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AMERICAN GYNÆCOLOGICAL AND
OBSTETRICAL JOURNAL

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THE
AMERICAN GYNÆCOLOGICAL
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JULY, 1895.

A LARGE ŒDEMATOUS MYOMA TREATED BY ABDOM-
INAL ELECTRO-PUNCTURE.*

BY G. BETTON MASSEY, M. D.

Mrs. C. M. W., aged forty-five, never pregnant; menopause two years ago. An abdominal tumor was discovered ten years before consulting me, accompanied by menorrhagia; but at this time there was no flow, notwithstanding which the tumor was rapidly growing and becoming softer. Her general health was decidedly affected—rather more than is usually the case with fibroid tumors.

On March 20, 1891, she placed herself under my care, at which time the abdominal circumference was thirty-seven and one eighth inches and the upper limit of the growth four and a quarter inches above the navel. In size and shape it resembled the pregnant uterus at term, and was soft and semifluctuating. The uterine cavity was but three inches deep.

In order to determine the character of the growth, the patient was placed under the influence of nitrous-oxide gas, and the needle of an aspirator thrust deeply into the growth through the abdominal wall. The point apparently entered numerous small cavities, withdrawing one and one eighth ounce of a serous liquid, which was sent to Dr. Allen J. Smith for microscopical examination. The following letter was received from Dr. Smith:

* Read before the Philadelphia Obstetrical Society, May 2, 1895.

332 SOUTH SEVENTEENTH STREET, *March 31, 1891.*

DEAR DOCTOR: I went over the specimen you left with me very carefully yesterday. The clot is, I am quite sure, an ordinary blood-clot, and the appearance of muscle or connective-tissue fibers is simply given by a peculiar contraction of the fibrin of the clot compressing the blood-cells into an elongated shape. Washing the clot and staining by Weigert's fibrin stain shows the real nature of the mass to be such, and staining by ordinary nuclear stains, as carmine and Bismarck brown, fails to bring out the cellular appearance seen in the unstained preparation. I do not think, therefore, that you are warranted in concluding from this specimen that you are dealing with a myoma or a fibroma.

On the contrary, none of Drysdale's cells are to be found either in the mass or in the liquid.

Taking the whole matter into consideration, I should regard the blood as probably accidental, and the fluid from a broad-ligament cyst.

Very truly,

ALLEN J. SMITH.

In view of the doubt thus thrown on the nature of the growth, which, however, I still thought might be an œdematous myoma, I decided to ask a consultation with Dr. William Goodell with a view to sending her to him for operation. This the patient objected to most strenuously, resulting in my decision to test the contractility of the growth with strong external currents. It was found that such currents did cause a temporary hardening and shrinkage, and I therefore decided to use galvano-puncture by the abdominal method, passing three insulated needles at each application through the abdominal wall, all connected with the negative pole of the battery. This was done on three occasions during the following two months with a strength of 65 milliamperes, external applications being also employed. At the end of this time the girth was reduced two and one eighth inches to thirty-five, and the upper limit was only two inches above the navel.

From September, 1891, to March, 1893, nine such punctures were made varying in strength from 100 to 300 milliamperes, during which time no other treatment was used, and a continuous decrease in size was noted. Since the termination of the treatment the patient has been under occasional observation, and at her last visit, during the past winter, the tumor was the size of a large orange only, with general restoration of health.

TWO CASES OF TUBAL PREGNANCY OPERATED UPON
MORE THAN A MONTH AFTER RUPTURE.*

BY GEORGE M. BOYD, M. D.,
Physician to the Philadelphia Lying-in Charity.

Cœliotomy for extra-uterine pregnancy is at present so frequently performed that to add one or more cases to the long list would be a needless encroachment on the time of the Society had not the cases some possible lessons to teach.

The two women the subjects of this report did not die from primary rupture of the tube. To those who believe in extensive temporizing, this fact might justify the position they take.

Cœliotomy was performed some time after the tube had ruptured for the removal of the diseased tube and partly organized and encapsulated blood-clot which were causing local and reflex symptoms. I believe that in a considerable proportion of cases the hæmorrhage is not sufficient to cause very alarming symptoms, and that cases of early ruptured tubal pregnancies are often not recognized as such and are treated symptomatically. The majority of these cases fall into the hands of the surgeon sooner or later suffering from the results of inflammatory changes brought about by a foreign body in the abdominal cavity.

CASE I.—Mrs. A., aged thirty years, came under my care last December in consultation. Three months prior to that time, after having missed one period, while bathing her child she was taken suddenly with pain in the abdomen and fainted repeatedly. For several days she was unable to extend her legs, so intense was her suffering. Her physician then in attendance diagnosed tubal pregnancy, but did not feel that operative interference was justifiable. She was compelled to remain in bed several weeks, the pain and some swelling of the abdomen gradually subsiding. In October and November she had improved sufficiently to go about her home, but complained of some vesical and rectal tenesmus, also marked gastric and nervous disturbances. When I first saw her, about three months after the accident, she was suffering from the symptoms of a tumor in the pelvis pressing on the rectum. A mass could be felt posterior and to the left of the

* Read before the Philadelphia Obstetrical Society, May 2, 1895.

uterus. Cœliotomy was performed for the removal of the mass, which proved to be a partly organized and encapsulated blood-clot which Nature had attempted to shut off from the general peritoneal cavity.

The left tube, the seat of the disease, was soon delivered, and a perforation near the uterine end was found. Patient made a nice recovery.

CASE II.—Mrs. B., aged thirty-six years, was sent to me March 4, 1895, for a repair of the pelvic floor. Her physician believed that her symptoms were due to a procidentia and injury of the perinæum, which was very marked. She was a multipara, her last child born eleven years ago. There was also the history of the cervix being amputated five years ago. The operation, she states, was done without ether.

Without any irregularity of the menstrual periods she was taken suddenly ill six weeks before I saw her, with pain in the left ovarian region. The pain soon subsided and she was able to go about, not realizing the magnitude of her trouble. Careful examination of the pelvis found the uterus enlarged, cervix elongated. Posterior to the uterus, which was fixed, was found a tumor extending to the left side.

Cœliotomy was deemed advisable after examination under ether. Omental and bowel adhesions were very general. Finally the anterior surface of the uterus was reached. In attempting to further break adhesions my finger ruptured a tumor posterior to the uterus about the size of a walnut, which was filled with a partly organized blood-clot. This mass was encapsulated by the surrounding structures. The right ovary making up a portion of the capsule of this tumor was diseased, and consequently with the other was also removed.

The patient recovered without an unfavorable symptom and left the hospital, promising to return in a short time for the perineal repair.

The lessons taught me in the study of these two cases were—

First, That the described symptoms associated with the rupture of a tubal pregnancy do not always exist, and that although the amount of hæmorrhage in the two cases reported was not very great, Nature is unequal to its complete absorption and will do what is next best—attempt to shut the mass off from the general peritoneal cavity.

Second, The value of verifying a diagnosis by careful examination under ether was demonstrated in Case II. With the history in this case of a long standing prolapsed condition of the uterus and injury

to the perinæum, and with the uncertain symptoms of other trouble existing and the difficulties often encountered in making an internal examination, the true cause of her trouble might have been overlooked.

I believe it would be wise in all cases where there is an element of doubt as to the size or position of any tumor or inflammatory mass in the pelvis to adopt a routine of examination under ether just before proceeding with operative interference. The amount of time now consumed will be trifling, and the information gained in some cases might lead the operator to hesitate in opening the abdominal cavity.

PUERPERAL ECLAMPSIA.*

BY A. D. PRICE, M. D., HARRODSBURG, KY.

Eclampsia is the most serious and fatal trouble to which the pregnant woman is liable. It is well, therefore, to occasionally review the subject and learn, by an interchange of views, what is of doubtful utility, and thus to formulate rules of practice, founded on sound pathological principles, for the management of this dangerous disease.

The importance of such reviews and interchange of opinions is recognized when it is remembered that eclampsia develops only in about one in every three hundred cases of labor, and that consequently the opportunity for large clinical observation comes but to the favored few.

The one essential thing in the management of this disease is a correct knowledge of its ætiology. The following declaration, as enunciated by another, may be accepted as approaching correctness: First, that eclampsia "is a condition of toxæmia due to functional insufficiency of the kidneys; second, that the convulsions are dependent upon an abnormally irritable condition of the central nervous system, produced by the hydræmia of pregnancy. While either may be the sole cause in some cases, yet we must recognize the presence of both, the one or the other predominating, in the vast majority of cases."

Puerperal convulsions may occur during pregnancy, while labor is in progress, or after its completion. The cases developing after

* Read before the Tri-State Medical Society, at St. Louis, April 4, 1895.

labor rarely supervene later than the second or third day, while those coming on before do so after the fourth month, their liability increasing with the advance of gestation. Their relative frequency has been pretty accurately determined. Of Shröder's 316 cases, 62 occurred during pregnancy, 190 during labor, and 64 in the puerperium. Wieger reports 455 cases—109 during pregnancy, 236 during labor, 110 in the puerperium. The experience of other observers approximates these statements.

The mortality has been estimated to be from thirty to forty per cent.; this, I am led to believe from the recent literature on the subject, has been greatly diminished, and will continue to grow less as the correct principles of treatment become more definitely defined.

The convulsion may come without previous indications, but this is rare. It is generally preceded by premonitory symptoms, and these should always engage the physician's serious attention. For this, were there no other reason, the patient should be under medical supervision from the earliest months of pregnancy. To the acceptance of this dictum the public should be educated; and those who do obstetrical work should, in season and out of season, avail themselves of every opportunity to make its great importance known. Here is a field where we may labor wisely and successfully, and by earnest, persistent effort, so instruct the laity that this class of patients will be saved much suffering and many dangers.

Were it the rule to carefully examine these patients during the early months of pregnancy and keep them under strict supervision, there would be found the fewest number of cases without prodromic symptoms. The probability is that all would present, in some form or other, more or less indications of the impending danger. Careful observation would be very apt to detect some of the premonitory symptoms—as headache, excessive nervousness or marked irritability, impaired vision, disturbance of the sense of hearing, severe epigastric pain sudden in its appearance and of short duration, nausea and vomiting during the latter months of pregnancy, general œdema, diminished quantity of urine with a low specific gravity and with or without albumin or casts.

The treatment of eclampsia resolves itself into preventive and curative. And the physician whose great and chief mission is to prevent disease and save life has here the opportunity to accomplish much and add many jewels to his crown of glory.

The pregnant woman should be under constant supervision, that

preventive treatment may be instituted on the first appearance of the premonitory symptoms.

The urine, being an index to the activity of the treatment, should claim special attention. The authorities tell us that albumin occurs in twenty per cent. in the urine of pregnant women, and that these women are four times more liable to convulsions than an equal number without it. The urine should be frequently examined, and the amount passed in twenty-four hours ascertained once a week. The quantity and quality, specific gravity, amount of albumin and urea, character of epithelia and casts being known, the danger signal would rarely be unobserved and the patient put in a condition favorable for a safe confinement.

However desperate the threatened condition may appear, hope should never be abandoned, as, by persistent and well-directed efforts, the danger is often averted. By rest, quiet, and freedom from mental worry and physical overexertion; by diaphoresis, diuresis, and catharsis; by the milk diet and the administration of the tincture of chloride of iron in large doses; by the knee-chest position assumed several times a day to take the pressure off the ureters and kidneys; and by proper hygiene—the toxæmia is diminished, and the nervous system so stayed as to greatly lessen the liability to an eclamptic seizure.

A case in point is that of a primipara the subject of chronic parenchymatous nephritis. Early in gestation she manifested headache, disturbance of vision, tinnitus aurium, marked and persistent nausea, anæmia, general œdema, renal insufficiency with a large amount of albumin and numerous renal epithelial and granular casts. The twenty-four hours' urine was frequently less than eight ounces; yet, by the management above indicated, she went safely through her pregnancy and gave birth to a healthy child, and I was saved the necessity of producing premature labor, which I was ready, and expected, to do at any moment. Such risks as were taken in this case are justifiable only in the primipara; and it should be remembered that in assuming them the life of the patient is jeopardized.

The induction of labor is often imperative. If convulsions are threatened in spite of the treatment already outlined, the welfare of the patient and of the child, if viable, demands its prompt accomplishment. No time should be wasted in doubtful expedients; delay is fraught with the gravest dangers.

When one convulsion occurs you may expect another, and another. The first one compromises the life of the patient and the fœtus, and

each succeeding seizure makes death more certain. The only question that can now be entertained is emptying the uterus at once with the forceps or by turning, the patient having been completely anesthetized and the cervix, if necessary, fully dilated.

The curative treatment embraces many remedial agents, and much valuable time is often lost in flitting from one to another. Hence the necessity of always expecting an eclamptic seizure, and going to the bedside with well-defined and fixed rules of procedure.

There are, doubtless, cases that require bloodletting to relieve vascular tension of the brain and congestion of the lungs, to subdue the laboring heart, and to remove urea from the system, but it has not been my fortune to observe them.

Chloroform to ward off the attack and morphine hypodermatically in doses sufficient to subdue and control the nervous excitability, in conjunction with free catharsis and diaphoresis, are remedies that will be successful in the majority of cases.

The most unpromising cases are sometimes saved, as exemplified by the following: A primipara, aged thirty years, whom I saw in consultation. During the four hours previous to my visit she had had eight convulsions, remaining unconscious from the first seizure. She had the ninth one soon after I entered the room, and the tenth in fifteen minutes. She was pale and anæmic, and there was present general œdema. The cervix was slightly dilated; the head engaged; the bladder empty. Chloroform was administered, the cervix rapidly dilated, and a living child delivered with the forceps. The eleventh convulsion occurred while the perinæum was being repaired.

The patient was ordered two grains of calomel on the tongue every hour till five doses were given. She had sulphate of morphine, one half grain hypodermatically, with instructions to repeat every two hours till convulsions ceased. During the next five hours she had five seizures, and three hypodermatic injections of sulphate of morphine, one half grain each. She remained unconscious the succeeding ten hours, at which time she awoke in a dazed condition, her bowels having acted copiously and her kidneys freely. She made a good recovery.

In conclusion, I would impress upon all the necessity of having constant supervision of the patient from the earliest months of pregnancy until the completion of the lying-in. To this end spare no pains to educate the public.

THE UTERINE SOUND AND CURETTE.*

BY W. M. CATTO, M. D., DECATUR, ILL.

The sound and curette are instruments with which every physician is more or less familiar; they are made of a variety of materials, and of different sizes and shapes, each of which has its advantages in special cases.

Both instruments are used as a means of diagnosis and treatment; their range of application is wide but limited, and, although their judicious use results in great benefit, there are perhaps no two instruments in the physician's armamentarium capable of producing more disastrous results when carelessly or unskillfully handled.

The typical sound is that of Sir James Simpson. It should be made of flexible material capable of being readily bent with the fingers, but of sufficient rigidity to withstand a moderate degree of pressure. In most cases this is the best sound, but when the cavity of the uterus is tortuous, as in a submucous fibroid, Emmet's sound should be used, as also Emmet's fine probe in exploring for the position of the uterus.

As a means of diagnosis the sound is almost indispensable in many forms of uterine trouble. With it we may determine the length, shape, and direction of the uterine canal; the presence or absence of abnormal tenderness; the condition in a measure of the uterine mucosa; the presence or absence of atresia, stenosis, granulations, and tumors; fixity or freedom of the uterine body; when a tumor is present, its size, shape, and situation as related to the uterus; its fixity, density, and probable character.

No force should ever be used in the introduction of the uterine sound, and it is needless to say it should always be surgically clean.

In displacements of the womb, either backward or forward, we are enabled by its use to determine whether we have a flexion or version, a point not always easy to determine by other means; not infrequently the neck of a small uterus will occupy a normal position, but the body be difficult to find from deposit of adipose or other causes, and upon the introduction of a sound we may find an acute flexion which has been the cause of a distressing dysmenorrhœa, or even cystitis. So also, by using the probe, what may have been an

* Read before the Tri-State Medical Society, at St. Louis, April 3, 1895.

apparent stenosis at the internal os will be found to be an acute flexion, which, when relieved, all symptoms of stenosis disappear.

As regards the condition of the uterine mucosa, the proper introduction of the sound into the cavity of the uterus should not cause any flow of blood when the instrument is withdrawn if the membrane be healthy; nor should the touch of the sound against the fundus produce pain or tenderness as it would in a case of endometritis.

If blood follows the withdrawal of the sound, it is indicative of granulations, endometritis, or the near approach of menstruation.

In fibroid tumors of the uterus, either submucous or intramural, the sound, by the distance it enters and the direction it takes, indicates the probable size and position of the tumor, as to whether it occupies the anterior or posterior wall; it tells the degree of solidity, smoothness of outline, and sometimes the presence or absence of a pedicle.

In cases where doubt exists as to the position of a small fibroid, the sound in the cavity of the uterus, brought well up against the abdominal wall to meet the hand placed externally, as in a bimanual examination, will often clear up the doubt.

With the sound we can sometimes distinguish a hæmatoma from a uterine tumor; also in doubtful cases whether a tumor be uterine or ovarian.

By the careful use of the sound we may determine whether the uterus is free or bound down by adhesions, and in the latter case whether the adhesions are firmly fixed or elastic and yielding, whether they surround the organ or are confined to one side; also to what structures it is probably attached.

The instrument is also useful in making a diagnosis between polypus and an inverted uterus. In the latter condition, upon endeavoring to enter the sound, it meets with obstruction all round; while in the former the sound will usually pass on one side of the tumor, and to a greater distance than normal, as the uterus is enlarged.

As a means of treatment, the use of the sound is much more limited.

It may be used to partially overcome a moderate degree of stenosis. With it we may replace and momentarily retain in position a uterus that is "verted" or flexed and not bound down; when adhesions exist, reposition should be accomplished by other means.

It is useful in making medicinal applications to the endometrium.

A knowledge of when not to use the sound is fully as essential as to know when and how to use it properly.

It is an unsafe instrument to use when a healthy woman has

missed her regular menstrual period from any given cause, and should not be passed without satisfactory evidence that pregnancy does not exist.

It should not be used during menstruation, and should never be employed to replace a uterus that is firmly bound down by adhesions; there is danger of penetrating the organ or of injuring the endometrium.

The sound should never be heedlessly introduced into the uterine cavity of a patient suffering from an acute or latent gonorrhœa either of the vagina or cervix. I am inclined to believe that more harm is done by its use in this class of cases than in any other, and the physician should satisfy himself in every case, if possible, that no such condition exists before passing the sound either for the purpose of diagnosis or treatment.

In such cases there is great danger of lighting up a violent specific inflammation in structures that Nature seems to have fortified against the entrance of the poison, and most physicians of experience can call to mind cases in which the introduction of a sound into the uterus of a patient having gonorrhœa has resulted in an acute metritis, salpingitis, and ovaritis, ending in loss of ovarian function, of the organs themselves, or even sometimes of the patient's life; and this, too, when the disease had been present in the vagina and cervix for some time without doing any apparent great harm.

The curette is more frequently used as a means of treatment than of diagnosis, although in the latter case it is useful in removing tissue from the cervix or uterine cavity, for chemical or microscopical examination in cases where the nature of the disease is doubtful.

Many forms of this instrument have been devised, all of which seem to have their disadvantages; it should be slightly flexible, but not too easily bent.

We are frequently told by authorities that the best curette is the finger; and, theoretically, this may be true, but practically it is not the case, as nineteen times out of twenty, where the use of the curette is indicated at all, the finger could not be used.

A finger, to make a good curette, should be about half the circumference and three or four times as long as the ordinary index finger.

Probably the safest and best instrument for ordinary use is the dull, spoon-shaped, irrigating curette.

Its chief use is to remove from the uterine cavity any substance that is causing or likely to cause mischief, such as granulation tissue, retained placenta, shreds of membrane, foreign bodies, small tumors, etc.

Much difference of opinion exists as to the proper time to institute mechanical interference for the removal of the placenta or other retained products of conception after miscarriage.

Generally, all such should be thoroughly removed by curetting and irrigation, if necessary within twenty-four hours after the escape of the fœtus; the use of the dull curette with antiseptic irrigation will render the patient safer and the physician more comfortable, whether urgently demanded or not.

When, however, a case has been neglected until absorption of septic matter has begun, no time should be lost in removing all offending material that may be in the womb.

In those cases of granular endometritis often following miscarriage and sometimes labor at full term, accompanied by a condition of subinvolution and characterized by menorrhagia at each menstrual period, which latter is likely to be irregular and prolonged, the use of the curette aids very materially in bringing about a cure.

The instrument may be used with advantage in some cases of cancer where, owing to the advanced stage of the disease, or to other causes, palliative measures only can be used.

In conclusion, the curette is almost the only reasonably sure means by which we can cure that most painful and persistent malady—membranous dysmenorrhœa. This has resisted nearly all known remedies, rational and irrational, but will yield to thorough curettement, followed by the application of tincture of iodine, practiced five to eight days after the cessation of the menstrual flow.

The curette should not be used in that class of cases where the use of the sound would be contra-indicated, the same objections applying with even greater force to the curette than to the sound.

INDICATIONS FOR LAPAROTOMY.*

BY W. O. HENRY, M. D., OMAHA, NEB.,

Gynæcologist and Orthopædic Surgeon to St. Joseph's Hospital and the John A. Creighton Medical College.

In complying with the courteous invitation of your secretary to prepare a paper for the present meeting, I have chosen the above

* Read before the Tri-State Medical Society, St. Louis, April 4, 1895.

subject in order that the suggestions made and the discussion elicited might prove to be a helpful guide both to those of us who do abdominal surgery and to those who are called upon to treat cases which eventually come under the surgeon's knife. I shall not assume to cover in detail all of the possible present and future indications for abdominal section, but rather, from my own experience in part, coupled with the wide and varied experiences of the leading operators at home and abroad, together with the observations of learned physicians (whose opinions I fear are too often ignored by the surgeon), I shall formulate some propositions which, if not now generally indorsed, should, in my opinion, be followed by physicians and surgeons. I shall not stop to discuss the question as to whether laparotomy, cœliotomy, or gastrotomy is the proper term to use, but shall use the first as generally understood by the profession.

Laparotomy is indicated—

1. For the removal of all ovarian cysts, fibro-cysts, parovarian and intraligamentary cysts as soon as discovered. Delay is dangerous. Tapping of these cysts is not a justifiable practice.

2. In all malignant diseases of the ovary limited to these parts, and as soon as the diagnosis is determined.

3. In all cases of pyosalpinx. Although a few men advocate catheterization, still it is generally agreed that "tubal catheterization is not found to be practicable." Notwithstanding the opinion of Dorsett, Glasgow, Murray, and others that curettage and packing of the uterus will effectually drain pus-tubes, and, in spite of the fact that Vulliet and Landau prefer vaginal puncture in these cases, still the profession, and I believe correctly, holds to abdominal section as the proper way to reach these pus-sacs and effectually get rid of them.

Jacobs and Sutton have not been encouraged in their suggestion that the treatment of these cases should be by vaginal hysterectomy.

It might be well to mention the fact, too, that even the name of Tait has not been sufficient to lead the profession into that erroneous practice of removing a healthy tube and ovary simply because the opposite tube is distended with pus and therefore demands removal.

Let it be said here, too, that many of these cases of pus-tubes are not of gonorrhœal origin, and we should recognize this fact in justice to our patients and in the interests of science. I am supported in this opinion by the reports of Haultain, Chrobak, Duncan, Martin, Zweifel, Bantock, and Reamy, who hold that these cases are not so frequently of gonorrhœal origin as is generally supposed; but that

on the other hand, many times they occur from septic and even simple inflammations by extension from other parts. Then, too, it is known that many times the gonococcus can not be demonstrated. Cheadle reports a case in a girl one year and nine months old without a vaginal discharge of any kind.

4. For removal of the tubes and ovaries. When (1) they are so seriously diseased (other than above) as to warrant a grave operation, provided always systematic, intelligent treatment has been tried and has failed to give relief. I wish most emphatically to protest against the removal of these organs for salpingitis, ovaritis, prolapsed ovary, acute retroflexion, or other similar conditions before suitable treatment has been given a fair trial. I am sure these organs are being unnecessarily removed.

In some cases of prolapsed ovaries with adhesive inflammation and plastic effusion in the pelvic cavity let Dr. Bedford Fenwick's plan of giving three times a day half-drachm doses of solution of perchloride of mercury be tried, together with suitable local treatment, and many of these cases will entirely recover without operation.

Or (2) if not very badly diseased themselves, they keep up serious conditions not amenable to milder measures, as certain cases of insanity, dysmenorrhœa, and uterine fibroids. Price, of Philadelphia, and many others have seen insane women cured by removal of the appendages.

G. H. Rohé, who has made this subject a special study, says: "The results obtained (from operation) not only encourage us to continue in the work, but require us, in the name of science and humanity, to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

5. For uterine fibroids not amenable to electricity or vaginal hysterectomy.

6. For malignant growths of fibro-cysts of the uterus too large for removal *per vaginam*.

7. For hysteropexy, as advocated and practiced by Thomas Keith since 1869. His method is to stitch the stump of one horn of the uterus into the abdominal wound. And the writer has found it to be a useful procedure in those cases of misplaced uterus not amenable to milder measures.

8. For ectopic gestation. (1) When the fœtus is dead and the patient's life is threatened, or the fœtus has been dead long enough (two or three weeks) to render the operation comparatively safe because of the atrophied condition of the placenta. (2) Near term,

before the child dies, in order, if possible, to save both mother and child.

When an ectopic pregnancy is discovered early the patient should be kept quietly in bed upon low diet until the danger of rupture is past, which is practically the fourth or fifth month, and then by care and an easy life you may tide the patient along until near full term, when your operation may save two lives.

I hold that the fœtus should not be destroyed, and that the section should be made at term before the child dies a natural death, as a wise provision of Providence if not removed about this time. Dr. Reed and the late Professor Goodell agree with me in part upon the foregoing, for the latter said shortly before his death that after the fifth month of ectopic gestation he would try to carry the case to full term and then operate to save both mother and child.

9. In all removable tumors complicating pregnancy and liable to produce premature labor or interfere with delivery at term. If done carefully these operations do not disturb the normal course of pregnancy in the least. The writer has done two of these operations—one at the third month and the other at the fourth—without any trouble.

10. In all cases of labor at term if a living child can not be delivered through the natural channel. In short, embryotomy and other mutilating operations upon the living child are not justifiable. Symphysiotomy will aid in some of these cases where formerly destruction of the child was practiced; but Cæsarean section or Porro's operation are always preferable to destruction of the child.

Please note that Harris gives the results of the first fifty Cæsarean sections in this country, and also of the first fifty in Europe, as follows:

Women saved.....	75
Children saved.....	94
	169
Total.....	169

So that a total of one hundred and sixty-nine lives were saved out of a possible two hundred. Whereas if embryotomy had been done one hundred innocent children would have been murdered, and possibly some of the mothers would have died from septic or other complications. At all events, here is a positive saving of sixty-nine lives. The physician's business is to save life, not to destroy it. It is more humane, scientific, and moral to let *two* die (if need be) in an honest, intelligent effort to save both than to deliberately destroy an innocent person.

Winckel has demonstrated that Cæsarean section may save a living child if done within thirty minutes of the mother's death, but results are better if done within ten minutes.

11. In peritonitis not yielding to milder measures Dr. E. E. Montgomery saved a patient by this operation who had peritonitis following abortion. Tait and Baldy also both advocate this operation.

Körte records eighteen operations with six recoveries in suppurating peritonitis. Barling, of Birmingham, reports a successful case in a girl aged seven years.

Dr. Sutherland reports two cases of traumatic, non-suppurating peritonitis in children which, being obstinate to medical treatment, yielded nicely to abdominal section. So that I hold a patient should not be allowed to die from a peritonitis, whether following labor, abortion, or any other exciting cause, without giving them the benefit of this operation.

12. In tubercular peritonitis as a specially curative measure.

König, in a report to the Berlin Congress, gave a summary of one hundred and thirty-one cases thus treated. Twenty-four died, eighty-four were cured, and the remainder were improved by the operation. So many of these operations have now been done successfully with drainage and without it, with flushing the cavity and without it, that it is generally recognized as a valuable treatment in children and adults suffering from tubercular peritonitis.

13. It is indicated in appendicitis: 1. When rupture has occurred. 2. When pus is present. 3. When a tumor remains and the patient grows worse rather than better after five or six days' treatment of rest to the body, mind, and intestinal tract.

I am inclined to think too free catharsis is often practiced in these cases and that they are really aggravated thereby.

Dr. J. B. Murphy says: "The rule first, last, and always should be to operate in every case of appendicitis, promising or unpromising, at the earliest possible moment."

Dr. Deaver and Dr. McBurney both advocate early operation in all cases. In contrast with these opinions we have Treves, Ashhurst, Osler, Hare, and Meigs, who all oppose early operation and believe that too many appendices are being removed.

Dr. Lange, of Ohio, reports very carefully eighteen cases treated without operation, and all recovered.

Dr. Grandin, of New York, reports eighteen cases. Upon ten he operated and had two deaths. The others all recovered but one without operation.

In addition to these experiences and opinions we have the combined testimony of the great mass of general practitioners who have for years treated many of these cases successfully without any operation.

14. In rupture of the stomach, bowels, gall, or urinary bladder and uterus when any of these viscera pour their contents into the peritoneal cavity.

Kriege and Barling each report a successful case of laparotomy done for perforating ulcer of the stomach.

Kyewski reports two cases of rupture of the intestines from abdominal contusion, in which laparotomy was done, the bowel sutured and recovery followed.

Dr. Richard Braun von Fernwald has recently saved two women by abdominal section and repairing a ruptured uterus. Rupture of the urinary bladder shows about ninety-five per cent. of deaths if left to Nature, but only sixty-eight per cent. if section be done and the rupture repaired. Perforation from typhoid ulcer shows about twenty per cent. of recoveries from section and suturing of the ruptured point.

15. In all penetrating wounds of the abdominal and pelvic cavities. Since the very elaborate paper of Dr. Nancrede in 1887 the consensus of opinion has been more and more in this direction.

Rapetto reports recovery from a stab wound of the stomach after laparotomy and repair of the wound with Lembert-Czerny sutures.

16. In obstruction of the bowels under the following conditions: 1. It should be done at once when obstruction is due to intussusception, gallstone, enterolith, foreign body, or morbid growth. 2. If due to volvulus, constricting bands, or other undetermined cause, it should be done as soon as alarming symptoms develop (such as collapse, stercoraceous vomiting, peritonitis, greatly increased frequency of the pulse, or high grade of fever), or when relief does not come after one week's judicious treatment.

17. In stenosis of the œsophagus tending to speedy death, carcinoma of the stomach as soon as discovered, and cholelithiasis whenever any serious or distressing symptoms arise.

Billroth's wonderful successes in more than fifty per cent. of his one hundred and twenty-four cases of direct anastomosis of stomach with bowel, and gall bladder with intestine, together with the many favorable reports from the use of Abbe's catgut rings, Senn's bone plates, and the Murphy button, encourage us to believe that now the surgeon is master of the situation in many of these stomach, gall bladder, and intestinal troubles formerly beyond his control.

18. As an exploratory and diagnostic measure in all other serious conditions in the abdominal and pelvic cavities which do not yield to less heroic measures.

The suggestion of Dr. Morris that these cases be diagnosed by dividing the tissues between the anus and coccyx so that the hand may be passed through the rectum and colon for such purpose has not met with favor from the profession, and I think should be condemned as being unreliable and therefore unjustifiable.

Let a word or two of warning be spoken here. In the first place, do not wait too long in recommending and doing this exploratory operation, for an early diagnosis may make the removal of disease or tumors possible and thus indefinitely prolong life and prevent suffering, which if neglected may render operation entirely useless. As a case in point note the cysto-sarcoma of the kidney reported in a recent *Lancet-Clinic*. Hence in obscure cases after due consideration, if not cleared up, then make your diagnostic operation early.

In the second place, if it be found upon exploratory operation that your patient will probably live longer and suffer less to leave the morbid condition as found than by removing it, then by all means leave it, sew up your abdominal wound, and give Nature a chance.

It is bad surgery and worse morals to complete an operation merely for the sake of being able to say that you have done such and such operation; therefore stop immediately at the point where you find you can do nothing more for your patient's recovery.

REPORT OF A CASE OF HYSTERECTOMY WHERE THE
MORPHOLOGY OF THE TUMOR MADE TOTAL
EXTIRPATION OF THE CERVIX THE
ONLY POSSIBLE PROCEDURE.*

BY JOSEPH EASTMAN, M. D., INDIANAPOLIS, IND.

I hope the gentlemen will pardon me, and yet they might have expected that I could not speak to a medical society without saying something about hysterectomy. In a recent text-book, published in Philadelphia, I believe, they say that Eastman was the first American to make a total extirpation of a fibroid uterus, and add that he did so

* Read before the Tri-State Medical Society, at St. Louis, April 3, 1895.

by a very complicated technique. That statement is to me very objectionable, inasmuch as all my efforts have been to simplify the entire operation of both suprapubic and infrapubic hysterectomy.

I have here a photograph representing a class of tumors with which I have come in contact. From conversations with Dr. Bantock, of London, and Dr. Price, of Philadelphia, I believe they find similar tumors which could not be dealt with at all by the abdominal fixation method. You will see that a fifteen-pound tumor has developed from the anterior wall of the cervix, disorganizing the same, and extended



down fully two inches beneath where the lower part of the cervix was found. This tumor was removed by a method which I have been trying to perfect since 1887. It does not make a particle of difference whether we take out the entire cervix or leave a little atom; my preference is to take it all out. I left a piece of cervix in my first case, and the result was satisfactory. I do believe, however, that there are but two methods of hysterectomy now before the world for acceptance or rejection—abdominal fixation and pelvic fixation—one being intra-abdominal and the other intrapelvic. The old terms of intra-peritoneal and extraperitoneal must become obsolete, because of the fact that no one now attempts to fix a pedicle within the peritoneal

cavity ; they are all extraperitoneal, though the method I speak of is intrapelvic.

I will demonstrate the best I can by means of a pincushion to represent a fibroid tumor. The broad ligaments are not always well defined, and sometimes can scarcely be found at all. This is true with reference to the cervix. It is not always pear-shaped, but sometimes we have almost to manufacture broad ligaments, and pedicles as well. In order to make the operation as simple and as hurriedly as possible, I have, for about six years, used a broad-ligament forceps



in suprapubic hysterectomy to temporarily secure the broad ligament. If we ligate this ligament and go on with our enucleation of the cervix, our ligature may slip. The broad ligament is held by this forceps, which we plunge through the broad ligament and lock, while another pincer may be placed next the tumor. We then cut around the serous membrane, making our anterior and posterior flaps. Joseph Price and myself perfectly agree, so far as this part of the operation is concerned. Then with the finger or any krife handle we enucleate the cervix, keeping between the uterine artery and the uterus. If we have no cutting instrument we will scarcely sever a ureter or have serious hæmorrhage.

The question of closing this wound so as to make a perfect intrapelvic wound is of a great deal of importance, and really is the very important point of all—to be sure that we not only catch the serous membrane and bring it together, but all loose connective tissue situ-

ated between the serous membrane and the vaginal wall. This connective tissue, as you are aware, is rich in lymphatics, the least accumulation there of bloody serum, the slightest pocketing being liable to produce sepsis. I am not disposed to believe that Dr. Bernays was speaking seriously as to the different methods of hysterectomy when he said that they all get well. I have had patients die after the most careful operations I could make, and I think that if all would tell the truth they would say the same thing. If there is one thing above another in pelvic fixation, it is the fact that we must carefully deal with this loose connective tissue. If we simply bring over the serous membrane, we make pockets below; therefore by using a needle like this I go through this connective tissue and use a suture similar to the Halstead suture. After we remove the tumor the ideal way is to contract and bring together the parts which the development of the tumor has separated. This should be cautiously done. Then we suture the serous membrane together with what is practically a Lembert suture. I always pack several pieces of iodoform gauze down into the vagina, leaving an end of one up in the wound.

This, to my mind, is nearly the ideal. The lines of surgical progression converge toward simplification of operative technique, and the simplicity of any operation is a measure of its success. The idea that we may ligate a broad ligament here or ligate it there is not tenable in every case, because sometimes broad ligaments are wide, sometimes narrow, sometimes can not be found at all. By simply securing the broad ligament and then keeping close to the uterus you can not by any possibility get at any large blood-vessel, nor can you by any possibility reach a ureter. See that the connective tissue is all brought toward where the cervix ought to be, and do not leave any chance for a pocket in which bloody serum might accumulate. The matter of narrowing the broad ligament by a forceps of this kind you all appreciate. Sometimes I have seen several ligatures applied and the ligament ligated in its full breadth.

You will note this forceps has but one large, strong catch. Many catches are objectionable. All my forceps have only one large catch in place of many.

With this method of operating the patient is convalescent in a week. Dr. Etheridge, of Chicago, has seen some cases operated on in this way, and I think he will bear testimony that the patients are practically convalescent on the fourth day, whereas if you fix the pedicle in the abdominal wound it is several weeks before they become so.

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EDITORIAL.

THE ABUSE OF OUR QUASI-PUBLIC HOSPITALS AND CLINICS.

The timely and truthful exposition of a great abuse, by Dr. Douglas H. Stewart in his paper read before the New York County Medical Society, on June 18th, entitled: "The Physician as a Citizen," should be read by every practitioner in this city and neighborhood and should arouse the profession to the consideration of ways and means by which the evil to which he refers especially may be rooted out.

The evil in question is this: In all our quasi-public hospitals and clinics, viz.: those not under the management of public officials, in this city at least, there is a large and constantly increasing class of patients, who are admitted and receive medical and surgical treatment free while entirely able to pay for these or other equally competent services at their full valuation.

The causes of this state of things are several, but chief among them is one which, it would be supposed, would be the least likely to find place here. Incredible as it should seem, it is quite true that the unbridled commercial rivalry and selfish want of *esprit de corps* of many of the medical attendants themselves at these institutions, especially among the younger men, are responsible, in the first place, for this gross injustice to their fellow-practitioners outside, for the encouragement of a shameless spirit of sharp practice and beggary on

the part of well-to-do patients and the conversion of medical charity, which rightfully belongs to the poor, to the use of a class of rich patients so entirely devoid of self-respect and honesty that they seek to accept, gratuitously, services for which they are bound both by ability and in justice to pay for and from which they exclude, in a large measure, the honestly poor.

It is surely but necessary to mention the indisputable fact that this abuse exists to obtain a concurrent opinion of all just-minded men on the subject of the attending physician's or surgeon's duty. This is to take all ordinary measures to exclude from entering his service any person who is able to pay for efficient treatment; to examine personally into the ability to pay of any patient to whom suspicion may be directed; and, finally, immediately to discharge every well-to-do beggar of this description, when caught, no matter how interesting may be the proposed surgical operation or the intended course of medical treatment to the surgeon or physician himself. It is well to bear in mind that but one class of patients has an inalienable right to the very best medical relief without compensation: that class is *the poor*. This one fact is the glory and the pride of the profession and it alone gives dignity to the latter and raises it above the level, with one exception, of all other professions or mercantile pursuits of men.

We have stated the duty in this respect of the doctor toward his hospital patients; what he really does, in many instances, the existence of the abuse in question shows. It is especially prevalent among surgeons and gynecological surgeons in particular. Nor is the selfish incentive hard to find. It has grown and is fed by the great struggle in competition for surgical work, that each man may be able to present a longer record of cases than his neighbor and thereby receive the attention of his fellow-practitioners. In this struggle the rights of others are not considered, the chance to add another operation to the list is not to be missed; while the certainty exists that the next man who sees the case in another hospital will operate gladly, if we discharge the patient. It is the knowledge of this spirit of commercial rivalry and underbidding, on the part of so many surgeons connected with hospitals, which encourages this species of fraudulent beggary. Women are the chief offenders in this respect and the most shameless. It would be interesting, in the study of heredity, to know the percentage of criminals—forgers, thieves, defaulting cashiers and human sharks generally—to be found among the offspring of such mothers.

But apart from the moral responsibility of the attending surgeon in the encouragement of fraud, which is a serious one, a most severe injustice is done to the deserving poor. For every rich patient thus admitted to the free services of a surgeon, some poor person is kept out and deprived of those services ; moreover, the Governors of these hospitals, which claim to be institutions of charity because the surgeons give their services, are encouraged to seek patients, in preference, who pay a high rate of board, to limit their free wards to one or two and thus still further deprive from the free services of the medical man the only class which has the slightest right to them—the very poor.

The next cause of this abuse we have just referred to as depending also upon the first, namely, the surgeons themselves. It is that in these institutions any patient is gladly received by the lay authorities in charge, if such an one is willing to pay the required board ; and this entirely irrespective of this patient's ability to pay for the professional services sought. We venture to assert our belief that the wife of a known millionaire could enter any quasi-public hospital in this city, by paying the twenty or thirty dollars a week required for room and board, without the slightest objection being raised, by any layman connected therewith, that she was depriving the attending surgeon of the fees which were his just due. We have yet to hear of the medical institution under corporate private management so richly endowed that it is unwilling to receive as high compensation as possible for what it provides in the way of bed and board ; on the contrary, they all seek those patients who will pay highest for these luxuries. Therefore, the free wards and free patients are in a very small minority and are, in the balance sheet of profit and loss, put down under the latter category. Yet, if every attending surgeon or physician would refuse to treat free any patient who could afford to pay for competent services, either of himself or of others perhaps less prominent, the authorities of the institutions would be compelled to increase their capacity for free wards and to become charitable in fact. It is no true argument that pay patients help in the support of the free wards ; for, if this were true, the greater the number of the former and the higher the charge, the greater the number of free patients also. But this is not the case. On the contrary, the more the private rooms and the higher-priced wards are filled, the more extensive become the accommodations for this class of patients, but with no corresponding ratio in the free wards.

I have but lightly touched upon another great injustice. For

every patient, able to pay a reasonable fee, who is treated gratis in hospital, some physician is the poorer. When we consider the hard and bitter shifts to which many competent physicians are put, that they may support themselves and their families, it is easy to appreciate the intense selfishness which allows a prosperous Attending at hospital or clinic to think only of his own prospective glory and to ignore the just claims and needs, because not pertinent to himself, of his harder-working, perhaps equally competent though less fortunate brother.

It is a crying abuse—evil in every aspect—and it is to be hoped that the finer sense of the profession at large may soon be aroused to create so strong a public opinion in regard to this practice, that it must be eradicated.

CORRESPONDENCE.

“PHYSICIAN, HEAL THYSELF.”

PHILADELPHIA, June 25, 1895.

To the Editor of the American Gynæcological and Obstetrical Journal :

I confess that I am not so familiar as I should be with the Bible. It may be that my text is matter of “unconscious absorption.” I put my brain, my conscience, my heart, the skill of my fingers, my time, and my purse in my calling.

The letter of Dr. Richard C. Norris, physician-in-charge of the Preston Retreat—“To the Editors of the American Gynæcological and Obstetrical Journal”—has just been called to my attention, and commands from me, in duty to the records of the institution I had the honor to serve, and in duty to myself, an answer. I answer without any appeal to that common honor or common honesty which characterizes the profession. I answer for the Retreat and for myself.

I will begin by quoting his introductory sentences: “I inclose a letter which I will ask you to publish in the next issue of your JOURNAL. The statements therein made are *absolutely correct* (Italics mine) and are *capable of ready demonstration*. I send the letter to you for publication, prompted by a desire for *accurate statement of statistics*. Dr. Price has *at all times* treated me with courtesy, and I am therefore not *actuated by any other motive*.”

I am grateful to Dr. Norris for his acknowledgment of *courtesy*.

In that connection I can only express the hope that to all the representatives of my profession, when they meet me on common grounds, I extend to them the easiest thing in our professional living—courtesy. In this, under the stress of conditions, I may not always have succeeded. I hope that at no time I have ever played the *hypocrite*, the *sycophant*, or *coward*. I never have been or will be any man's enemy until he willfully and deliberately plants himself in my way and makes himself mine. I have the comforting faith that there are many noble fellows of my profession who, in common with Dr. Norris, and with less of *questionable sincerity*, will acknowledge "courtesies" freely, willingly, and gladly extended. They make up the happiness as well as the mutual helpfulness of the profession. As to the motives which have prompted Dr. Norris' communication, the cool, impartial, and unprejudiced temper of the profession is better able to judge than I am. In our modern days, it is known that there is such a thing as *bidding* for *cheap* notoriety. As to the desire of "accurate statement of statistics," I can respond in all sincerity to the sentiment "to be just to other and similar institutions." It will be recalled by every member of the profession who has heard a word from my lips or read a line from my pen, that I have expressed special pride as an American in our American maternities, and at the same time expressed admiration for the worthy features of others across the waters. The only worthy ambition or pride I could have was to make our own maternities, so sacred their mission, the best within the power of the genius of man to make them. I am glad to say here that I do not know a member of the profession, and hope I will never have the misfortune of knowing one—or rather another one—who has such a very happy way of expressing his appreciation of courtesies. The profession, being made up of those sharing a common humanity, has its failings, but is not altogether impoverished in the common decencies. Now, then, for the record of the Retreat as Dr. Richard C. Norris, now physician-in-charge, gives it: "The mortality record of the Preston Retreat during Dr. Price's residency there is as follows. There were ten hundred and ninety confinements and two deaths in the institution, with two more deaths outside of it that should unquestionably be credited to it. One of these was in the case of a woman sent on the sixteenth day from the Preston Retreat to the Pennsylvania Hospital, where she died three weeks later, and it was found at the post-mortem examination that she had appendicitis and purulent peritonitis."

In regard to the appendicitis case: Women commonly leave the

Retreat with their husbands on the thirteenth or fourteenth day when convalescence has been thorough, favorable, and aseptic. Such was the condition of the woman referred to above. Appendicitis is commonly an acute and virulent disease, and in this case, from the purest feeling of humanity, I regret that the woman did not send for me or return to me to be cared for in my private hospital.

In saying this it is foreign to my intent and purpose to raise even the shadow of a doubt as to the good faith and wisdom of the treatment of this patient in the Pennsylvania Hospital. My regret is a natural one regarded from a professional and surgical standpoint, and will be so regarded by the unprejudiced of the profession. I would not have about my statement the coloring of reflection upon any one; it should be kept in mind, however, that this woman died thirty-seven days after her delivery, and with her death her delivery had nothing to do; and, further, she was twenty-one days in the Pennsylvania Hospital without a diagnosis, post mortem revealing appendicitis—not a post-puerperal disturbance. As to having sent patients to the Pennsylvania Hospital, the statement is altogether and absolutely false, and no minute of such an act appears upon the records of the Preston Retreat. If such existed, it would have been known to the committees which, monthly, carefully and scrupulously examine the records.

In regard to the use of the curette, my statements were correct when I made them, and are as correct now as then.

The statistics in the seven years and a half of my professional connection with the Retreat remain as I have given them. With Dr. Goodell's consent, I always included his statistics with my own. They were the statistics of the institution and not of an individual, nor were they ever so claimed. They covered a period of more than ten years. During my period of more than seven years as resident physician there were two deaths, neither of which could in common honesty or by any form of logic be credited to the mortality of the institution. The first case was one of eclampsia, admitted in labor and in convulsions, and died on the fourth day without secreting a drachm of urine. The second death was one in a case of acute mania with a vicious history. Had either of these patients died in an ambulance on their way to the institution, her death could have as honorably and honestly been credited to the Retreat.

Again quoting: "The second death outside the hospital followed a Cæsarean section. The woman had been delivered once by Dr. Price and a number of times during Dr. Goodell's incumbency by the induction of labor, high forceps, and version." This statement, after

the "labor of the mountain," is correct. It will be noted that Dr. Norris has been having his field days outside of the Retreat or his trust. What mother was neglected? The will of Dr. Jonas Preston, through whose beneficence the Retreat was founded, limits the field of the charity to Philadelphia and Delaware Counties. Mrs. Elizabeth Hartley, the deformed Englishwoman, was a resident of Altoona. After many unfortunate deliveries, she was counseled by me to have a Cæsarean or Porro operation that she might have a living child. For the delivery referred to she made no application to the Retreat; her name does not appear on the books or minutes. By correspondence she made all her arrangements for the Cæsarean section, and traveled from Altoona in a common railroad coach at midnight. All arrangements had been made to receive her at a private hospital. She simply went to the Retreat on her arrival in the city, because she knew the nurse there and had no other acquaintance to whom she could go. On her previous admissions to the Retreat she had deceived both Dr. Goodell and myself as to her place of residence. It would have been very agreeable to me could she have been admitted to the Retreat, as the entire care of her was at my expense. The cold night ride resulted in acute double pneumonia, of which she died speedily. The resident physician of the Retreat receives applications and recommends admissions. The regular monthly committees of four visit the institution weekly, examine papers of all applicants, and inspect wards. Any accusation of irregularities is a reflection upon the managers, their intelligence and honesty in the discharge of the duties of their trust. With the record of six Porros without a death, I am satisfied that if the above case had been a resident, and could have been admitted to the Retreat two weeks before period of delivery, she could have been saved. In this connection I might refer to numerous distressing cases—one a Porro at midnight—referred to me while resident at this splendid charity; many of them gave intense anxiety for the mother and for the record of a charity the good name of which had reached beyond the bounds of our own continent. One distressing case I now recall was sent from the Pennsylvania Hospital. The woman was pregnant and at term. She was suffering with a tubercular ankle joint; a partial resection had been done at the hospital, and drains placed. She was in a feeble and exhausted condition when sent to the Retreat for delivery. She was safely delivered, and returned to her family fully convalescent. It is not as much what is in the communication of Dr. Norris as what can be read between the lines; not so much the tortured statements as the animus. He

parades his conscientiousness as to the integrity of the statistics of the Retreat ; he seeks the statements of some itinerant gossip, that most despicable species of the human family, to impeach them. His time could have been more profitably employed in looking after the great trust his association with the institution imposes. Instead of traducing his predecessors, soiling the name and fame of the institution with which he is officially associated, and by innuendo insulting the managers, he could have employed his time in reducing his own mortality. We appreciate the fact that his mortality in his short incumbency must be very mortifying to him ; but he does not improve the matter by rushing into one of our leading medical journals and assailing the splendid record of the Retreat. His time, nerve, and brains could better have been devoted to the study of obstetrics, a subject with which he does not seem to be as familiar as one should be filling so high a trust. Where the mortality of any maternity (Retreat included) exceeds two per cent., it would be well for the managers, for the sake of their own good names and in all charity, and for the sake of poor mothers, to close the doors of the maternity or have its walls leveled to the ground.

I have no objection to Dr. Norris keeping his own statistics inside and out. As they now seem, certainly no one would be desirous of the job. But I object to any attempt on his part to keep or correct mine. The hand that touches me I would have surgically clean. Before my election to the Retreat I was informed that Dr. Goodell was opposed to my succeeding him. I called upon him to ascertain the grounds of his opposition. (At no time could our personal relations have been regarded as angelic.) In my interview with him he frankly stated that his records of the work of the institution would be left behind him, and that he did not desire to have an enemy succeed him. To this I replied that the records were the property of the Retreat ; that they belonged to the trust, and as such were sacred to the institution. Dr. Goodell was never given reason to complain of betrayal. I was succeeding a professor in one of our leading colleges, and I recall then as now the very terse utterance of an eminent teacher : "A dishonest man is dangerous enough in his ignorance, but he is tenfold more so when armed with the polished weapons of a higher education." I would like to have Dr. Richard C. Norris' statistics in the form in which he keeps them, the deaths in the Retreat, and those immediately following discharge, whether due to appendicitis, Cæsarean section, or imperfect convalescence.

THE PUERPERIUM.

NOVA GOA, PORTUGUESE INDIA, *April 18, 1895.*

To the Editor of the American Gynecological and Obstetrical Journal :

SIR: I desire to bring to the notice of my *confrères* a few cases in which diseases were cut short by simple means, in order that those who have more considerable practice may try them and compare the results.

1. *After-pains due to Retroflexion.*—Mrs. C, aged twenty-one, on the second day of her third confinement complained of very severe after-pains which did not yield to various medicines, and even to quinine in large doses. Vaginal examination revealed retroflexion of the uterus, which was reduced by laying the patient on her face, and the pains stopped, but on changing the position they recurred. The former decubitus having been therefore maintained for three consecutive days, allowing the patient to occasionally lie on her sides, she was completely cured.

2. *Retention of Placenta due to Tough Membranes.*—Mrs. P., aged twenty-five, had the membranes left untouched during her first and second labors until they protruded through the vulva, and the placenta had to be detached by Credé's method. In her third labor they were ruptured just before the full dilatation of the os to prevent uterine fatigue, and the third stage of the labor was normal.

3. *Inflammation of the Breast treated by Suction.*—Mrs. P., aged twenty-six, on the thirteenth day of her third confinement had a severe pain in the right breast attended with fever and spontaneous flow of milk. In spite of fomentations, the symptoms became worse, the increase of fever being preceded by a chill. The flow of milk stopped, the breast enlarged, a portion of it, of a pyramidal shape, being indurated and tender. By oral suction at the nipple about two tablespoonfuls of blood were drawn at about 11 A. M. on the following day, and all the symptoms gradually disappeared, so that by the evening the gland regained its natural size and functions.

4. *Puerperal Inflammation arrested by expressing the Blood out.*—Mrs. N., aged thirty-five, on the second day of her fifth confinement lost the child; on the fourth had pain in the hypogastric region, fever, and diminution of lochial discharge. Being worse on the following day, it was resolved to apply leeches, but on finding by palpation the uterus enlarged, it was held after Credé's method of extract-

ing the placenta, and about three ounces of blood were drawn by gentle compression and the patient improved rapidly.

This case and the preceding one show that timely application of vacuum and compression avoided local depletion by other means.

5. *Post-partum Hæmorrhage due to Suckling*.—Mrs. A., aged thirty-three, of nervous temperament, had a laceration on more than half of the neck of the uterus in her fourth labor due to meddlesome interference of the midwife, which bled profusely when the newborn child was put to the breast on the second day. The hæmorrhage was stopped by suitable means. When it was found that suckling induced the bleeding it was discontinued for two days, and on again taking the child to the breast there was no hæmorrhage.

This case shows that in women of nervous temperament suckling produces hæmorrhage when there is much laceration, as noticed above.

VIVIATO JOÃO PINTO, M. D.,

Professor of Anatomy in the Médico-chirurgical School of Nova Goa.

TRANSACTIONS OF THE PHILADELPHIA OBSTET-
RICAL SOCIETY.

May 2, 1895.

The *President*, WILLIAM H. PARRISH, M. D., in the Chair.

Dr. G. BETTON MASSEY read a communication on

A Large Œdematous Myoma treated by Abdominal Electro-puncture.

(See page 1.)

DISCUSSION.

Dr. GEORGE ERETY SHOEMAKER: I would like to ask Dr. Massey in what way he determines whether or not the intestine is adherent to the growth in front or to the abdominal wall before making abdominal puncture. It is the experience of most men that such adhesions can not be excluded absolutely by external examination. If there should be such adhesion, the puncture must be attended with considerable danger. It is difficult to see clearly that the doctor has made out his diagnosis of soft myoma in this case. I would call attention to the fact that the soft myoma is the very form of tumor where, in the ex-

perience of electricians, this treatment has been proved to be useless, and that it is advised by no good electrical authority. This increases the presumption that this was some form of cyst and not a myoma, since it so largely disappeared.

Dr. MASSEY : I recognize the possibility of incarceration of intestine across the top of the tumor as a danger which may be present in abdominal electro-puncture. Some years ago I was told by Dr. Emmet that in a case where he had made up his mind that there was nothing of the kind, on opening the abdomen he had found extensive adhesions. However, I have made now one hundred and fifty such punctures, and have never had any evidence of having had this to happen. It is quite possible that I may have passed through a loop of intestine, but I would not like to do it intentionally, and do not think I have done so. It must be remembered that the needles are insulated except near the point, and there would be no electrical action except in the tumor around the point of the needle. My own opinion is that by careful manipulation, with the aid of percussion, the puncture could always be made at a point where the bowel is not adherent. A condition of flatulence would render the detection of adherent portions of the bowel more easy.

With regard to the nature of this growth, I would say that the improvement under electricity is no proof that it was not a soft myoma. I agree with the statement that soft myomas are generally held to be unfit for electricity, and I would state that this is the first case of the kind which I have treated. This tumor did not have the consistence which soft myomas generally have ; indeed, it was semi-fluctuating rather than soft. It was not until I began using the stronger currents externally over the tumor that I observed the mass grow hard, and it remained so for half an hour after the applications. After finding it respond to both currents, I became convinced that it contained muscular fiber and that the diagnosis of myoma was correct. In making this electrical test I used two large electrodes—one placed on the front and the other on the back—and not only did the tumor go down under the application, but it remained so for several days afterward.

Dr. GEORGE M. BOYD read a clinical report of

Two Cases of Tubal Pregnancy operated upon more than a Month after Primary Rupture.

(See page 3.)

DISCUSSION.

Dr. GEORGE E. SHOEMAKER : The question arises in these cases of ruptured tubal pregnancy which have lived several weeks, What will become of the blood-clot which is known to have escaped, and which is completely surrounded by the tissues of the body? In other situations in the body we know that the blood may be absorbed and completely disappear, as, for instance, after a dissecting aneurism. If the amount of blood be large, however, or there be great tension, it will be likely to produce sloughing or an abscess. The behavior of large blood effusions in extra-uterine pregnancy long after rupture may be illustrated by three cases. The first one presented the symptoms of peritonitis following the rupture, but refused operation for a time. As she was steadily going down, she finally consented and got through safely. The second case had been treated for peritonitis by enormous doses of morphine. Her cervix had also been dilated for a supposed impaction of a retroverted pregnant uterus. When she afterward came into my hands she was extremely ill, profoundly septic and depressed. An offensive bloody mucoid fluid escaped from the anus, probably due to pressure. A large tumor in the abdomen reached nearly to the diaphragm. Incision with difficulty avoided the bladder adherent high in front and greatly thickened by inflammation. Adhesions of the small intestine and inflammatory tissue formed a sac containing several pints of black blood-clot. Most of the small intestine was buried in the thick sac wall and absolutely fixed. This illustrates what goes on in the abdomen in cases of large effusion of blood. She was washed out and drained, but it was too late ; she died. Miracles happen, and some of these large effusion cases recover without operation ; but most of them die. Nearly all should get well if washed out early. The third case was in the hands of another man ; the pressure and inflammation were sufficient to cause sloughing of the sac. She also died.

Dr. CHARLES P. NOBLE : I did not hear the paper, but as I entered the room I heard Dr. Shoemaker refer to one of my cases. I have no doubt but that in some of the cases of ruptured extra-uterine pregnancy the blood is absorbed. Most of us admit this. The ques-

tion yet to be decided is, What is the percentage of these cases? But after the blood is absorbed, an adherent and occluded Fallopian tube remains, which gives rise to trouble in many cases, and may suppurate. The case referred to by Dr Shoemaker shows that we may have gangrene as a result of ectopic pregnancy. This case I operated upon and the entire left broad ligament was gangrenous. That patient had general septicæmia at the time of operation and, it is needless to say, did not recover. I reported this case to the Society during last winter at one of the meetings. When a hæmatocele forms after rupture my experience is that if operated upon the patients recover. Every one of my cases recovered except the one with gangrene; so that in cases operated upon the danger is almost *nil*. We must balance this result with the danger of subsequent trouble from an adherent uterine appendage, and the very slow convalescence when Nature effects a cure.

In contrast with the above are those cases of rupture in which the blood is effused into the general abdominal cavity and does not form a hæmatocele. In these cases the hæmorrhage is generally from large vessels, and the patients nearly always die. I have operated upon three cases, and these patients all died. These women had the abdomen enlarged, as in abdominal dropsy. The loss of blood previous to the operation was the real cause of death in each case.

There is yet another class of cases which I have operated upon in which there is considerable blood-clot in the pelvis and also considerable blood in the abdomen. All of them have recovered. These cases are of an intermediate kind. In these cases there has occurred intermittent hæmorrhage. The explanation is that the patient has time to recuperate between the successive hæmorrhages. In the intervals the blood-making organs have had time to make fresh blood to replace the loss, and the proportion of red blood-corpuscles in the blood of these cases is much greater than when the same amount of blood is lost in a single hæmorrhage.

In conclusion, I will say that it must be admitted that some cases will recover without operation. But there is no way of telling these cases from those that will die from recurring hæmorrhage or from suppuration in the tube or in the hæmatocele. Nor can we be sure that the diseased and adherent tube will not require subsequent operation. The class of cases that will recover without operation is that in which the ovum dies early and in which the hæmatocele is moderate in extent. But the risk of operation in such cases is practically nothing. Therefore I have no hesitation in advising operation

in all cases, as adding to the certainty of recovery, and as greatly shortening the period of convalescence even in the simplest cases.

Dr. M. PRICE: In my opinion there are three distinct conditions in the cases of extra-uterine pregnancy to which the operator is called: 1. Primary cases with free hæmorrhagæ from pretty large vessels. 2. Cases where hæmorrhage has taken place under the peritonæum and is nearly encapsulated, and there is very little free blood in the abdominal cavity. These are also nearly acute, and in the course of two or three weeks they attain their full development. 3. There is another class of cases like those which Dr. Boyd has reported. These constitute a class which is frequently brought to our notice, but in proportion to the time they are allowed to go on is the danger greater to the patient. The operation is not difficult; the intestines can be separated readily by tearing the adhesions, the ovarian sac can be readily removed, and the patient saved. I do not remember seeing any one of this class which has died. But these are just the kind in which the blood has taken on retrogressive change and may form abscess, especially if they have been tampered with, so that the patient not only suffers from the loss of blood, but also from poison in the pelvis. It has been my custom in these cases to simply open the sac, remove the placenta and tube, and leave the remainder of the sac in position to protect the peritonæum, and for this reason: as soon as you take away or attempt to remove the sac you infect the whole peritoneal cavity. Moreover, the separation of the adhesions requires such a long time that it would unduly extend the operation, which would expose the patient to unnecessary risk. I lost one a few weeks ago, in the fourth month after abortion, where the blood-clot had become disorganized, and if it had not been for a blood-clot and cyst there would have been a question as to the cause of the trouble. That case I lost because I set out to enucleate the sac from the pelvic organs. These are the cases we ought to save, and I hold that we should save them all.

I disagree with Dr. Noble in the treatment of severe cases where the patient seems at her last gasp. I think that they should be operated upon promptly. I recall two cases in which Dr. Cordier, of Kansas City, helped me, both of which were in a desperate condition. During the operation, one gave a little cough and the blood spurted nearly to the ceiling, and she was without pulse. Dr. Hare has given the explanation of the pulseless condition of these extra-uterine cases: It is due to the pressure of the blood in the abdominal cavity. This is proved by the fact that as soon as the pressure is removed the pulse

returns. The operation is the simplest in uterine surgery. In primary cases, every day that the operation is delayed only increases the amount of danger. As regards recovery, I believe it possible; they recover in the same way that a man comes into a hospital with a crushed limb and refuses operation, and, after suffering for months, finally recovers. The surgeon will tell you that for every man that succeeds in saving his limb, there are ten who will lose their lives; for when one recovers, ten others will attempt it and fail, because they have not the strength.

I believe that every case of extra-uterine pregnancy should be operated upon; and that it is our duty as surgeons to operate upon every such case that comes into our hands. I remember two cases in which rupture occurred; they were clear cases of extra-uterine pregnancy, and without operation I would have said that they would not live forty-eight hours. Many cases of this kind are called peritonitis and all sorts of things, without their true nature being recognized.

Dr. G. BETTON MASSEY: The great danger in these cases is from primary rupture and its consequences. The patient is dying, probably, before she comes into the surgeon's hands. It seems, therefore, that all else but the surgical operation is of very secondary consequence. It is what the patient's condition demands and is done to save life. When the patient is not seen at the time of rupture and survives it, however, the danger is not great, as these specimens show. The conclusion of a previous speaker, that all cases should be operated upon, would mean that those who would get well without it would be subjected to operation as well as those who would not; and that the operation in the former is justified from the point of view of the health of the patient rather than her life. I hardly think that he presented both sides of the question with entire fairness. He spoke of what would become of the tubes and ovaries after the blood was absorbed, and, on the other hand, the almost entire certainty of recovery after operation. I hardly think this a fair presentation of the case. We should not forget that the operation also has its pathological effects, and cases that I have seen show that these effects should not be ignored. These cases I constantly see at the clinic and in private practice, some of whom have been before us, who complain of pain and functional disorder and go on from operation to operation without permanent relief. I recall a young girl, twenty-three years of age, who had had three operations—the last for impaction of the bowels from adhesions following the previous abdominal sections.

Dr. NOBLE: I would ask Dr. Massey how many cases he has

treated after operations for tubal pregnancy ; in other words, whether his remarks apply to tubal pregnancy or to abdominal surgery in general?

Dr. MASSEY : I do not know what the cause of the original operation was in most of the cases ; but in the case of the girl I refer to, the first was for removal of an ovary, the second for removal of the uterus, and the third was for adhesions and obstruction of the bowels. The cases I referred to were cases of obstruction of the bowels following abdominal section, in which the operation was performed for ectopic pregnancy and other similar conditions.

Dr. M. PRICE : I think that I would like to call attention to the question raised by Dr. Massey, whether or not these hæmorrhages are recurrent, and whether we should operate for the first hæmorrhage or not. There is always danger as long as the placenta remains, for as long as it retains vitality it will bleed. I have known a placenta to bleed for months afterward. The first principle is to operate to save life and close the source of the hæmorrhage which is draining away the life of the patient. Secondly, if there is blood effused it should come away. I hold that the operation is necessary to preserve life and to procure health. When there is no evidence of any disorder in the pelvis, and nothing to indicate that the patient is suffering from any local condition, of course no one would operate, and the woman may have passed through several such attacks before symptoms appear for which she applies to the surgeon for relief. If she has adhesions to the tubes or ovaries causing pain and disorder, no matter what has been the cause of these adhesions—tumor, gonorrhœa, or anything—she should be operated upon for their removal ; but in ruptured tubal pregnancy it is first, last, and all the time blood, blood, blood, which is going to kill our patients unless relieved by operation.

Dr. GEORGE M. BOYD read the report of

A Case of Double Tubo-ovarian Abscess Ligature coming away by the Bladder.

Ellen C., aged twenty-six years, a negress, single, was admitted into the surgical ward of the Philadelphia Lying-in Charity September 20, 1894. She had been suffering with pain in the ovarian region for more than a year. For the past two weeks has had a bloody vaginal discharge. Upon examination, the uterus was found fixed and to either side a mass painful on pressure.

Cœliotomy was performed after the patient had been in the hospital ten days. To be able to separate an agglutination of omentum

and bowels, it was necessary to make the abdominal incision larger than usual. After much manipulation an extensive tubo-ovarian abscess of either side was removed. The venous oozing which followed so much traumatism was so great that I found it necessary to pack the pelvis with a sterilized-gauze drain. This gauze was removed in part on the second day after operation, the remaining portion coming away on the third day. The abdominal incision was then drawn together by the sutures already introduced and the wound healed nicely. patient leaving the hospital in a much-improved condition.

Eleven weeks after the operation, after complaining of slight vesical irritation, she passed during micturition a mass of ligature.

I believe it is rather unusual for ligature to come away through the bladder, and what surprised me most was the slight vesical trouble during its travel through the bladder wall and from there through the urethra.

DISCUSSION.

Dr. GEORGE E. SHOEMAKER : I would ask whether, in the original operation, there was particular difficulty experienced in separating the bladder from the pedicle of the tumor, and whether, in Dr. Boyd's judgment, the ligature might not have been passed partly through the wall of the bladder. It seems to me very unlikely that a ligature should select the uninjured wall of the bladder in escaping from the abdomen ; but, if the needle had partly taken up the wall, it might pass through afterward with comparative ease.

Dr. CHARLES P. NOBLE : I am very glad to see this ligature, as it emphasizes a point which has been referred to many times in the discussions before this Society. In the first place, it is a large ligature, and, in the second place, the ends are cut rather long, and it is for these reasons, in my opinion, that the ligature came away, and not because it was of silk. I have used silk ligatures in all my abdominal work, and the percentage of ligatures that come away is about one per cent. I believe that if we use a small silk ligature with the ends cut off short it will give no trouble. I always use the double knot lest the knot should become untied. I have also been in the habit of re-enforcing my ligature by one through the top of the broad ligament, which controls the ovarian artery.

Dr. B. F. BAER : I believe with Dr. Noble that the ligature used in this case of Dr. Boyd's was too heavy and the ends were too long for the safe encystment of the ligature in the usual way ; but that does not explain why it came away through the bladder. The bladder wall must have been caught in the ligature.

Dr. NOBLE stated that he removed the uterus the other day simply to control bleeding. It seems to me that this is an extreme measure. Why would not deep ligation of the broad ligaments or ligation of the uterine arteries have been sufficient? I have never found it necessary to remove the uterus simply to control hæmorrhage. I do not believe in the prevalent doctrine that when the appendages are removed the uterus should be removed also. It is an unnecessary mutilation and an additional danger, for the percentage of mortality in hysterectomy is a little greater than that of ovariectomy.

Dr. M. PRICE : That ligature was entirely too large and the ends were too long. The whole difficulty in my mind is just this : If you tie a figure-of-eight knot which crosses over at the spot where you have your hæmorrhage, the hæmorrhage will not occur one time in a thousand from the uterine side, but it comes from the outer side near the ovary. In ninety-nine cases out of a hundred you will find the bleeding vessel to come from the ovarian artery.

Now, after denuding and taking off a large part of the peritonæum, I say how much of this large surface can you cover by Dr. Noble's method? You can not cover two inches. Now, why you should take out the uterus when the hæmorrhage is from the ovarian artery I can't understand. My plan is to tie the ovarian artery early and get it out of the way. For these cases I use a twisted silk ligature, which has been twice scalded, the twist is taken out by the scalding, and the strands of silk are put around the vessel and tied with all your might, which buries the ligature and favors its becoming encapsulated ; within an hour it is hermetically sealed, and, if it is a clean ligature, it will not go through the bladder or anywhere else. If you use a large ligature, you will have an infected ligature, and it will make a sinus. You may close the wound, but one day the ligature comes out. If you use a small ligature and tie it tight, it will not be heard of again.

Dr. NOBLE : In reply to Dr. Baer, I would state that I am not in favor of removing the uterus in all cases where the ovaries are removed. I have taken ground against this on several occasions ; but where there is hæmorrhage occurring from the trunks or branches of the uterine arteries, I have said that it is better to ligate these arteries and to take out the uterus. I would ask Dr. Baer if, in a case with hæmorrhage from both sides of the pelvis, he would tie both ovarian arteries and then tie both uterine arteries without removing the uterus? Where there is oozing deep down in the pelvis, it is my plan to remove the uterus and have all four vessels tied. I have done so a

number of times and the patients have made good recoveries. Tying the ovarian arteries for oozing deep down in the pelvis has no influence whatever. As regards taking out the uterus and covering the raw surfaces with peritonæum, Dr. Price has not done this, and hence is not in a position to estimate its value or the facility with which it may be done. By putting the patient in the Trendelenburg posture there is little difficulty. Extensive raw surfaces can be disposed of in this way, and the necessity for a drainage-tube avoided. In tying ligatures in removing the ovaries, it is not necessary to use a figure-of-eight knot at all. We have only to deal with the ovarian artery. A ligature applied near to the uterus and one to the outer portion of the broad ligament are sufficient. One controls the trunk of the ovarian artery, the other its anastomosis with the uterine artery.

Dr. PARRISH: Nothing has been said about the influence of the gauze drain in causing the discharge of the ligature in Dr. Boyd's case. My own experience has been that the use of the gauze drain will often prevent the encapsulating of the ligature, and will lead to its escape from the pelvis in one way or another.

Dr. BOYD: In answer to Dr. Shoemaker, I would say that adhesions were very extensive, and it is possible that some of the coats of the bladder may have been involved in placing the ligatures, and it seems to me that this is the explanation, probably, of the unusual course which the ligature took in escaping from the body. With regard to the size of the ligature used, it seems much larger now, after remaining in the pelvis and bladder for some time, than it was when used. It certainly looks much larger to me than it did then.

Dr. B. F. BAER presented the specimens and reported the following cases:

A Rare Form of Arrest of Development of the Right Uterine Cornu, simulating Ovarian Hæmatoma.

This small specimen which I first present is one of exceeding interest to me because of its unusual and probably unique character. It is a mass of fibro-muscular tissue which resembles the uterus in color and consistence, although not in shape. In its center is a little cavity which is lined by a mucous membrane which resembles the endometrium, but it has no outlet. It had attached to its outer side the right ovary and a portion of the Fallopian tube. By its inner side it had a membranous attachment to the uterus proper.

The patient was an unmarried girl of twenty years, in whom puberty occurred at the normal age, menstruation recurring without

event until about two years ago, when she began to suffer pain in the right ovarian region at the menstrual epochs. At first the pain was not severe, but it gradually increased in severity until it became of such intense and excruciating character that the patient would writhe in agony, and, although the usual anodyne remedies, including morphine, would be administered in large doses, she would only obtain relief with the subsidence of the flow. As stated above, the pain was always felt most intensely in the right iliac region. These symptoms led me to suspect hæmatoma of the right ovary, and physical examination confirmed this view, for I found a tumor about the size of a hen's egg occupying the position of the right ovary, except that it was located higher than the ovary usually is under these circumstances; and it was not tender upon pressure, nor was it fixed. The cervix uteri was infantile, the os small, and the uterus deflected to the left. In accordance with my custom in the treatment of hæmatoma of the ovary, which gives rise to such serious symptoms, I advised its removal, which is, I believe, the only proper treatment for this condition. This advice was gladly accepted, and I operated about six weeks ago. Under ether, I was a little uncertain as to the correctness of the diagnosis of hæmatoma, because the tumor appeared so firm and elastic, and was situated too high. Abdominal section was made, and the small tumor which I hold in my hand came into view. It had the color and consistence of uterine tissue, and the right ovary was found attached to the mass. Diagnosis of arrested development of the right horn of the uterus was made. The mass was removed, together with the right ovary, which you see attached, after ligation of its membranous attachment to the uterus. The left side, or uterus proper, being in an undeveloped condition, it was thought best to remove the left ovary also. The patient has made a good recovery. Section of the tumor showed it to contain a little cavity which is lined by an endometrium, and which contained a small quantity of menstrual fluid. This cavity had no outlet whatever.

The explanation of the intense dysmenorrhœa from which the patient suffered was evident; there was an effusion of blood into the cavity with each menstrual recurrence, but as there was no outlet, the pain resulted.

In connection with this interesting case I wish to record the following, which has never been reported:

A Case of Double Uterus and Vagina, one Side of which was Patulous and the other closed, resulting in Tumor from Retention of Menstrual Fluid, while Menstruation was Normal from the Opposite Side, in a Girl Fourteen Years of Age.

Instead of a specimen, I will present a diagram which represents the condition found in the following case :

A. B. was sent to me several years ago. She was fourteen years of age, and had begun to menstruate eleven months before I saw her. At the second or third period after the menses first appeared she began to suffer intense pain with each recurrence, and soon after there was evident a swelling in the right iliac region and a smaller tumor or protrusion at the vaginal orifice. Finally the pain and distention became extreme ; soon after this I saw her. The history led me to suspect retention of the menses, but the presence of a regular monthly flow was at first puzzling. Physical examination, however, fully explained the unusual phenomena. The right iliac region was found distended by a tense, globular, fluctuating mass as large as a cocoanut. On the upper border of this mass an elongated firm body, somewhat the shape of the uterus, could be distinctly outlined. Inspection of the vaginal orifice revealed a mass the size of an egg, which occupied a position on the left side of that orifice. It was purplish in color, and resembled the vaginal mucous membrane. Pushing this mass aside, the finger entered what appeared to be a normal vagina, except that it was flattened by pressure from the left side by a tense, fluctuating, elongated mass which was continuous with the tumor at the orifice. At the upper end of this canal a small cervix uteri was located. A sound was now carried along the finger and made to enter the uterine cavity. It curved over the summit of the iliac tumor and passed horizontally to the right, showing that the firm body referred to above was really the uterus or a part of it. The patient had a double uterus and a double vagina, and menstruated from both uteri, but atresia of one vagina existed ; hence the retention on that side. I advised operation, and the patient entered my private hospital.

The vaginal septum was divided with scissors from the orifice to the os uteri. A large quantity—fully a pint—of a tarlike semi-fluid escaped. A pin-hole os uteri was now discovered. A free incision was made from this point outward, when at least a quart more of the same fluid escaped. Thorough irrigation of the uterine cavity was made and then the uterine septum was divided to the fundus. This completed the operation. The after-treatment consisted of a daily

antiseptic irrigation. The patient made an easy recovery, and has remained in good health since.

Dr. Baer also reported the following cases and presented the specimens :

A Case of Ovarian Tumor in which Rupture had occurred followed by Chronic Peritonitis.

The large specimen which I here exhibit is one of peculiar interest, because it shows that although the question of early operation in ovarian cystoma has been urged so often that the profession and the laity should both be familiar with the fact that early interference is necessary for the highest operative success, we still too often meet with cases which, like this one, narrowly escape death as a result of delay.

The patient, Mrs. L., aged forty-seven, five children, five years ago consulted the late Dr. Goodell, who made a diagnosis of ovarian tumor and advised its removal, but she declined operation.

Shortly afterward there were symptoms of rupture of the cyst, followed by profuse diarrhœa and micturition, with decrease in the size of the tumor.

She then had great tenderness of the abdomen with tympanites and other evidences of peritonitis. She recovered, and seemed better for a time, the tumor remaining of the diminished size ; but, as usual, the cyst began again to refill. Its growth was slow, however, until about six months ago ; after that date the increase in size was rapid, and the patient became so ill from exhaustion and emaciation, and from the dyspnœa resulting from pressure on the diaphragm, that successful operation was now considered almost beyond reach. Under these circumstances I was requested to see the patient. I found her even worse than described, but I decided to operate. For this purpose she was removed with difficulty to this city, where the operation was performed on April 17, 1895. An incision through the linea alba revealed the bladder drawn up as far as the umbilicus and spread out over the tumor. But I was on the outlook for it, having, several years ago, cut into the bladder in a similar case. (I think Dr. Noble, as well as some other invited guests, was present at that operation. It was the first time that I had been so unfortunate as to wound the bladder. My incision extended at least two inches through the wall of the viscus. I immediately closed it with several silk sutures. No trouble ensued, for the patient made an uninterrupted recovery. I have wounded the bladder once or twice since, no bad result occurring

in either case.) But to return to the case in hand: After learning that the bladder was adherent to the tumor, I carried my incision farther up, and came upon the growth just below the umbilicus. The tumor was found to be ovarian, with the thick walls which you see, and it was closely adherent to everything with which it came in contact. The mass was friable, and in manipulating to separate adhesions, rupture occurred. The cyst contained great quantities of cheesy material, as well as a semi-fluid substance. In addition there was a large quantity of fluid in the abdominal cavity. Finally, the tumor was separated from its firm intestinal adhesions and the pedicle reached, the latter being situated low down under the bladder, where it was found to be attached, through the Fallopian tube and broad ligament, to an enlarged and fibrous uterus. Ligation of the pedicle was made, and thorough irrigation continued until the peritoneal cavity was entirely freed from tumor contents. Examination now showed the uterus to be the size of a large cocoanut, but the patient was in such a low condition that further operative measures could not be considered. After placing a glass drainage-tube in the peritoneal cavity, the patient was returned to bed more dead than alive. Under careful and continued stimulation she finally rallied, and has recovered, much to the surprise of every one who saw her before or at the time of the operation.

This case emphatically teaches the folly of the delay which places the patient, to say nothing of the surgeon, in so hazardous a position and upon a trial so great.

The patient fortunately recovered, but if she had died it is probable that the fatal result would have been attributed to the operation, whereas the operation would have had nothing to do with the death.

I am so firmly convinced of the advisability of early operation that where a tumor, of whatever character, is found to exist I always advise its removal, even though the patient does not then appear to be suffering from its presence.

The next specimen is from

A Case of Intraligamentary Fibrocystic Tumor of the Uterus. Hysterectomy, in which Unusual Difficulties were Encountered.

Mrs. L. G., aged thirty-three years; married two and a half years; sterile.

Puberty occurred at the normal age. She had always had dysmenorrhœa, so that she was obliged to go to bed the first day of the flow. Six or eight months ago she was awakened in the night by a

violent cramplike pain in the right ovarian region, and in placing a hand upon the abdomen she felt a "knob" in the right iliac region. From that time on there was an increase in the size of the mass, and shortly afterward she noticed another mass about the size of a goose egg in the left iliac region. She consulted a physician, for the first time for this trouble, in May, 1894. Tumor was recognized, and the patient placed upon ergot without benefit. After this she had repeated attacks of violent uterine tenesmus, lasting five or six hours, and only subsiding after the free use of opiates. The attacks of pain were attended with profuse metrorrhagia. The pain and hæmorrhage caused another physician, whom she next consulted, to think that the tumor was an intra-uterine fibroid, which could be removed by way of the cervical canal, and for that purpose, on September 8th, she was etherized and the cervix dilated, when it was determined that the tumor was intramural. Nothing further was done.

On October 16th the patient was placed in my charge. She had then been bleeding continuously for almost a month, and was generally in a very low condition. She had lost considerable flesh, and was cachectic in appearance. Examination revealed a tumor occupying the entire pelvis, especially on the right side, and extending into the abdomen. It was immovably fixed and very firm, but obscurely fluctuating. The cervix was carried far up behind the symphysis pubis, so that it was almost entirely out of reach. The left iliac region was occupied by an irregular mass, which was determined to be the uterus, as it appeared to be almost one with the tumor.

Diagnosis.—Intraligamentary tumor of the uterus or ovary. The patient entered a private room at the Polyclinic Hospital, and was placed upon preparatory treatment, which was continued about a week.

Operation October 23, 1894. Abdominal section exposed the tumor. It was found to be entirely subperitoneal within the folds of the broad ligament, which were widely separated and carried upward into the abdominal cavity. The right Fallopian tube and ovary were spread out over the surface of the tumor. The uterus was comparatively small, and was located on the left side of the tumor. The mass looked very vascular, and the operation for its removal appeared formidable. I first placed a ligature, after the method which I have introduced for supravaginal hysterectomy, upon the left broad ligament. Severing the latter, I next ligated the left uterine artery. After careful examination of the relation of the cervix to the tumor, I determined to pursue a different method from that which I usually follow. I immediately amputated the cervix, and came upon the

uterine artery of the right side and then ligated it, thus controlling all arterial hæmorrhage. But the real operation only now began—that of enucleation of the tumor from its very deep and intimate pelvic connections. Many veins were severed in this manipulation and hæmorrhage was free, but with pressure forceps and packing with balls of sterilized gauze as I proceeded, I was enabled to soon tear the tumor from its capsule. This was rendered more easy because the tumor was found to contain some liquid in its interstices evacuating, which reduced its size somewhat. Finally the mass was removed, leaving an immense vascular cavity in the pelvis. This cavity was made up of the widely separated folds of the right broad ligament and the pelvic peritonæum, which had been lifted up by the growth of the tumor. The packing was next removed, when it was found that the hæmorrhage had about ceased. The peritonæum was now folded and stitched over the tumor cavity, and the abdominal cavity then closed without irrigation or drainage.

This is the sort of case in which gauze packing is sometimes placed and allowed to remain for the purpose of checking hæmorrhage and to serve as a drainage apparatus. I was only once guilty of leaving gauze in the pelvis for this purpose, and that once was sufficient. I never found it necessary for the purpose of controlling hæmorrhage, and certainly it is not necessary for drainage. Hæmorrhage can and should always be controlled without such a clumsy procedure. When drainage is necessary it should be done thoroughly with the glass tube, but I so seldom find it necessary that it is quite unusual for me to place a drainage-tube. I am constantly closing wounds without gauze packing or drainage in cases of this character and in pus cases, and my patients are better for it, I am sure. Of course I am always careful to remove all pathological products, leaving only healthy tissues.

The method pursued in this case is one which I have followed in several other instances of broad-ligament fibroids—that is, ligating one side and then amputating the cervix, and afterward ligating the vessels on the other side before proceeding to the enucleation of the tumor.

The second case that I operated upon by the supravaginal method was one of somewhat similar character to the one just related. It was a fifty-pound fibrocystic tumor, in which several electro-punctures had been made, rendering the contents of the tumor purulent in character. I was somewhat frightened by the large size of the venous channels upon and around the tumor mass. There was con-

siderable bleeding during the operation, and for hæmostasis I packed into the wound balls of sterilized gauze, which were removed before closing the abdominal incision. This operation was so formidable in character from hæmorrhage and the shock to the patient that it was thought by all present that she would certainly die on the table; but she rallied and recovered. I closed without gauze packing, but made great compression by strapping a large roll of gauze on the external surface of the lower abdomen immediately over the tumor cavity. I believe this woman would have died if I had left this packing within the pelvis, for the additional healing processes would have been a far greater drain upon the vital forces.

DISCUSSION.

Dr. CHARLES P. NOBLE: I wish to congratulate Dr. Baer upon having great luck as well as skill and judgment. I am sure that if any of us had such great oozing and did not make any provision for its arrest, our patients would die. I am both pleased and surprised at the results which Dr. Baer has had in these cases, and in closing up old pus cases without drainage, even though the pus has discharged previously into the bowel. The bladder case I remember perfectly, because he had scolded me for cutting into the bladder. But when I went to see him operate I found him sewing up a bladder which he had just cut into. I understand that he cut into another in the same week. Doubtless that was because he scolded me for my own accident.

Dr. WILLIAM H. PARRISH: I would like to ask Dr. Baer if in any of his cases he found it necessary to reopen the abdomen or to make an opening through the vagina because of blood accumulation during the after-treatment?

Dr. BAER: In reply to Dr. Noble, I would say that I have had just such a case as he refers to within two months, and I expected to have presented the specimen this evening, but I found after opening the jar that it was not there. The patient, aged twenty-eight years, with one child five years of age, became ill about a year ago with pelvic inflammation and abscess. The physician in attendance opened through the vagina, evacuated the pus, and drained. The patient got apparently well, or rather improved and got about. She then, following the usual course, had a second attack, which was very much worse than the first one. When I saw her, ten weeks ago, she was exceedingly ill with general pelvic suppuration. The whole pelvis was filled and the cervix crowded up and forward behind the

pubic arch. The abscess had opened into the bowel two or three weeks previously, and had since been discharging pus freely by this channel. An operation was advised and she was brought to the hospital. I opened the abdomen and found that a recent hæmorrhage had occurred and filled an old abscess sac. I then suspected that extra-uterine pregnancy existed as a complication, but microscopic examination, since made, does not confirm that view. The cavity was quite large, and was lined with a pyogenic membrane. The tubes and ovaries were riddled with sinuses. I did not look for the sinus into the rectum. I would have done so some years ago, but not now because I have learned from experience that Nature can take better care of such a condition unaided than by my meddling interference. The patient went home on the nineteenth day. I irrigated, but did not think for a moment of putting in a drainage-tube.

I have operated upon a number of cases where pus had been draining into the rectum through a tortuous sinus for a longer or shorter period before the operation. I irrigated in all of them, but did not drain, and every patient recovered.

I would choose rather to omit drainage where there was an opening into the bowel, because the presence of the tube only helps in the formation of a fæcal fistula by interfering with the natural processes of repair. I learned that fact some years ago in a case in which the late Professor Agnew was associated with me. Pus was discharging from a tubo-ovarian abscess into the bowel. We operated and placed a glass drain, watching it carefully. The patient recovered with a bad fæcal fistula. I afterward, with the assistance of Dr. Agnew and Dr. White, tried to close the opening into the bowel, but could not reach it because of its deep pelvic location. The patient lingered for three months, and finally died of septic pneumonia. In another case of intraligamentary cyst in which the bowel was denuded I placed a drainage-tube. Two days afterward fæcal matter began pouring through the tube. I was so horrified, having the case just related fresh on my mind, that I got my brother, who was then a medical student, to come with one of his fellows to aid me, and we quietly, four days after the operation, put the patient on the table and reopened the abdomen. I now learned something which opened my eyes to the irritating effects of a drainage-tube. I found a large mass of lymph surrounding the tube and entirely shutting off the peritoneal cavity, so that it was draining nothing but the bottom of the tract, where it had produced an opening into the previously denuded bowel. Nature was endeavoring to get rid of the drainage-

tube, and had thrown this wall of lymph around it for that purpose. I removed the drainage-tube and tried to close the opening in the bowel, but failed to reach it because it was too deep. I then closed the abdominal wound, expecting the patient to die ; but, thanks to the *vis medicatrix naturæ*, she recovered and went home four weeks afterward. The fistula closed later. I have always felt sure that if I had not used a drainage-tube in that case the patient would have made a smooth recovery. From that time on I gradually used drainage less and less, until I finally dropped it almost altogether. I have drained very little during the last seven or eight years, and I believe my percentage of mortality is as low as that of my friends who drain more ; I have far less trouble, and my patients are more comfortable and have fewer unpleasant sequelæ.

The lesson I have learned about fæcal fistula, and which may be useful to my younger friends is this : Leave the case to Nature, and the fistula will close, as a rule.

The President asked whether I had ever found it necessary to evacuate a collection of blood which had formed after the incision had been closed without drainage. I reply : In not a single instance, that I can recall, have I found it necessary where there had been adhesions. I have, however, in two instances of simple hysterectomy, where there had not been a single adhesion, found it necessary to evacuate a collection of blood from the broad ligament below the point of ligation. These were cases of what Tait describes as broad-ligament hæmatocele, and of which he some years ago reported eighty cases. I believe that if we were to examine all of our simple ovariectomies even a day or two after the operation, we would find a thickened broad ligament, the result of oozing below the ligature. These effusions are rapidly absorbed, and as a rule they give no trouble. Occasionally, however, absorption does not rapidly occur ; then there will be rise of temperature and slow convalescence. I repeat that the only instances in which I have found it necessary to evacuate blood were in two or three cases of broad-ligament hæmatocele, but never from bleeding the result of separated adhesions.

Adjourned.

FRANK W. TALLEY, *Secretary.*

TRANSACTIONS OF THE TRI-STATE MEDICAL SOCIETY
OF IOWA, ILLINOIS, AND MISSOURI.

April 2, 3, and 4, 1895.

The *President*, JAMES M. BALL, M. D., in the Chair.

PUERPERAL ECLAMPSIA.

BY A. D. PRICE, M. D., HARRODSBURG, KY.

(See page 5.)

DISCUSSION.

Dr. EVERETT J. BROWN (of Decatur, Ill.): This is a subject which we as general practitioners should regard as very important, for we never know at what time we may be called upon to meet a case. There are two great classes of eclampsia—the ante-partum and the post-partum—and there is nothing more terrible to me, I think, than a case of ante-partum eclampsia—one occurring in the last months of pregnancy, in which there has not been the least sign of labor or dilatation of the cervix. I recently had such a case, and the fatal termination, which I think was due entirely to the great severity of the convulsions, has set me to thinking on this one subject. There is such a diversity of opinion in regard to the proper mode of treatment in such cases that I think it is a subject which it is well for us to discuss. This case occurred twenty miles from our town, and I was called in consultation with an older physician. The woman was eight months pregnant. She had had no prodromal symptoms except possibly a very severe headache. The first intimation was a convulsion. The physician she called in attendance paid but very little attention to it. I think that it was probably the first case he had ever seen. He gave her bromides and chloral. When I arrived eleven hours afterward she was in a comatose condition, and had been so for eight hours and had had twelve or fifteen spasms. She could not be aroused, being completely comatose, and the cervix was not dilated in the least. I consulted with the physician in attendance. She was having convulsions every twenty minutes or half an hour at this time. We decided that the best thing we could do was to dilate, and if you have ever endeavored to dilate a cervix which has not been influenced in the least by labor pains you will realize how very hard it is

to accomplish the object. I tried Barnes' bags, but, unfortunately, the rubber was in bad condition and could not be used and I had to depend entirely on my fingers, and it was two hours and a half before I succeeded in applying the forceps. We had managed by means of chloroform, hypodermics, and morphine, to control the convulsions to a certain extent. I delivered a living child and it survived two hours. The hæmorrhage was considerable. Patient became conscious within an hour after. I turned the case over to the regular physician and she died within ten hours, but she had no more convulsions. This case was one, I think, of more than ordinary severity. It is the third case I have had in my practice.

Dr. J. F. PERCY (of Galesburg, Ill.): This paper, Mr. President, is so concise and covers the field so well that I think any one here who has any experience along these lines should give it. I have had three cases in the last seven years of puerperal eclampsia and none of them have died. In one of them, my last case (and this illustrates what the doctor said about the necessity of educating our patients) the woman was blind in the morning and the husband thought that that was a natural accompaniment of pregnancy, and went off to his work without saying anything about it. At the same time she had, of course, the terrific headaches. Her labor did not commence until the afternoon. I was called—it was simply an emergency case, I did not know the family, and I immediately sent for the family physician and together we delivered her. The child was dead. Like Dr. Brown's case, the cervix was not dilated, but in that case it was not difficult to dilate the cervix. I had to turn, however, to deliver the child. I do not know whether it was the fault of the physician who attended the woman or not, but a pelvic abscess developed, and she lingered for a number of weeks between life and death. I saw her when it seemed she could not possibly live, and yet she made a good recovery.

I had another case some years ago, which I saw also in consultation, and from something the woman said to me once—I met her accidentally, though I was not her physician—I suspected that she was a subject of syphilis. She had some trouble with one of her knees, and she called it rheumatism, and also said she was in the habit of flowing a great deal. When I saw her in consultation I said to the doctor that perhaps it was syphilis that was causing this woman to have eclamptic seizures. She had five. He had followed the case very closely and found that at no time were there any symptoms, as far as the kidneys were concerned, of renal insufficiency due to this trouble. This was at the fourth month she had her eclampsia come on, and

she had the most terrific paroxysms I ever saw. After this she was put on anti-syphilitic treatment and her rheumatic condition entirely disappeared. She seemed to be entirely well and the flowing stopped. She has not been pregnant since, though I think should she become pregnant again she would not have eclamptic seizures.

The other case was the first one I ever had of eclampsia, and, with Dr. Brown, I remember the awful impression it made upon me and the awful impression it made upon the family. It was a case which I wanted to deliver with forceps. I suppose they thought I was so young that I should not be allowed to use them, and they would not consent to my using them until she had an eclamptic seizure, and that was enough to get their consent. The child was dead when born.

Dr. HENRY JACOBSON (of St. Louis): This subject is especially interesting to me, as it touches upon my line, the kidney. I think that all general practitioners should observe the urine from the beginning, not only for the amount of albumin in it, but for the amount of urea. Many times you may examine the urine and not find albumin, but you will notice the amount of urea given off each day. If you find there is the parenchymatous kidney or the cirrhotic kidney, then attend to the hygiene, see that she has daily baths, see that the skin takes off the work from the kidney, attend to the bowels, give her lithia water or lithia in some form, and keep a careful watch on her all the time. If you do that I think you will rarely have these convulsions. Also attend to her diet; see that she gets very little food which will cause an extra amount of urea. I think that buttermilk diet is one of the best for nephritic disease. If buttermilk causes diarrhœa, give her some other form of milk—koumiss, for instance.

Dr. EMORY LANPHEAR (of St. Louis): It is all very well to talk about examining the urine and all that kind of business, but the majority of cases of eclamptic convulsions that will come under your observation are those in which you will find that the woman does not know she is pregnant until she sends for you. I will tell you how you can save cases just like that of Dr. Brown's, and there is no difficulty about it if you proceed properly. In the first place, you have to ignore the family, go ahead, regardless of what the family says, and do what is right. Chloroform the patient if she has not been delivered. If the os is not readily dilatable, do as I have done time and time again—insert one finger up by the side of the cervix, insert the scissors with the other hand and cut right through the cervix up to the cervico-vaginal junction to the other side, then upon the other

side simply make an artificial laceration of the cervix, and if you are careful, there is no danger of getting into the peritoneal space; then sew up the cervix, and you have saved the patient temporarily. Of course where the abnormal contraction of pelvic structures renders delivery impossible, make Cæsarean section, and do it hastily, or inside of half an hour, as you can readily do if you have a knowledge of the technique of the operation. That, of course, is not advisable if you can do the other operation of which I have spoken. But it is not the cases of puerperal convulsions which occur before delivery which alarm and puzzle us as to treatment; it is those terrible cases which come after the delivery of the child. What are we to do? Save the life of the patient. How? Simply by insuffusion with normal saline solution, which is the only rational treatment, and it has never failed. You take a woman who has puerperal convulsions, whether before delivery or after (but it is particularly in cases which occur after delivery that it is efficacious), you put one or two pints of normal saline solution into that woman's circulation, and it will avert further convulsions. If a second attack does occur, make an intravenous injection of the normal saline solution. Now you say, How can this do any good, with this total suppression of the urine? If you dilute the blood with a sufficient amount of normal saline solution you will find that within thirty minutes she will begin to pass her urine without any difficulty. This has been tried in at least twenty cases and it never has failed.

Dr. PRICE (closing): I will only say, Mr. Chairman, that prevention is always better than cure, and if, as has been said by the gentlemen, we have these cases under constant supervision, we are often enabled to tide the patient over an eclamptic seizure, and I do not believe the mass of the profession has realized the importance of that fact. Certainly the public has not, and it becomes our duty to urge the importance of this fact upon them, not only once, but time and again. It takes a long time to educate the public to the acceptance of a view of this kind. I will only say that if a patient has one convulsion it is our duty to deliver that patient at once without further delay, rapidly dilating the cervix with the finger.

THE UTERINE SOUND AND CURETTE.

BY W. W. CATTO, M. D., DECATUR, ILL.

(See page 9.)

DISCUSSION.

Dr. J. H. ETHERIDGE (of Chicago) : MR. PRESIDENT : I think the older the worker is in gynæcological work the less he uses the sound, and about the only class of cases in which he uses the sound is in tumors. The size or location and the condition of the uterus as to flexions and displacements can almost always be outlined with the fingers, therefore removing the necessity for using the sound a great deal. I recollect using the sound in the past few months in the case of fibroid tumor about the size of a large goose egg attached to the posterior wall of the uterus, and the whole mass did not reach more than two thirds of the way up to the umbilicus. The sound went in easily, in and in and out of sight, ten inches. I felt the point of the sound about on a level with the umbilicus. I did not know what occurred until I opened the abdomen, when I found that the uterus, instead of being placed directly upright, was turned around in such a way that I passed the sound right up through a Fallopian tube. In the use of the curette the doctor omits one thing which is of great importance to the physician, and that is when he has the great misfortune to scrape a hole through the uterus, when the sound does not strike bottom and he keeps on until the conviction strikes him that he is puncturing a hole through the wall of the uterus, then he has trouble. Experience with that misfortune leads me to make this one remark concerning it, and that is, if we have the misfortune to puncture the uterine wall early in the curetting, a good deal of trouble will follow, because considerable septic material is forced into the abdominal cavity ; but if it occurs at the end, the patient will get well absolutely without a symptom. I have seen that three times.

Dr. EDWIN WALKER (of Evansville, Ind.) : While the paper is very interesting, I think, as Dr. Etheridge intimates, it gives rather a false impression. The sound certainly should be used only in exceptional cases. There is one expression there, I think, which is rather misleading ; he speaks about the sound always being surgically clean. In my own experience I regard it of greater importance that the vagina should be surgically clean. I have long since ceased the

use of the sound except where I have had my patient prepared for an operation. Again, he speaks of using the sound as an applicator, or for making applications inside of the uterus. I have long since stopped using applications inside of the uterus. I have never seen any benefit from them. Of course we are all compelled to use the curette, but I think it possesses a limited advantage. In those cases where we have a large amount of *débris*, as following an operation, it is a very useful instrument, but I would take the precaution to thoroughly dry the uterus out after using it. In curetting for endometritis and similar troubles I have stopped irrigating entirely. I find my patients get along very much better if I dry the cavity out with gauze, in fact, I think that in all operations on the genital tract we are inclined to irrigate too much. I formerly used irrigation for doing operations on the cervix and perinæum, but I find patients get along very much better where I do the operations dry. In regard to perforating the uterus with the curette, I have fortunately not had that accident; but I remember one instance in which I surely would have done it if I had not noticed in dilating the cervix that there was so little resistance; with just the slightest pressure on my dilator the cervix gave way, so I dilated then with my finger. I found that I had a flabby uterine cavity with very thin walls—in fact, there was no wall there at all. I carefully curetted a large amount of fungous matter, and the patient did very nicely.

Dr. CATTO (closing): I did not wish to convey by my paper the idea that the sound should be used in these cases of which I speak. It was my intention only to give the impression that it might be used in that class of cases, simply as an assistance in diagnosis when other means could not be conveniently used. Now, I do not think myself that in every case it is an easy matter to make out the position of the uterus without the use of the sound. You take a woman who is fat, young, with a narrow vagina, the uterus high up in the pelvis, possibly an acute ante flexion existing, and I believe there are cases that you can not map out with your fingers, and the sound is the only means by which you can determine the shape of the uterine canal.

As to the vagina being surgically clean instead of the sound, there are very few cases in which the vagina is not clean, so far as the entrance of the sound is concerned. We are supposed to wash out the vagina before introducing any instrument into the cavity of the uterus; but where the sound is clean and gonorrhœal virus does not exist in the vagina, the entrance of the sound will ordinarily do no harm.

Abstract of a paper entitled

A REPORT OF CASES.

By J. H. ETHERIDGE, M. D., CHICAGO, ILL.

Under the above heading the author quotes the following cases :

CASE I.—Miss A., thirty-two years old. Menses had been regular until October 15th, when they became irregular and profuse.

When seen by the author, January 9, 1895, she had suffered several severe flows. Examination at this time disclosed a fibroid of irregular shape, filling up the pelvis and extending two thirds of the way to the umbilicus.

January 18th.—Abdominal hysterectomy was performed. The tumor was shaped like a parallelogram ; the upper part was hard and the lower soft, and it was diagnosed as a fibrocystic tumor.

The broad ligaments were tied off on each side, the uterine arteries included in the ligatures, a flap of peritonæum dissected away on front and back down to the anterior and posterior *culs-de-sac* in front and behind. The cervico-vaginal attachments were then cut away, and the entire mass lifted out. The two crescentic flaps were then brought together across the entire pelvis, the broad ligaments being turned in and left permanently extraperitoneal. An uninterrupted recovery followed. The decision to operate at once was hastened by the suspicion of coexisting pregnancy, which the operation showed to be correct, for a three months' fœtus was found in the lower part of the growth. The history of menorrhagias for three months previous indicated the absence of pregnancy. An attempt to pass the uterine sound failed because of a sharp retroflexion. The patient was single, and had always borne a spotless reputation.

In regard to pregnancies complicating fibroids, the only cases in which hysterectomies should not be done are those where the fibroids are in the fundus. The author, however, considers that hysterectomy is justifiable even in these cases.

CASE II.—Mrs. B. Left sclerotic ovary removed and right entirely sloughed away and found loose between the uterus and bladder. The great point of interest in this case was the loose ovary. Immediately on introducing the fingers it was discovered and taken out. It was dark, perfectly smooth, and slippery. Upon squeezing, it yielded a crackling sensation, as if filled with sand.

The scalpel used in cutting it open was dulled by the calcic degeneration present.

There was scarcely enough tissue left in any part of it to make a slide. The entire surface of the broad ligament was examined, and no trace of an ovary found. The tube was atrophied and contracted, and of the fimbriated extremity only the most rudimentary suggestion remained. The pathological process was probably the formation of an embolus in the ovarian artery. The feeble capillary circulation in the ovary favored the deposit of calcific matter, which, in turn, led to complete vascular obstruction. When the vascular supply of the connections was cut off, it is probable that the attrition of its surroundings caused its severance. This author has found no such case reported in medical literature.

CASE III.—Mrs. C. Case of extra-uterine pregnancy. At three months, suppuration and extrusion of foetal bones through the bladder.

Patient twenty-four years old. Three months after marriage, in July, 1894, a series of four hæmorrhages, about two weeks apart, began from the bladder. The hæmorrhage always came at the end of urination, and amounted to one or two pints. During December she had erratic chills and temperature, and lost about twenty-five pounds in weight. February 23d passed through urethra a foetal tibia. March 11th a humerus, and said that she had passed several small bones. She had almost regained her health and weight by March 26th, when with great pain, and failure to accomplish it, she endeavored to pass another bone.

March 26th.—The bone was located and extracted through the urethra. It was the left ilium.

Since January she passed large quantities of pus from the bladder, which probably came from the foetal sac. The origin of this suppuration is very obscure; but from whatever source the infection came, it found a fertile field for development when it reached the foetal sac. The soft parts of the ovum liquefied, permitting the maceration of the foetal bones to such an extent that they were ragged and sharp, and pierced through the least resistant part, which happened to be the bladder.

The author assisted the late Dr. William Byford eighteen years ago in removing the remains of a foetus from an ectopic sac through the abdominal wall, at a point midway between the umbilicus and the anterior superior spine of the ilium. The most lasting impression was induced by the disgusting odor of the pus. The patient had been

ill for a number of weeks from the usual effects of sepsis, experienced prompt relief after the operation, and finally recovered.

Nature points out the proper channel for the delivery of these bones. It was therefore thought unwise to enter the abdominal cavity on account of the great virulence of the pus to be encountered. Many bacteria were found in the pus voided in the urine, chiefly bacteria of putrefaction.

DISCUSSION.

Dr. B. MERRILL RICKETTS (of Cincinnati): Dr. Etheridge has given us some very interesting reports of cases, and I do not know that there is very much to say. One, where the ovary had sloughed off, is unusually unique. With reference to the removal of the skeleton, that, I think, is of the greatest interest to us and something that is very practical. Two of these cases have come under my observation—one where it was necessary to remove all the bones *per vaginam*, the other where they were allowed to come away *ad libitum*. Where such a state of affairs exists as has just been described, I believe it is the duty of the surgeon to explore and remove whatever *débris* there may be. If we can remove interligamentous cysts and fistulæ and do the other abdominal work which is being done, no difference what the degree of infection may be, I think that we are justified in making an exploratory incision and removing the skeleton or the bones. The doctor states that in his cases they were allowed to come away *ad libitum*. The only reason he gave for such a procedure as that was to avoid the great danger of infection. I can hardly see how the pus in that case would have been any more infectious than the pus found in an ordinary pustule, in an interligamentous cyst, in a perforating typhoid ulcer, or in an appendicitis case. Those, I think, are the principal reasons why we should make an exploratory incision. I believe it would be unsurgical and unscientific to attempt to remove all the bones *per vaginam*. We should therefore make an abdominal incision and explore for the bones in the pelvis just as we would explore for anything else.

Dr. E. R. LEWIS (of Kansas City): I am very anxious to have Dr. Etheridge's opinion upon a case which I wish to add to those of his, and also the other members present, because it is so exceedingly interesting to me that I want the opinions of the members who are present. I was called in consultation with three physicians to see a woman who had passed her proper period for gestation, had been in labor two days, entering the third day. This was in the evening. On examination, it was impossible for any one of the four of us to

discover the os. In that quartette examining her there was a professor of gynæcology, a professor of obstetrics, a professor of surgery, and a general practitioner, and neither one of us succeeded in locating the os or anything that approached to it. In determining upon an operation, they decided that I should operate. The woman was becoming weak, and had but a few hours apparently to live. The method of operation of course had to be decided immediately. I operated through the vagina, simply taking a long pair of scissors, running them between my fingers, and cutting directly through the uterus itself. In twenty minutes everything had been evacuated, the child living; the woman was in good condition and went on to recovery. I only report this case to call attention to the fact that this woman had been operated on by Dr. Barry Clow, who was then in Denver, for a stenosis. Conception took place and the uterus grew up entirely. It was as complete an oval, egg-shaped condition as I ever saw in my life, without any possible opening anywhere. None of us who were present, no one I have ever talked to, no book I have ever read, gave me any history of a case like it. The condition staring us in the face, the time of night, the method of operating, were to me of so much interest that I presume such cases must have occurred and must be in the minds and in the practice of others. I simply cite the case to call attention to these anomalous cases with which we come in contact in ordinary practice, which are so puzzling, and yet have to be operated on almost instantly. I believe in the operative procedure, although in complications such as the doctor spoke of in his case, where he did not operate, I dare say it was better, because infection would no doubt have taken place in the peritoneal membrane and probably have resulted in the death of his patient. I do not believe in closing abdominal sections after operation, and I have closed the last one that I ever expect to close.

Dr. ETHERIDGE: You mean without drainage?

Dr. LEWIS: I mean to drain it without closing.

Dr. ETHERIDGE (closing): Only a few words in response to Dr. Ricketts' remarks concerning exploratory incisions. I was deterred from it absolutely by the large quantity of pus that was evidently present. That was the only reason, and when Nature indicates the channels through which bones are to be expelled I think it is pretty safe to leave matters that way; I think it is safest to let the patient alone so far as any cutting is concerned. That is the only reason I did not do it. The doctor speaks of drainage in laparotomies after the removal of pus-tubes and things of that kind that contain pus. It

really is a fact that in a good many of these cases the pus-tube is sterile and there is no danger from it beyond the mere cleaning out of the cavity, and we can close it without any fear whatever; but I am sure that the pus in these cases is most frequently active.

Abstract of a paper entitled

AXIAL ROTATION OF OVARIAN CYSTS.

BY GEORGE W. CALE, M. D., F. R. M. S. LOND., ST. LOUIS, MO.,

Surgeon to the Woman's Hospital; Consulting Surgeon to the City and Female Hospital; Professor of Surgery in the Woman's Medical College, etc., St. Louis.

Giving the history of axial rotation of ovarian cysts, Dr. Cale refers to Rokitansky's paper on this subject, written in 1865. Rokitansky gave the particulars of thirteen cases, eight of which were found in making autopsies after fifty-eight deaths from ovarian disease. The author said that cases had been reported by Spencer, Wells, Keith, Tait, Greig, Smith, Doran, Robinson, himself, and others.

Wiltshire, of England, in 1868, was the first to diagnose the condition, and operated successfully.

The author considers that the direction of rotation is not constant. When the tumor rotates outward, if the Fallopian tube is non-adherent to the tumor, it will be spirally twisted about the pedicle; if adherent, about the pedicle and tumor, the twist of the tube following the direction of the tumor's rotation.

Sometimes the rotation is sudden, and sometimes considerable lapse of time occurs during the process. He considers that in the causation a long pedicle is a prime factor, and among other causes he mentions contraction of abdominal muscles, movements of abdominal viscera, and quotes Tait as giving movement of fæces along the sigmoid flexure and rectum as one of the causes; also the simultaneous occurrence of pregnancy with development of the cyst, as well as positions assumed by the patient.

The results of rotation depend upon its extent and upon the consequent constriction of vessels which produce effects ranging from those of congestion to gangrene.

Sometimes when the twisting is very slow the reduced blood supply may cause shriveling of the sac, with gradual absorption of its contents, or the adhesions to surrounding viscera may continue to supply nutrition, even though the pedicle is completely severed.

The symptoms of strangulated ovarian cyst are sudden violent pain in the abdomen, vomiting, and shock.

The differential diagnosis lies between this condition, ruptured tubal pregnancy, intestinal strangulation, gallstone colic, renal colic, and perforated appendix. The tumors have been known to right themselves, recovery following. About six per cent. of all ovarian tumors rotate.

Dr. CALE relates two cases, one occurring in a girl twenty years old. The symptoms were sudden onset of intense abdominal pain, vomiting, and shock. She was treated by her physician for colic, and died on the third day. Autopsy revealed a twisted and gangrenous ovarian tumor the size of a child's head.

One case (II) was diagnosed as rotated ovarian cyst, and operated upon. The diagnosis was confirmed at the operation, and the patient rapidly recovered.

DISCUSSION.

Dr. J. H. ETHERIDGE (of Chicago): The doctor spoke of adhesions to surrounding tissues, that eventually the pedicle sloughed off, leaving the tumor without a pedicle, adhesions to the intestines being the source of its nourishment. I have seen three such cases of ovarian tumors, all on the left side, varying in size from the smallest to the largest—from the size of the fist up to about the size of an adult head. The cause of this rotation the doctor has delineated so fully that it is unnecessary to say anything further on that point.

Dr. GEIGER (of St. Joseph, Mo.): Some two years ago a similar case came under my observation—a woman past middle life with a rather large tumor. The cause in this particular case I attributed to the action of the family physician. The case had gone the rounds and was variously diagnosed. It was a plain, simple ovarian cyst. The family physician believed it was dropsy, as they very frequently do, and subjected the woman to all manner of tests. The following night the woman developed violent symptoms; the family physician was called and said she had colic. During the day the shock was almost profound, and I insisted upon an immediate operation, which was performed, and the pedicle was twisted two and a half times around—that is, the tumor—and was in a high state of necrosis, with extensive hæmorrhage into the tumor. The tumor was not adherent at any point, and it had a pedicle three and a half to four inches in length. The woman rallied nicely and made a fine recovery.

Dr. CALE (closing): I think that probably this accident of rotation

happens oftener than we suppose. Ovarian cysts, however, are not the only things that may rotate. Dr. Eastman related to me yesterday a case of a fibroid weighing fifteen to twenty pounds which had rotated and torn off, and had become completely severed from the vagina.

Abstract of a paper entitled

ADDRESS ON GYNÆCOLOGY—OBSERVATIONS ON THE PERITONÆUM IN FIFTY AUTOPSIES.

BY FRED. BYRON ROBINSON, M. D., CHICAGO.

The author reported his observations on the peritonæum and abdominal viscera of fifty autopsies which he performed in Cook County Hospital. He noted the three great composite regions of peritonitis—viz., that of the gall bladder, that of the appendix, and that of the pelvis. He spoke of the landmarks of peritonitis as existing at the sphincters and flexures of the digestive tube. He spoke of inflammation of the peritonæum existing in seventy-five per cent. of cases over each psoas muscle—*i. e.*, around the cæco-appendicular region where these organs rest on the psoas and iliac muscles, or in the meso-sigmoid over the psoas and iliac muscles. There is more peritonitis in the meso-sigmoid than there is around the cæcum and appendix—*i. e.*, more inflammation over the left than the right psoas muscles. The peritonitis over the psoas on each side he attributes to the action of the muscles irritating the bowel with its contained germs, so that the germs or their products migrate through the bowel wall, producing a local peritonitis. The frequent peritonitis found around the spleen he attributes to the excessive motion to which the stomach is subjected. In other words, wherever the bowel is irritated, microbes or their products are liable to pass through, exciting peritonitis. He takes as a sample the bend in the duodenum to illustrate the point in view. If one examines many cadavers it will be noted that adhesions or peritonic bands frequently exist in Haller's omentum at about the middle of the ascending colon. This point of local peritonitis lies immediately over the flexure of the duodenum—*i. e.*, where the duodeni descendens merges into the duodeni transversum. He notes that eighteen per cent. of male cadavers show vesiculitis seminalis—which he attributes to gonorrhœa—analogueous to endosalpin-gitis.

In the fifty autopsies fully ninety-five per cent. showed traces of local peritonitis. Dr. Robinson observes in his remarks the great use of the omentum: that it is the great peritoneal protector against infectious invasions; that it is like a man-of-war, ready at a moment's notice to sail to invaded parts—to points of infectious invasion; that the omentum is the surgeon's friend, protecting the evils that his hands have wrought.

The fifty autopsies show that visceral prolapse begins at thirty years of age, and steadily increases in some throughout life. The great mobility of the right kidney was recorded. The cæcum occupies three prominent positions—viz., (*a*) non-descended, when it lies above its normal position, just under the liver; (*b*) in its normal position—*i. e.*, lying on the psoas and iliac muscles, in the right iliac fossa; (*c*) where it descends into the pelvis. This occurred in thirty per cent. of cases in females and twenty-five per cent. of cases in males. The author calls these non-descent and excessive descent of the cæcum. The gall bladder showed some sixty-five per cent. of peritonitic adhesions around it. The writer notes the frequent vertical position of the stomach. The mesentery of the small intestines averaged six and one half inches, and would allow the gut to be drawn through the artificially prepared inguinal and femoral rings in forty-eight cases out of fifty—*i. e.*, ninety-six per cent. of individuals have a mesentery sufficiently long to herniate the small bowel.

DISCUSSION.

Dr. HUGO SUMMA (of St. Louis): I was greatly interested in the subject, but I think that fifty autopsies are insufficient to base statistics on in such an important question. Dr. Robinson also mentioned pneumonia in the development of peritonitis. Pneumonia will never lead to a case of peritonitis; it is always the pleurisy which accompanies pneumonia. I also understood the doctor to say that the peritoneal adhesions which he found around the appendix he attributed to frequent contraction. If the muscle contracts it can never lead to inflammation either in its own tissue or the surrounding fascia. According to the teachings of modern pathology, in most cases it is due to the infection of a bacillus.

Dr. ROBINSON (closing): The doctor took my address fragmentarily. I said pneumonia and peritonitis are very frequent, but immediately after, in speaking of the peritonæum, the pleura, and the pericardium, I indicated that those regions were inflamed which were adjacent.

In regard to the point that the psoas muscle is the cause of the inflammation around the cæcum and around the sigmoid, I did not say that. I said it was a predisposing factor. And the gentleman says fifty cases are not enough. I have done nearly one hundred consecutive cases. I didn't record them here. I dissected about one hundred bodies very carefully in the peritonæum in the last eight years, and I have done very nearly one hundred peritoneal autopsies, just for the purpose of recording my observations, but I didn't record the previous ones. This last time I made up my mind I would record exactly one hundred cases. I have nearly one hundred now recorded. They are all the same. Now, this psoas muscle contracts. There are times when the gut is in such a condition that the irritation produced by the contraction of the muscle will induce the gut to allow germs or the products of germs to pass through its walls. I offer this as an explanation. Another surgeon of national repute says "it can not be so; it is not according to modern pathology." I don't care whether it is according to modern pathology or ancient, it is there and you have to make some explanation of it, and I have of course the American privilege of making the one I think is the best. I think this is the only rational explanation I have found so far. That puzzled me for years and years. No wonder it puzzled me when it puzzled such men as Virchow and Price and the French, who are doing such splendid work on the peritonæum recently, and it is not any wonder that it has puzzled the gentleman who has just spoken. I said to Professor Senn when he discussed the article, and I say to the gentleman here in the same spirit, if it is not according to modern pathology, give me an idea which will explain it better.

INDICATIONS FOR LAPAROTOMY.

BY W. O. HENRY, M. D., OMAHA, NEB.

(See page 12.)

REPORT OF A CASE OF HYSTERECTOMY WHERE THE
MORPHOLOGY OF THE TUMOR MADE TOTAL
EXTIRPATION OF THE CERVIX THE
ONLY POSSIBLE PROCEDURE.

BY JOSEPH EASTMAN, M. D., INDIANAPOLIS, IND.

(See page 18.)

DISCUSSION.

Dr. GEORGE F. HULBERT (of St. Louis): I would like to ask Dr. Eastman whether he has had any reports made in regard to rectoceles or cystoceles?

Dr. EASTMAN: If the gentleman will note in the last issue but one of the *American Journal of Obstetrics* he will see my reference to the notorious Dr. Pratt, of Chicago, and this fixing of the connective tissue to the vagina anteriorly, and this narrowing and bringing down of the broad ligament, is for the purpose of holding up the vagina, as your suspenders hold up your trousers.

Dr. HULBERT: I understand perfectly your method, Doctor, but would like to know if you have any reports as to rectoceles or cystoceles?

Dr. EASTMAN: I have seen no cystoceles or rectoceles following the operation.

Dr. A. C. BERNAYS (of St. Louis): I have listened with great pleasure to Dr. Eastman's report. I have been a reader and a follower of Dr. Eastman's work in the line of hysterectomy for many years, and have always looked upon him as one of our advanced workers in that field. The doctor is perfectly well aware of that fact. This morning, while assisting Dr. Hulbert in an abdominal hysterectomy for a large myoma, I had occasion to make the remark that I had seen fifty different operators perform fifty different operations for the removal of a myoma of the uterus; that I believed all of the fifty cases got well. That, to the best of my knowledge, is true, and I want to again repeat here in your presence that I deprecate and denounce the claim of any man to have a method which alone will lead to success. Any myoma of the uterus, or two or three nearly similar ones, can be removed by very different methods with equal success, and I have no sympathy with any man who claims superiority for any particular method in that direction. I did not mean to convey

the idea that every operation for myoma would be successful. I myself have done about seventy-five abdominal hysterectomies for myoma, and the mortality has been about twenty per cent. I do not know whether it was twenty-one, twenty-two, or nineteen per cent.

I suppose the doctor meant his remark in a friendly way, but it did not sound friendly at all.

Dr. EASTMAN: If it is unfriendly to acknowledge that we have patients die occasionally, so be it.

Dr. BERNAYS: I have acknowledged that here I have firm convictions. I said nothing this morning which I think could be construed to mean that I had never lost a case after an abdominal hysterectomy. If I did, I expressed myself badly. The salient point that Dr. Eastman has made in the operation is this. I speak now for a moment as an anatomist: The doctor, I think, deserves credit for having been the first man who has called the attention of the surgeon to the fact that a uterus, particularly a uterus bearing a myoma, can be enucleated out of a certain capsule which surrounds it and connects it with the vault of the vagina, with the so-called laquear of the vagina, and with the broad ligaments. The doctor told me, and I believe it is true, that he has found that a myoma is not nourished by large arteries entering into the tumor, but that it is nourished by a capillary network of blood-vessels which loosely surround the tumor and the uterus, and that if the operator after ligating the broad ligaments will put a blunt instrument or his fingers into the proper layer he can strip down the peritonæum and the vascular layer in front and behind the uterus with very little hæmorrhage, and may remove the tumor with little loss of blood. That, I think, is the great merit of Dr. Eastman's method. I have never seen Pratt, of Chicago, operate, but I have seen very trustworthy men who have seen him operate. I have heard very excellent men in our profession state that they had seen Pratt remove a uterus through the vagina with the loss of less than a tablespoonful of blood. If he can do that, then I do not blame them for going to see him do it and to learn how to do it.

Dr. FRED. BYRON ROBINSON (of Chicago): I think Dr. Hulbert asked a very important question, as to whether cystocele or hernia occurs after these operations. I wish to say that I assisted Dr. Waite to do a hysterectomy, and about eight months after that this woman had a very large cystocele—in fact, the hernia came out through the vulva. I know that it was done well, because I saw all the stitches put in and I saw every step of the operation. I know that after taking the uterus out, neck and all, sometimes hernia will follow, but I have

so far not seen a single case of hernia after the neck was left in. I followed the method Dr. Eastman suggests for a long time and the results were excellent, but I say that when the neck is taken out hernia will follow sometimes.

Dr. A. H. CORDIER (of Kansas City): Everything else being equal, the man who will do his operations in the shortest period of time will have the lowest rate of mortality. That is the first thing to be considered in doing abdominal surgery especially. I am a disciple of the Bantock operation, and it is the only operation I have performed; my recoveries have been one hundred per cent. straight through. In a tumor where you can carry out the procedures which Dr. Eastman has described, by grasping the broad ligaments on either side with a hæmostat, that same tumor and the capsule through it can be stripped down, encircled by wire, and tied down with one grasp in much less time than any man can do the operation which Dr. Eastman has described. While I think there are cases in which the Eastman operation (to Dr. Eastman undoubtedly belongs the credit) will have to be done, and I will likely run across them some time, I have yet to find the tumor that I can not remove by the Bantock operation. The doctor has done a good many Bantock operations himself, and I understood him to say that these Bantock operations had recovered. All your assistants or your nurses have to do is to tighten up the little screw to control the hæmorrhage. Objection to the Bantock operation is generally raised by men who have not done the operation themselves, or they have been faulty in the technique of doing it. I have seen a number who attempted to do it, but very few of them performed the operation as I understand it.

Dr. EASTMAN: I have nothing to say in closing except to thank the gentlemen for the consideration they have given me.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL
SOCIETY.

Meeting of February 22, 1895.

The *President*, FRANKLIN H. MARTIN, M. D., in the Chair.

Abstract of a paper entitled

THE OPERATIVE TREATMENT OF VESICO- AND
RECTO-VAGINAL FISTULÆ.

BY ALEXANDER HUGH FERGUSON, M. D.

Of the many varieties of urinary and fæcal fistulæ, the writer has selected for the subject of his paper the two most commonly met with—vesico-vaginal and recto-vaginal.

He summarizes the present methods of relief *per vaginam* as follows:

1. Cauterization.
2. Vaginal autoplasty or elytoplasty.
3. Vivification and suture of the edges of the fistula.
4. Flap-splitting and sutures.
5. Flap-formation and sutures, which the author suggested and put into successful effect more than three years ago, and which he reported in the *British Medical Journal*, February 24, 1894.

Cauterization is now confined to very small or oblique fistulæ.

Mucous- and skin-flap operations were instituted by Roux, Velpeau, Leroy, Grédy, Jobert, and others in the early part of this century. Although more or less successful, they fell into disuse shortly after the introduction, or rather revival, of the operation of vivification of the edges of the fistula and the bringing of these together with silver sutures.

In 1570 Ambrose Paré proposed the closure of vesico-vaginal fistulæ by a retinaculum, which was the first idea of the coaptation of the fistulous edges. Von Roonhuysen in 1660 vivified the edges of a fistula and sewed them together. His failure, due to bad technique, was not improved upon until two hundred years later, when Marion Sims, Bozeman, and Hayward in America, Simpson and Baker Brown in Great Britain, Simon and Hegar in Germany, Neugebauer in Warsaw, Follin and Verneuil in France, placed the operation for vesico-

vaginal fistulæ upon the firm and useful basis upon which it now stands.

The writer waives a description of Sims' operation, but calls attention to some of the causes of failure that are met with.

1. *Hæmorrhage, either Primary or Secondary, into the Bladder.*—The extremely vascular and in many cases congested mucous membrane of the bladder is pared off the full size of the fistula, and the oozing of blood into the bladder gives rise to distention from the accumulation of coagulated blood mixed with urine, distressing tenesmus, etc., which, if not at once fatal to success, is apt subsequently from decomposition of the residue to invade the seat of operation with disastrous results.

2. *Leakage of Urine along one or more Sutures.*—This is a frequent cause of failure when the edges of the fistula are very thin and only a narrow raw surface is obtainable, and when the tension on the coaptating sutures is so considerable that the edges of the fistula on the vesical surface can not come into close contact because they are not grasped by the stitches; the urine consequently trickles along the sutures with which it had been in contact from the time of the completion of the operation.

3. *Suppuration* from the surface of the bladder. In the majority of these patients septic inflammation has extended up the fistula to the lining of the bladder. Suppuration from this source is liable to occur when, as in Sims' operation, the vesical lining is wounded by the vivification, and when a gaping of the bladder edges exists, and more or less of a concavity is present on the bladder surface along the line of coaptation after the sutures are tied, which acts as a retaining surface for any pyogenic organisms.

The flap-splitting operation in gynæcology, with which the name of Lawson Tait has been associated in his perineal operation, was primarily applied to the cure of vesico-vaginal fistula by Blasius, in Germany, in 1839. The operation was revived by Tait and von Herff. It consists in splitting the cicatricial margin of the fistula, extending the incision into the surrounding septum, and reflecting the flaps toward their respective mucous surfaces, vaginal and vesical. The operation is completed by inserting one row of sutures in the inner or vesical flap and one in the vaginal flap. Its praises have recently been enthusiastically sounded by von Herff, Säger, Fritsch, Walcher, and others.

Tait has successfully employed one buried suture inserted circumferentially and tied. The single suture can only be successful in very

small fistulæ where coaptation of the raw surfaces is easy. The usefulness of the more extensive flap-splitting operation already described is limited to comparatively small openings.

The objections to this operation are :

1. Its application is limited.
2. It leaves a flat surface on the vesical side at the seat of operation, and on this account infection from an inflamed bladder is more liable to occur than when a prominent elevation is secured.
3. Accurate coaptation of the whole raw surface is impossible. At the point of deviation of the flaps a triangular space is left in which blood and serum are liable to accumulate.
4. It is difficult to suture the internal flap without wide separation of the external.

THE FLAP-FORMATION OPERATION

suggested itself to the writer after the performance of two unsuccessful operations. The preparation of the patient includes surgical cleanliness of the field of operation, which frequently necessitates dilatation and curettage of a foul uterus. The position of the patient for operation is that which furnishes the best exposure of the fistula, which may be the extra lithotomy on the side of the knee chest.

Operation.—The fistulous opening being exposed, an incision is made with a scalpel through the mucous membrane of the vagina at the distance of an eighth to a quarter of an inch from the margin of the fistula. This incision is extended until it completely encircles the opening.

The line of incision is carefully deepened, not obliquely, but at right angles to the parts severed, until the vesical membrane is reached, and great caution should be exercised in retaining the integrity of that membrane. A stream of sterilized water directed on the wound keeps it free from blood. In this manner a circumferential flap, hinged by the mucous membrane of the bladder, is obtained. This flap is turned into the bladder, thus forming a roof for the broad raw surface exposed, and is held in this position by a continuous fine chromic catgut suture inserted in such a manner that the stitches do not pierce the mucous wall of the bladder, or preferably with several of my inversion sutures.

The narrow strip of vaginal mucous membrane, which, owing to its density, retains a suture well, becomes part of the lining of the bladder and causes no disturbance in its new location. The artificial opening is now closed and water-tight, and to complete the operation

it is necessary only to pass and tie silkworm-gut or silver-wire sutures on the vaginal surface in the ordinary way. Great care must also be taken that these sutures do not include the vesical mucous membrane.

The vagina is now carefully packed with iodoform gauze, which is left *in situ* for six or eight days; it is then removed, the vagina thoroughly irrigated, any loose suture withdrawn, and the packing renewed. This cleansing and dressing are repeated every five or six days for about three weeks.

In my opinion all the sutures should not be taken out on the eighth or tenth day (as recommended by so many operators); as long as a stitch is not easily moved in its bed it would better be left until fibrous tissue is formed, which ordinarily requires about three weeks.

The chief advantages of this operation are :

1. There is no loss of tissue.
2. A very broad raw surface is obtained for apposition.
3. At the site of the operation there is a projection into the bladder which forms a roof for the raw surface.
4. Should the mouth of a ureter be exposed at the edge of the fistula it is not injured, but is turned into the bladder.
5. It obviates the danger of primary or secondary hæmorrhage into the bladder.

6. As the coaptation on the vesical surface is perfect, the danger of leakage of urine along the sutures is obviated.

7. Secondary infection of the wound from an inflamed bladder is minimized by the prominent projection of the internal flap into the bladder along the whole line of operation, thus raising the abraded surface above the most dependent parts where septic material would most naturally lodge; and because the bladder lining is not injured.

8. In large fistulæ, the apposition of whose edges requires great tension upon sutures, this operation affords the best opportunity to make relaxation incisions, gliding flaps, or other auto- or ektoplastic operations.

9. It is applicable to every form, and may be adapted to every size or site of a cicatricial fistula between the vagina and bladder or urethra.

Dr. Ferguson reports four cases of vesico-vaginal fistula operated on by his method as described above.

CASE I.—Patient had a vesico-vaginal fistula that would admit the tips of three fingers. Also a large recto-vaginal fistula and atresia of the vagina above the fistulæ. After two unsuccessful operations by

other methods he succeeded in closing both fistulæ by his method at one operation. The vesico-vaginal fistula returned as large as before and was again successfully closed only to return a second time as bad as ever. Sexual intercourse was found to be the cause of both relapses. The patient refused a third attempt, because her husband threatened to leave her if she could not gratify his desires—besides she experienced but little discomfort, only leakage and odor.

CASE II.—Fistula one inch in diameter due to rupture during labor of a distended bladder which had been neglected three days. She had undergone four unsuccessful operations already. The fistula was closed by his method perfectly at one operation.

CASE III.—Small oblique fistula, following labor. Closed perfectly by one operation under cocaine anæsthesia.

CASE IV.—A case of Dr. D. O. Todd's done by the writer's method. Fistula involved base and neck of bladder and the whole length of the urethra. Primary union by one operation.

There is still another operative procedure which might have been referred to with the autoplasmic operations, but as it is effected through the bladder by a suprapubic cystotomy, it may be better to mention it separately. Lannelongue in 1873 successfully repaired a very large fistula, involving the whole vesico-vaginal septum, by this method. McGill, after reporting a couple of cases of his own, gave the credit of the suggestion of this operation to Trendelenburg. A number of successful cases have since been reported. The complete closure of the vagina, in order to direct the urine through the natural passage, should be done only as a last resort. The subsequent establishment of a recto-vaginal fistula to allow the urine to escape by the rectum, which was done first by Baker Brown and afterward by Rose and Fritsch, is not to be commended.

In deep juxtacervical fistulæ the posterior lip of the cervix uteri has been vivified and successfully secured to the freshened lower edge of the fistula (Hegar), thus allowing the urine to escape naturally and the menses to be directed into the bladder.

After looking over the literature of the treatment of recto-vaginal fistulæ, and noting the colotomies of Rose and Czerny, the episioleisis of Baker Brown, Slavjanski, Gerasimovitch, Crepsi, and Iakovleff, and the rectangular flap method of Le Dentu, the writer felt justified in attempting a new procedure.

Operation.—A circumferential flap is made from the vaginal surface; the incision extends to, but not through the mucous membrane of the rectum. The edge of the flap is now seized with four pressure

forceps, inverted into the rectum, and a small pile clamp applied. Instead of the clamp a stout ligature may be thrown around the tissues inverted into the rectum, or my buried inversion sutures of catgut may be used, as already described in the vesico-vaginal operation.

The free portion of the flap external to the clamp is burned off with the actual cautery, but the clamp is not removed until interrupted sutures of silkworm gut have been inserted in the usual way without grasping the rectal mucous membrane, and tied on the vaginal surface. A rectal tube, well wrapped with iodoform gauze, is placed in the rectum, and the vagina is packed with iodoform gauze. In this manner an extensive denuded surface is secured which readily unites upon proper coaptation. The rectal flap is cauterized, thus lessening the liability to septic infection from that source. The rectal tube and vaginal packing further guard the wound against infection, and act as splints to insure that rest so necessary to primary repair.

The after-treatment consists in keeping the wound as surgically clean as possible. The rectal tube is not disturbed for about a week; after its removal the first movement of the bowels since the operation is obtained by the administration of a copious enema. The rectum is washed out with sterilized water every twelve hours for the following week, and during that time a rectal suppository containing five grains of iodoform is inserted every six hours. The packing in the vagina is changed every six or eight days; the stitches are removed at intervals between the tenth and twenty-first days. Previous to the first evacuation of the bowels the diet must be of liquid, and as free from excrementitious materials as possible.

Dr. Ferguson has performed this operation but once, but with a perfect result by one operation. Dr. J. O. Todd reports one successful case after this method.

DISCUSSION.

Dr. NICHOLAS SENN: It is not my intention to enter a claim of priority for the operation which has just been so well described by Dr. Ferguson in his very interesting paper, knowing well that such claims must be based upon published reports. About eight years ago, however, I performed an operation identical with the one described here. I was about to publish a report of the operation when, to my astonishment, on picking up a copy of the *British Medical Journal*, I found it described by Dr. Ferguson, and to him, of course, belongs the credit of bringing it to the attention of the medical profession.

The first case I operated upon in this way could not have been

treated successfully by any other method. The patient was eighteen years of age. When a child she fell astride some sharp object, a picket fence or something of that kind, and hurt herself seriously. Not much notice was taken of the injury at the time, and she finally recovered, but was treated for many years by different physicians for an uncontrollable diarrhœa ; at least this was the universal diagnosis. When the patient was brought to me, after listening to the clinical history I suspected that the sphincter had been injured and insisted upon making an examination, which revealed a very interesting pathological condition. The vagina and rectum constituted one common cloaca, the tear extending up along the recto-vaginal septum for at least two and a half inches, the rectum below this point being atrophic, the mucous membrane constituting a shallow gutter. I could not conceive that by vivification or by flap splitting, or by any method except by an extensive autoplasmic operation, I could repair this rectal defect.

As I had no precedent I had to plan an operative procedure, which consisted in taking an oval flap from the anterior surface of the recto-vaginal septum high up, bringing this flap down as far as the sphincter, and then sewing the mucous membrane over it. At the base of this mucous flap I found and vivified the diminutive sphincter muscle, stitched it over the flap, and had the satisfaction of having this enormous wound, implicating such important parts, heal by primary intention, and the operation resulted in the formation of an efficient sphincter and a very respectable perinæum.

I have since operated on two or three cases of recto-vaginal fistula by exactly the method which has been described—that is, I suture as Dr. Ferguson has described in vesico-vaginal fistula ; I do not draw the mucous membrane into the rectum, but simply stitch the flap and turn it toward the rectum, and with deep sutures close the wound. The operation has invariably been successful. I wish to congratulate Dr. Ferguson on having worked so successfully in the same line.

Dr. G. W. REYNOLDS: Dr. Senn forgot to mention one fact in regard to the patient he operated upon eight years ago—that she returned about two years ago with a vaginal cyst, which he removed. He described the case to me at the time and it certainly was a grand success.

I had occasion to use the method in a patient who had been operated upon twice by New York surgeons. The lesion was a congenital hypospadias, and a vesico-vaginal fistula resulted from one of the previous operations. I operated and failed to close the fistulous opening. I then told Dr. Senn of the case and asked his advice, when he

kindly suggested the operation that has been so beautifully described this evening, and I employed that method with complete success; the patient left the hospital in three or four weeks perfectly well, and has been well ever since.

Dr. J. B. BACON: I have not had a case of recto-vaginal fistula since Dr. Ferguson explained his operation to me some time ago, but it is far in advance of any operation I have seen or read of. Le Dentu's flap-splitting operation was probably the best for the cure of recto-vaginal fistula until this operation was devised, but in his operation, however, tissue was destroyed. He made a semicircular flap and cut away some of the tissue in order to denude the edges of the fistula. In Dr. Ferguson's operation all of the tissues are saved. The important point in the cure of recto-vaginal fistula is to obtain primary union. It is comparatively easy to make the vagina aseptic, and therefore it is an important thing to keep the denuded edges of the septum between the rectum and the vagina aseptic.

The inversion suture which Dr. Ferguson uses is, as far as I know, entirely original with him. It is the most complete method of inverting tissues by suture that I have ever seen.

Dr. H. P. NEWMAN: Dr. Ferguson's operation is so thoroughly practical in method that it would probably suggest itself to any surgeon operating frequently for these troublesome fistulæ. I have employed a similar procedure for some time.

One point I should like to make in regard to the formation of the vaginal flap. This should be V-shaped both above and below, presuming that the opening is longitudinal to the vagina. The upper and lower angles being acute, by placing a tenaculum in each and putting the wound on the stretch a much more perfect coaptation of the linear incision can be obtained than by uniting a circular wound in the usual manner. I can see advantages in Dr. Ferguson's operation in the treatment of fistulæ communicating with the rectum.

Dr. F. H. MARTIN: I am very much struck with the ingenuity and originality of Dr. Ferguson's operation and appreciate very thoroughly its advantages.

There is one thing about the operation that appears difficult to me, and that is the difficulty of incising the flap, because I always denude with scissors, with the knife. Is not a specially constructed knife necessary? If the fistula is longitudinal to the vagina I can readily understand how it could be done, but I have seen fistulæ which it was necessary to close transversely. In that case it would be easy to lift the flap from below, but it is difficult to see how the

knife could lift it from above, where it is necessary to penetrate the entire flap. The only recto-vaginal fistulæ I have seen were complicated by lacerations of the perinæum, which were easily repaired by perinæorrhaphy.

Dr. NICHOLAS SENN : Dr. Ferguson will, I am sure, thank me for calling his attention to the recent literature upon the treatment of complicated vesico-vaginal fistula. I have just received a monograph written by William Alexander Freund, of Strassburg, who describes a very ingenious operation intended to close large vesical defects. Dr. Ferguson alluded to Hegar's procedure, which consists in stitching the posterior surface of the cervix to the lower part of the fistula with a view of directing the uterine contents toward the bladder. This has become a very imperfect operation. Freund utilizes in desperate cases the anterior lip, splits the uterus on both sides about as far up as the internal os, directs the anterior lip down, vivifies it, and stitches it to the vivified margins of the fistulous opening. After union has taken place he cuts off this part of the uterus and utilizes it as a flap with which to close the defect. As he describes it, this is a very tedious operation, but I can readily conceive in vesico-vaginal fistula with large defects, where even Dr. Ferguson's operation would not answer the purpose, that Freund's most recent method would be of great value.

Dr. A. H. FERGUSON, in closing the discussion, said : Mr. President and Gentlemen : I feel considerably flattered at the remarks which have been made by the members of this Society, and am very much honored by the reception this, my first paper in Chicago, has received. I am pleased to know that Dr. Senn had occasion to do a flap operation before I did, and yield priority to him in forming a recto-vaginal wall ; but if I understand correctly, my main operation is for vesico-vaginal fistulæ, and I was the first to devise and apply it for their treatment. I can doubtless, therefore, claim half the honors of priority, at least, with Dr. Senn. When preparing this paper I was informed by the President that I must limit myself to twenty minutes. I went over the literature pretty thoroughly, but am not positive that I struck upon the article Dr. Senn has mentioned, and I am very much pleased to hear of this last addition to the treatment of very large vaginal fistulæ.

With regard to the technique of the operation, I might say first of all that the knife is not properly represented in this drawing ; instead of going in obliquely, it enters at right angles to the edge of the fistula, cutting through without severing the mucous membrane on the

opposite side, so that the knife is far better than scissors. One who is accustomed to use the scalpel can tell when he cuts through the mucous membrane, the septum, and when he gets to the mucous membrane of the bladder. One who is not accustomed to cutting delicate tissues with the knife I fancy would be liable to go through into the bladder.

The material I should recommend for the internal flap would be catgut.

With regard to making the incision semi-elliptical or V-shaped, there is an objection to it, as in making the incisions you would have to invert the V-shaped vaginal mucous membrane into the bladder, and there would be a redundant amount of tissue which might have a concavity on its upper surface. There is no difficulty, after making a circumferential flap, in bringing the edges together, even when the fistula is perfectly round.

In regard to recto-vaginal fistula, I am indebted for the remarks of Dr. Bacon, as he is a specialist in diseases of the rectum. It was in order to prevent the cutting of the sphincter that the idea struck me to do this operation. I should deprecate the cutting of the sphincter in any of these operations. You can not obtain reunion better than it was before, and if you can avoid cutting it, which I claim you can, it is better surgery. That was the very objection I had to Le Dentu's operation, in that he cut a V-shape out and cut through the sphincter. We know by the results of operations on complete lacerations of the perineal body that the greater number of these have not perfectly restored the sphincter. I have a number in mind now that I have restored in the manner pointed out by Dr. Henrotin and the President, where the sphincter connection afterward was not complete, and I fancy the same has been the experience of others. I would, therefore, strongly recommend that the sphincter should not be cut.

With regard to my inversion suture, I would say that it has been original with me. It may have been original with others, but if so I do not know of it. I commenced to use it first in inverting the stump of the vermiform appendix, then in a pylorotomy in inverting the pylorus, then in inverting the flap in hysterectomy, then in cleft palate, then in vesico-vaginal fistula, fecal fistulæ, etc. Since Gussenbauer invented an intestinal stitch, which he called the figure-of-eight stitch, it may be better to designate mine the inversion suture, as it is quite different to his.

Presentation of Specimens.

Dr. J. A. LYONS : This specimen shows a

United Amnion and Chorion.

On section I found this degenerate mass. The history given me by Dr. Goodall is as follows : The patient had been married about nine years. She menstruated regularly until June, 1894, when her menses stopped, and she thought she was pregnant. In the September following she discharged a great deal of what seemed to be liquor amnii. She remained quiet for four or five days ; there was no other discharge, the abdomen decreased very much in size, and she resumed work ; she then gradually increased in size until January 1st. She continued about the same size until February 21st, when she again had what seemed to be labor pains, and about half-past five this morning discharged a great deal of light-colored fluid with this specimen. There did not seem to be any placenta.

Dr. BYRON ROBINSON : This specimen is a

Uterine Myoma.

The patient had been ill seven years, and was treated all that time by neurologists. The pelvis was not examined until the neurologist was informed that his bills would not be paid unless he allowed it to be made. Examination revealed this tumor. I removed the appendages and tied the uterine artery at the cervix uteri. The patient did well until four days after the operation, when suddenly she began to lose strength, and died ten or twelve hours later with but few symptoms. Dr. Van Hoosen with some difficulty secured an autopsy. It was found that the tumor had shrunk about one half, but there was a little kink in the bowel with a band around it, which did not seem to be sufficient to obstruct the bowel.

Dr. NICHOLAS SENN : I desire to present two pathological specimens for your inspection, representing two different varieties of tumors removed from the vaginal septa.

VAGINAL CYSTOMA.

The first specimen is a true cystoma which originated from a Wolffian rest, buried midway between the mucous membrane of the bladder and the vagina, consequently a tumor from the vesico-vaginal

septum. The patient is forty-nine years of age, a multipara, married at the age of twenty-five. Soon after marriage she discovered a small swelling, which gradually increased in size, on the vaginal side opposite the bladder. It gave rise to no considerable inconvenience until two or three years ago, when it increased rapidly in size. When I first examined the patient, about a week ago, the tumor prolapsed from the vaginal inlet and had the appearance of an aggravated form of cystocele. I excluded cystocele by inserting into the bladder a catheter, with negative results, and ascertained the exact location of the bladder by the use of the same instrument; then by making firm pressure upon the tumor, being unable to reduce it in size, satisfied myself that, as it had no connection with the bladder proper, it was a tumor of the vesico-vaginal septum. The tumor was sessile, located about half way between the anterior lip of the uterus and the meatus urinarius, and its surface was covered with normal hypertrophied mucous membrane. The symptoms of which the patient complained were a sense of weight and pain in the region of the bladder, but without special vesical distress.

The tumor was removed by circumscribing it with two elliptical incisions through the mucous membrane and carefully dissecting down upon the cyst wall, which was very closely attached to the surrounding tissue in consequence of prolonged irritation and perhaps inflammation between the cyst wall and the surrounding tissues. After a tedious dissection I succeeded in removing the tumor *in toto*. It contained two ounces of chocolate-colored fluid, which, under the microscope, shows a few epithelial cells and cholesterin and fat crystals. A section of the wall of the cyst proved the tumor to be a true cyst from a Wolffian rest. Under the microscope the section presents on the mucous side of the cyst a row of columnar epithelial cells superficially, and under it a number of layers of immature, round epithelial cells attached to a basement membrane, and outside of that connective tissue and muscular fibers. The case is a very rare one, and I am sure that few members of the Society have seen a cyst of the same character in the same locality.

SPINDLE-CELLED SARCOMA FROM RECTO-VAGINAL SEPTUM.

The next specimen is a small spindle-celled sarcoma removed from the recto-vaginal septum. The patient was eighty-two years of age. The growth was first discovered three months ago, when the patient complained of considerable rectal tenesmus with pain in the region of the rectum and in the left ischio-rectal fossa. Examination

revealed a tumor in the septum extending for about three quarters of an inch above the anus, as far as the *cul-de-sac* of Douglas. The tumor was smooth, and palpation showed it to be elastic, lobulated, in fact presenting some of the evidences of an abscess. The attending physician had suspected this condition, and had resorted to an exploratory puncture, but with negative results. The rapidity of the growth as well as the amount of pain caused by it left no doubt in my mind that it was a malignant tumor, either a carcinoma originating from a displaced Wolffian rest or a sarcoma, but a diagnosis between these two could not, of course, be made without the aid of the microscope.

About ten days ago, regardless of the age of the patient, I operated, making a transverse incision between the sphincters of the rectum and vagina, and had no difficulty in reaching the tumor, and by enucleation and careful dissection succeeded in removing it completely. Under the microscope it shows the typical structure of a small spindle-celled sarcoma. The case is an interesting one owing to the advanced age of the patient; sarcoma is found more frequently in children and young adults than in persons far advanced in years. It was also interesting to note that in spite of the marantic condition of the patient and her age she made a rapid recovery. The wound healed by primary union. The tumor was so firmly attached to the mucous membrane of the rectum that I had to remove about an inch and a half of the rectal mucous membrane, consequently I made a partial resection of the rectum in removing the tumor. Her recovery speaks well for the recuperative power of persons of advanced years.

Dr. BYRON ROBINSON: If I understand Dr. Senn aright he considers this the remains of a mesonephron, or kidney relic. I am perhaps presumptuous in differing from that opinion, but I think it is the remains of a post-anal gut, because the epithelial layer is distinct, and also because the muscular layers run in various directions—conditions which I could never find mesonephron. The layers of muscle simulate those of the gut; that is, they are longitudinal and transverse, and below there is connective tissue in various lines and directions.

Dr. NICHOLAS SENN, in closing the discussion, said: The muscular fibers to which Dr. Robinson alludes are derived from the vaginal as well as from the bladder wall. It was impossible to remove the cyst by enucleation, owing to the extensive and very firm adhesions. I can therefore readily conceive that the muscular fibers, which are present in abundance, are from the vaginal wall on one side and the bladder on the other. Tumors springing from the post-rectal gut I

should expect to find between the rectum and the coccyx. We know from the histogenetic study of cysts of the vagina that these cysts may be found anywhere. I have removed cysts the size of a fist, for instance, from a point corresponding to between the anterior lip of the cervix and the bladder, extending high up in the pelvic cavity. These cysts are remnants from the urogenital canal, misplaced matrices, and it is well known from clinical experience that they are apt to develop, with very few exceptions, as benign tumors about the age of puberty. This patient first discovered a little swelling, not larger than a hazelnut, when she was twenty-five years of age. At this time of life the embryonal matrix in any locality is apt to form these cysts, which are lined by a continuous layer of columnar epithelium; beneath this are a number of layers of immature epithelial cells, which in turn will assume a columnar shape and take the place of the epithelial cells we see now. This is a proliferating cyst, because these epithelial cells continue to reproduce themselves. We find some of these cells in the fluid; they degenerate and are cast off from time to time and are replaced by new cells. I can therefore hardly agree with Dr. Robinson that this cyst in the vesico-vaginal septum originated from the post-anal gut.

THE STATUS OF GYNÆCOLOGY ABROAD.

BY HIRAM N. VINEBERG, M. D.

GERMANY.

Septic Pyæmia originating from a Pyosalpinx.

Dr. H. DÜRCK (*Münch. med. Woch.*, 1894, No. 37) gives a very full report of the following interesting case: A girl nineteen years of age was admitted into the hospital for presumably acute rheumatism in the right shoulder joint. There being no improvement under the usual remedies, an incision into the joint was made and pus escaped. The patient died a few days later from progressive symptoms of septic pyæmia. At the autopsy, which was carefully done, the source of infection was found in a pyosalpinx of the left tube.

The urethra contained a purulent fluid which under the microscope showed numerous intracellular gonococci. At the autopsy cultures were inoculated from the following sources:

1. The pus from the periosteal abscess in the vicinity of the coracoid process.
2. The blood drawn with a Pravaz syringe from the left common iliac vein.
3. The pericardial fluid.
4. The contents of the pyosalpinx.

The same form of bacteria developed from all these different sources. The form of bacteria was the *Staphylococcus pyogenes aureus*. The rarity of this condition may be seen from the absence of any mention of it in any of the text-books on gynæcology. That a pyosalpinx may cause a circumscribed or diffuse purulent peritonitis through rupture of the pus sac, or transmigration of the micro-organism is fairly well known. But in this case the peritonæum was in no wise affected and the secondary affection was not of septicæmia but of unmistakable pyæmia. The development of the pyosalpinx may well be traced to the gonorrhœal urethritis.

Ether Narcosis in Gynæcology.

Professor AMANN (*Münch med. Woch.*, 1894, Nos. 33 and 34) writes in favor of ether narcosis in gynæcological operations. It is interesting to Americans to watch the extensive discussion going on for the past year in the German press on the pros and cons of ether. Some operators attribute all the sequelæ or mishaps to the anæsthetic. Others again give it credit for the successes they may have had in their operative work. V. Strauch (*Centrlbl. für Gyn.*, 1894, No. 13), for instance, is inclined to blame the ether for three cases of phlebo-thrombosis in nineteen cœliotomies done in the Trendelenburg position. Amann likewise had a similar complication in three cases out of thirty-seven cœliotomies. In his case, as in Strauch's, it was the left lower limb that was affected. He argues from this that the complication was due to the position and not to the anæsthetic employed. The elevated position of the hips, however, he thinks does not add to the difficulties of the ether narcosis. On the contrary it is rather beneficial than otherwise. He observed that the ether had no ill effects on the pulse, even in the presence of marked cardiac affection. There was less vomiting than when chloroform is used. Cough was not often observed during the narcosis, but it frequently set in when the patient awoke. Not infrequently bronchitis, lasting from five to eight days, developed, but only in one case was healing of the abdominal wound interfered with through the cough. Another condition frequently met with after

ether narcosis was a jaundiced discoloration of the skin lasting from three to six days. This, however, Amann believes is due to the method of narcotization, as lately it has not been observed so frequently.

Dr. KRECHE (*ibid.*, No. 40) is also a strong advocate of ether narcosis.

The Pathological and Histological Changes in the Female Generative Organs resulting from Cholera.

Dr. A. KLAUTSCH (*Münch. med. Woch.*, 1894, No. 45) draws attention to the meagerness of the literature on this subject. Virchow was the first in the cholera of 1848 to bring to the notice of the profession the changes met with in the female generative organs. Reinhardt confirmed these observations and extended them, inasmuch as he showed that they were to be seen in women without any reference to the menstrual period. In the epidemic of the following year Virchow was enabled to test the accuracy of these statements and remarked that even in newly born girls who died of cholera there were often to be seen bloody discharges from the endometrium together with swelling and hyperæmia and even ecchymoses. In addition there was hyperæmia, swelling and extravasation in the ovaries. In the epidemic of 1870 in St. Petersburg Slavjansky studied these changes more closely. Klautsch in 1893 made a thorough and careful histological examination of the uterus and annexa removed from a woman who died of cholera. He sums up the changes found as follows :

Uterus.—1. There occur in the uterus as a result of cholera exudations on the free surface of the mucosa. But it must be left undetermined whether already during life the surface epithelium is involved in the formation of this exudation or whether it is only after death that the epithelium is cast off and remains adherent to the exudate.

2. In the retained portions of the mucosa there occur areas of extravasations of blood, at the circumference of which pigment containing iron are to be seen in the form of small particles.

3. These changes to a greater or less degree are demonstrable in all female corpses independent of the fact whether the given individual has passed the climacteric or not. He has therefore found a hæmorrhagic inflammation of the endometrium.

The Ovaries.—1. The changes resulting from cholera affect chiefly the follicles, the contents of these become opaque to such an

extent as to take on a purulent appearance. The follicular epithelium is in the condition of opaque swelling and granular degeneration. This process may be termed oöphoritis parenchymatosa s. follicularis.

2. The process begins in the primordial follicles and affects during the course of the disease the ripe follicles also.

3. In isolated portions, particularly in the vicinity of the pathologically changed follicles, the interstitial tissue is strewn with small capillary extravasations.

4. In old regressive corporea lutea renewed hæmorrhages occur, attended with the same pigment formation as in the uterine mucosa.

The Tubes.—A fibrinous exudation is found on the surface of the tubal mucosa and the exudate is strewn with colored and colorless corpuscles.

This process may be termed salpingitis catarrhalis s. fibrinosa.

The Ætiology of Vaginal Cysts.

Dr. GEYL (*Ctrlbl. für Gyn.*, 1894, No. 44) reports a case of vaginal cyst the size of a hen's egg in the vaginal wall of a woman past the climacteric. The cyst contained an opaque brownish-yellow fluid. The microscopic examination was of interest. The vaginal wall covering the cyst was not of normal structure throughout. At some points it presented a sinking-in of the superficial epithelia, forming a large irregular mass composed mainly of indifferent epithelial cells. In short, it showed a glandular formation of the vaginal epithelium. This glandular process extended deep into the cyst wall, forming similar structures. The presence of glandular formation in the cyst wall causes the author to ask the question whether vaginal cysts *per se* are always benign, or can they as ovarian cysts undergo malignant changes? He is inclined to believe the latter and hence would urge the extirpation of all such cystic formations in the vaginal wall.

The Retention of a Dead Fetus in the Uterus.

Dr. KÖNIG (*Ctrlbl. für Gyn.*, 1894, No. 44) reports a case with the following history: Aged thirty-seven years; three children, at the respective ages of eighteen, sixteen, and ten years; an abortion at the sixth month five years ago. In good health until February 27, 1893. Menses ceased at this period. From this on her usual symptoms of pregnancy. At the end of May the symptoms of gestation suddenly ceased, the abdomen did not grow larger, the breasts began to shrink, the appetite returned, etc. But the patient began to suffer from chilly

sensations and from the feeling as if she were carrying a heavy weight in the abdomen. In addition she suffered from laborlike pains. In January, 1894, the patient came under observation with the history of being ten months pregnant. She disappeared then from view and did not return until the end of May, 1894, fourteen months after the cessation of the menses. A short time afterward there was expelled from the uterus an ovoid body eight centimetres long, which on close examination proved to be a fœtus surrounded by amnion and blood coagula. After the expulsion of the dead fœtus the menses recurred regularly and the woman regained her normal health.

Bacteriological Investigations of the Disinfection of the Hands.

E. A. REINICKE (*Centrbl. für Gyn.*, 1894, No. 47), under the stimulus and supervision of Zweifel, undertook a series of bacteriological examinations of the hands after being subjected to various methods of disinfection. The various antiseptics—corrosive sublimate, one to two per cent., carbolic acid, five per cent., lysol, one per cent., trikresol, two per cent.—did not achieve perfect sterility of the hands, even when the hands had first been scrubbed for five minutes with a brush, hot sterilized water and green soap. Sterility was obtained by scrubbing the hands with hot sterilized water and soap and then scrubbing them either in absolute or ordinary alcohol for three minutes. The most rapid method of obtaining sterility of the hands is by scrubbing them in alcohol (ninety per cent.) for five minutes. The paper gives in detail the method of investigation pursued, which seems to have been very careful and free from objections.

Extra-uterine Gestation.

M. HOFMEIER (*Verhand. der Physik. Med. Gesell. Würzburg*, 1894) bases his paper on fourteen cases coming under his own observation. Diagnosis is difficult during the first two months. Pulsation over the site of the tumor is a valuable sign. It is an indication that the ovum is living. When pulsation ceases it is a pretty safe sign that the ovum has perished. A sound should never be passed in the uterus unless one is quite certain that he is not dealing with extra-uterine gestation. The examination of the uterine mucosa is of great diagnostic value. It is easy to introduce through the cervical canal, which is usually dilated, a small curette, and remove a small portion of the lining of the uterus. Unfortunately, this little procedure at the commencement of pregnancy is not without danger, and when pregnancy is more advanced an examination of the mucosa does not

teach anything. The diagnosis is more easy if one has the good fortune to examine the woman before she become pregnant. But the second tumor need not necessarily be an embryo sac. In one case it proved to be a rapidly-growing hydrosalpinx.

A Case of Complete Disappearance of the Uterine Cavity after a Curettage.

H. FRITSCH (*Cent. für Gyn.*, 1894, No. 52) reports this very rare case :

The patient, twenty-five years old, had a normal labor on January 31, 1892, and was curetted on February 24, 1892, under narcosis on account of continued hæmorrhage. According to the husband, who was present at the operation, the physician removed with the curette a piece of "flesh" which was quite hard and could not be broken up with the fingers. The patient was tamponed, the hæmorrhage ceased, and she was discharged as cured in eight days. Since then she has not menstruated. It was for this and for sterility that she consulted Fritsch. She was a healthy, well-developed woman. On internal examination, the vagina was found dilated, the portio vaginalis small and hard. The os uteri, partly grown together, showed a small depression on the left side. Bimanually the uterus was readily palpated, owing to lax abdominal walls. It was found small, corresponding in size to an "infantile uterus." The os uteri was cut into and a sound entered for two centimetres into the cervical canal. But it was impossible to pass a thick or fine sound any farther. With a knife and a dilator a passage was dug into the uterus. A laminaria tent was inserted and iodoform gauze introduced for several days afterward. But already, in fourteen days, the artificial opening had grown together again. An examination in October, 1894, revealed the old condition. Cervical canal two centimetres deep, and complete obliteration of the uterine canal above this.

A vigorous curettage during the stage of fatty degeneration of the uterus following the puerperium may tear up so much muscular tissue as to bring about complete union of the uterine walls. The case, therefore, must serve as a warning not to curette too energetically during the involution period. Outside of the puerperium such an accident could scarcely happen.

HOLLAND AND BELGIUM.

The Treatment of Puerperal Endometritis.

J. A. TEN BOKKEL HUININK, of Holland (*Nederlandsch Tij'dsch v. Verlosk en Gyn.* 5^e année Tior 5, and *Nouv. Archiv d'obst. et de Gyn.*, February, 1895), after stating briefly the various methods of treatment, describes that followed in the obstetrical clinic of Professor Van der Mey. As soon as the puerperal woman shows any fever which can not be traced to any extra-genital condition, a most careful inspection is made of the vulva and vagina. If any ulceration the result of puerperal lesions are detected, they are irrigated with sublimate and then painted with tincture of iodine. Should the temperature not fall after this, then the cavity of the uterus is carefully irrigated with sublimate or carbolic-acid lotion, and painted also with tincture of iodine. If this treatment has not been deferred for too long a time after the appearance of the fever, the infection can be arrested in the majority of cases, as evidenced in fifty-two cases in the clinic.

Perforation of the Bladder in Vaginal Fixation.

Dr. JACOBS (*Archiv de Tocologie et de Gyn.*, February, 1895), in pushing up the bladder from the uterus in the operation for vaginal fixation, the finger inadvertently punched a hole in the bladder. He at once closed the opening in the bladder and abandoned the operation. The artificial fistula closed by secondary intention. Later on he did a ventral fixation. This is the only accident he has met with in the operation which he has performed several times.

[We have met with a similar accident only once in over thirty operations. In that instance we attributed the accident to the bladder being moderately full, though the nurse had stated that she had emptied the bladder just before the operation. The opening was readily closed by a continuous silk suture and healed by primary intention.—H. N. V.]

POLAND.

Extirpation of Fibro-myoma of the Uterus.—A New Procedure.

OBALINISKI of Warsaw, (*Przegląd Chirurgiczny*, tome 2, Zezeit 2, 1894, and *ibid.*), considers the enucleation of the fibroid growth with conservation of the uterus as the ideal method. Martin, who was a warm advocate of this method, did not succeed in getting a large following, on account of the high mortality (eighteen per cent). This

the author thinks was due to faulty technique. His manner of operating is as follows: When the tumor is pedunculated, the pedicle is cut in the form of a cone and the peritoneal flaps thus formed are united by a suture. When the growth is interstitial, he makes a longitudinal incision in the wall of the uterus and extirpates it bluntly with the finger and handle of the scalpel. The blood-vessels are caught and tied. The uterine wound is sutured at its depth and is then sewn to the abdominal wound. Several strips of gauze are passed in the lower angle of the wound down to the uterus, the wound of the abdominal incision being closed in the usual way. He has operated in this way in four cases with complete success. The last case operated on was particularly instructive, as the woman was in an extremely feeble condition from profuse hæmorrhages, and still the result was satisfactory. The author sums up as follows: Inasmuch as—

I. The course of fibro-myomata of the uterus can not be predicted they should be extirpated as soon as possible.

II. It is the more necessary to interfere in those cases which are continually growing worse.

III. The only sure method of removing fibro-myoma is by surgical means.

IV. Each case should be individualized for the purpose of following the method which is the most certain and least offensive.

V. Among the methods that are the least offensive must be ranged the extirpation of the fibroid growth *per vaginam*. If *per abdomen* then the author's method (*organo pexil*) is the safest.

VI. Seeing that in two thirds of the cases the growth can be removed without sacrificing the sexual organs, it is the duty of the operator in each case to endeavor to solve this problem. If the uterus can not be saved, then the author gives first choice to Péan's method of vaginal extirpation by *morcellement*, the second choice to supra-vaginal extirpation according to Zweifel, and last to total extirpation through an abdominal incision.

VII. It is only exceptionally that one should resort to castration or to decortication.

ITALY.

The Absorptive Capacity of the Vagina.

COEN and LEVI (Livorno, *Collezione ital. di lettere sulla med.*, serie vii, No. 2; and *Centrlbl. für Gyn.*, 1894, No. 49) made a number of experiments on women with various genital diseases in pregnancy and

febrile conditions, and in women whose uteri were removed by vaginal hysterectomy, as to the absorptive powers of the vagina. Potassium iodide is readily absorbed. A tampon saturated with a twenty-per-cent. solution will give within an hour an iodine reaction to the urine. The maximum of excretion takes place in twenty hours. In forty-eight hours the excretion ceases. The vagina of patients with fever has greater absorptive power than that of others. The same holds good of pregnant women. The vagina of women who have undergone hysterectomy shows the same absorptive capacity as that of others.

Iodoform is absorbed in very small quantities. The excretion commences in seven hours and continues for twenty-four hours. To obtain a greater absorption fresh iodoform must be constantly introduced, and the first introduced left in the vagina for several days.

Salicylic acid is quickly absorbed in fairly large quantities. It appears in the urine within an hour and disappears in twenty-four hours.

Salol is quickly absorbed and is to be detected in the urine for a long time.

Antipyrine is also quickly absorbed. It appears in the urine in an hour and a half and remains for forty-eight hours. The antipyretic effect is less than when given by the mouth. The more definite details must be sought in the original article. In general these investigations prove that the vagina has absorptive capacity which is increased in pregnancy, the puerperal and the febrile states.

DENMARK.

Adhesions of the Omentum.

FR. HOWITZ (Copenhagen, *Gynakl. oy obstet. Med. del*, Bd. x, Heft 3; and *Centrbl. für Gyn.*, 1894, No. 5) details at length his experience with this condition. Of particular interest are the adhesions which are found without any marked pelvic lesions. These may at times cause very distressing symptoms, most frequently of an intestinal character. The lesions usually found are an adhesion with a loop of intestine or omental adhesive cords constricting the bowel and causing a bend in it. The chief symptom therefore is frequent attacks of colic, which may reach the severity of an ileus at times. Apart from abdominal operations, these adhesions arise from inflammatory processes, and of these affections of the tubes, pus sacs especially stand predominantly; next come affections of the vermiform process, deep-seated intes-

tinal ulcers, cystitis, etc. It is very probable that the configuration of the omentum is of importance. If it be very large and present numerous projections from its lower border, *cæteris paribus*, the tendency to the formation of adhesions will be greater than when it is small and the lower border is rounded and thick. That large hernias and eventrations lead to omental adhesions is well known.

The diagnosis of this condition may be attended with the greatest difficulty. The subjective symptoms (pain, etc.) are usually not characteristic. They indicate that at times an obstruction in the intestinal tract is present.

Objectively under narcosis the omental strand may occasionally be detected. The varying results of recto-vaginal examinations may afford us a clue. At one time we may feel close to the uterus a soft elastic growth; at another time this will have disappeared. Even during the examination the objective finding may vary. An omental strand is adherent to the firmly fixed annexa, and another strand passes the loop of intestine. According to whether the traction be greater or less the loop would be more or less drawn downward, in this way causing a bend and a consequent obstruction to the passage of the contents which thus forms the mass that is felt. When the obstruction is relieved, as, for instance, through the examining finger, the tumor disappears. If the symptoms are very severe, nothing short of a cœliotomy with breaking up of the adhesions will afford relief. The author reports several cases bearing out his observations and one case of a woman on whom he had performed cœliotomy four times in a period of six years. The first time it was done for retroflexion and diseased annexa, the second time to break up an adhesion between the small intestine and uterine bed, the third time for an adhesion between the omentum and spleen, the fourth time for adhesion between the omentum and anterior abdominal wall. The symptoms each time consisted of gastro-intestinal disturbances, particularly severe vomiting. After each operation the vomiting would cease. Fifteen months have elapsed since the last operation, and there have been no recurrences of any gastro-intestinal symptoms since then.

PÆDIATRICALS.

Infant Feeding Among the Poor.

WELLS, WILLIAM H. (*Philadelphia Polyclinic*, February 23, 1895) cites two cases illustrating the type of chronic malnutrition and calls attention to the care and treatment of these conditions, emphasizing a few simplified methods of infant feeding among the poorer and more ignorant classes.

CASE I.—Five months old, extremely emaciated, bronchitis and nasal catarrh. Occasional vomiting, bowels irregular and passages white and frothy. Also said to have fever at night, followed by sweating. Had been fed with condensed milk. The condensed-milk mixture was substituted for one of cow's milk, based upon a formula used by Dr. Starr :

For a six-ounce nursing bottle—

Half fill with fresh milk = about $\bar{3}$ iv or 8 tablespoonsful.

Water (previously boiled half an hour) = 2 tablespoonsful.

Sugar of milk = 1 teaspoonful.

Fresh cream (top of bottle) = 2 teaspoonsful.

This should be Pasteurized by allowing it to stand in a pan of boiling water for ten minutes, care being taken not to allow the mixture to boil. The nursing bottle should be scrupulously clean—scrubbed and scalded, also the plain rubber nipple.

Regularity in feeding is of great importance—about every three hours during the day.

Small doses of calomel and bicarbonate of sodium were also ordered together with frequent flushings of the large bowel with warm water, made slightly alkaline with bicarbonate of sodium. Inunctions of cod-liver oil were also advised together with the syrup. ferri iodidi, ten drops three times a day. The improvement was rapid and well marked, and from an almost typical instance of marasmus the patient had become a strong and healthy baby.

CASE II.—Two months old ; presented a typical picture of marasmus and was much emaciated. The frontal veins were prominent, the fontanelles sunken. Continual diarrhœa with green movements. The nursing bottle used had a long tube connected with the nipple—both unclean. Cried constantly and was fed at any and all times. Bronchial and nasal catarrh. A plain rubber nipple was substituted for the tube. The same directions were given for preparing the milk and the nursing regulated. In this case it was necessary to

digest the milk before feeding, which was done by the addition of pancreatin and bicarbonate of sodium. Later, small doses of Fowler's solution were added. The child gained steadily from the first; the nasal and bronchial catarrh disappearing. Diarrhœa ceased and the stools resumed a normal color. Two months later another spoonful of cream was added.

In the treatment of these cases, the removal from the milk of the septic microbic life, by the process of Pasteurization, is of the utmost importance and, for this purpose, the simple methods related above, while not perfect, are far better than the usual manner of giving milk to infants. Nasal and bronchial catarrh are prominent symptoms in these cases and many of the infants are first brought to the physician for colds. Inquiry should always be made into the history of the child's digestive organs and the methods of its feeding.

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BACTERIOLOGY IN PELVIC SURGERY.*

BY CHARLES B. PENROSE, M. D., PH. D.,

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The bacteriological study of inflammatory diseases of the Fallopian tubes and ovaries has not only much enlarged our knowledge of the pathological processes affecting these structures, but also promises to be of practical value in the treatment of the morbid conditions.

The pathogenic organisms which are found in inflammation of the uterine appendages are the gonococcus, the streptococcus, and staphylococcus, the bacillus coli communis, the tubercle bacillus, and the pneumococcus.

The great majority of the cases of pyosalpinx may be divided into two classes: those which are caused primarily by the gonococcus and are due to venereal infection, and those which are caused by the staphylococcus and the streptococcus and are due to septic infection after abortion, labor, and operation. These two varieties may be mixed. The bacillus coli communis enters the abscess cavity secondarily through an adherent or morbid intestinal wall. Cornil † found bacteria in the substance of the wall of a partly necrosed intestine. Tavel and Lantz believe that though micro-organisms can not pass through the wall of healthy bowel, yet they readily escape if the gut

* Presented to the American Gynæcological Society, May 28, 1895

† *Arch. de méd. exper.*, t. i, p. 353.

be the seat of even a slight lesion. Repeated bacteriological examinations made by different observers show that the bacterium coli commune is found in those cases in which a portion of the intestinal wall is in a pathological condition and is adherent to the abscess wall.

The pneumococcus has been found but a few times in the pus of pyosalpinx. Rosthorn* reports a case and states that he has been able to find only two cases reported in the German literature, and one in the French.

Hartmann and Morax † report two cases. The disease may occur unassociated with pneumonia or tuberculosis. The pneumococcus obtained from tubal pus seems to be excessively virulent. Death from sepsis has occurred from it, and inoculation of animals proves rapidly fatal.

Bacteriology has demonstrated that—

1. The pus—in suppuration of the uterine appendages—does not contain micro-organisms in every case.
2. The danger of peritoneal infection from the pus of a pelvic abscess is dependent upon the variety of organism present.

A micro-organism is present, at some stage of the pathological process, in every case of suppuration of the uterine appendages. As the disease progresses, however, the micro-organism dies and disappears, and the pus becomes sterile. Such a result probably occurs in every case which runs a chronic course for a sufficient time.

Bumm found that the gonococcus, when inoculated in blood serum, failed to grow after five or six days. Bockhart found that it failed to grow after twelve to fourteen days. Wertheim ‡ found that the gonococcus died upon agar-agar and blood serum after forty-five days—though repeated cultures were frequently made.

It seems probable that an acute attack of inflammation in a chronic case is accompanied by the presence of active micro-organisms. And in any chronic case there is always danger of infection by the bacillus coli communis passing through an adherent intestinal wall.

Many observations go to prove the statement that pathogenic organisms, in time, disappear in inflammation of the uterine appendages.

In twenty cases of pyosalpinx, examined by Wright,§ the gono-

* *Prager med. Wochenschrift*, No. 2, 1894.

† *Annales de gynécologie et d'obstétrique*, 1894, No. 7.

‡ *Archiv für Gyn.*, Bd. 42, Heft I, 1892.

§ *American Journal of the Medical Sciences*, February, 1892.

coccus was only found in four, and in the remaining cases, with two exceptions, no bacteria of any kind were found.

Hartmann and Morax* examined the pus in thirty-three cases of pelvic suppuration originating in the annexa, with the following results: In thirteen cases the pus was sterile; in thirteen gonococci were found associated with the bacillus coli communis, when a pyosalpinx was intimately adherent to the rectum. Streptococci were found in four cases, in two of which the bacillus coli communis was also present. In two cases the pneumococci were present. In one the bacillus coli communis was found alone.

Shauta † found that in one hundred and thirty-four cases of pyosalpinx the pus was sterile in one hundred and one; there were gonococci in eighteen; streptococci and staphylococci in fourteen; bacillus coli communis in one.

Wertheim ‡ gives the following interesting table of cases in which bacteriological examination was made of pus.

OBSERVER.	Number of cases.	No organism.	Gonococci.	Streptococci.	Staphylococci.	Pneumococci.	Harmless bacteria. Saprophytic bacteria.
Orthmann....	8	7	1	0	0	0	0
Westermarck..	1	0	1	0	0	0	0
Schmitt.....	1	0	1	0	0	0	0
Stemann.....	1	0	1	0	0	0	0
Wertheim....	9	1	6	0	0	0	1
Schaeffer....	11	10	0	0	0	0	1
Menge.....	26	18	3	2	1	0	2
Zweifel.....	44	32	8	3	0	1	0
Reichel.....	1	0	1	0	0	0	0
Wertheim....	15	4	10	1	0	0	0
	117	72	32	6	1	1	4

These references are enough to show that in the majority of cases of suppuration of the uterine appendages which come under observation the pus is sterile.

The ratio of the sterile cases to those containing organisms differs somewhat in the records of different observers. This should be expected. The operator who meets, and operates upon, the acute cases is he who most often will find pus-containing micro-organisms.

Since the recent acute cases, and perhaps the chronic cases during an acute attack, are those in which we are most likely to find patho-

* *Loc. cit.*† *Archiv für Gyn.*, No. 44, 1893.‡ *Loc. cit.*

genic organisms, we should expect the septic or aseptic character of the pus in any case to be indicated by the symptoms presented by the patient. Hartmann and Morax* state that in their experience the pus was sterile in those cases which were of long standing.

In my own experience, the cases in which I have found micro-organisms have been those in which decided constitutional and local symptoms were present before the operation. These symptoms were pyrexia, coated tongue, rapid pulse, marked pelvic and lower abdominal pain and tenderness—all the symptoms of an active inflammatory process. Shauta † states, however, that we can obtain no knowledge in regard to the character of the pus from the history given by the patient, the pelvic examination, or the temperature. The statistics which he gives seem to show that fever preceding operation is of no significance in regard to the pathogenic or non-pathogenic character of the contents of a pyosalpinx. There were 134 cases under his observation; 112 were afebrile and 22 were febrile. Of the 112 afebrile cases, 88 contained sterile pus or no pus, 15 contained gonococci, 9 contained streptococci or staphylococci. Of the 22 febrile cases, 13 contained sterile pus or no pus; 3 contained gonococci, 5 streptococci or staphylococci, and 1 the bacillus coli communis.

In this connection it should be remembered that the demonstration by the microscope of pathogenic micro-organisms does not always prove that the pus is septic, for the micro-organisms may be dead or inert. The cases may be divided into three classes: those containing live, active micro-organisms; those containing dead micro-organisms, and those containing no micro-organisms. The second class represents the stage of transition between the first and the third. The second and third classes alike contain sterile pus. It is not always possible to determine with the microscope whether the micro-organisms are living or dead.

A fact of practical importance is that micro-organisms may be found not only in the pus of a pelvic abscess, but in the substance of the abscess wall. The pus may be free from organisms, while they are present in the wall. The pus may be sterile, while the wall is septic.

Boisieux ‡ states that in cases in which the bacteriological examination of the pus revealed no bacteria, he has injected the pus into the peritonæum of the guinea-pig with no result; whereas inoculation by the abscess wall produced fatal sepsis.

* *Loc. cit.* † *Loc. cit.* ‡ *British Gynaecological Journal*, part xxxviii.

The bacillus coli communis has often been found in the wall of an abscess adherent to the intestine.

Wertheim has found gonococci in the wall of the Fallopian tube. In the Bacteriological Laboratory of the University of Pennsylvania streptococci and staphylococci have been found in the substance of the wall of a tubal abscess. In these positions the micro-organisms are probably often dead. Boisleux seems to have shown, however, that they may be actively septic.

The second fact, demonstrated by bacteriology, to which reference has been made, is that the micro-organisms found in suppuration of the uterine appendages differ markedly in their action upon the peritonæum. In other words, the danger of peritonitis or of peritoneal sepsis, after intraperitoneal rupture of a tubal abscess, is dependent upon the character of the micro-organisms found in the pus. The danger may be nothing or very great.

The pneumococcus seems to be virulent in the peritonæum. The gonococcus seems to be of but doubtful danger to the peritonæum.

Bumm,* in 1890, stated that the gonococcus was harmful only to the mucous membrane and died in serous cavities.

Treves † says that the gonococcus dies in the peritonæum. The difficulty of reaching a definite conclusion in regard to the danger of the gonococcus arises from the fact that often there is a mixed infection in cases of gonorrhœal pyosalpinx; or that other morbid conditions may be present in the peritonæum which render the gonococcus dangerous.

Shauta believes that the gonococcus may do harm in the peritonæum, though he is unable to offer positive proof of this fact. He reports two cases in which gonococci alone were found in the pus of a pyosalpinx removed by operation; and after death, which resulted from purulent peritonitis, large numbers of gonococci were found in the peritoneal pus. But staphylococci were also found in the peritonæum; and therefore the pathogenic influence of the gonococci becomes uncertain. The staphylococci may have gained ingress *post mortem* or during the operation. Though these cases therefore do not prove that the gonococcus can cause fatal peritonitis, they at least seem to demonstrate the fact that under certain conditions the gonococcus does not die in the peritonæum, but may multiply, and to this extent it is an element of danger.

* *Annales de gynécologie et d'obstétrique*, t. xxxiii.

† Lettsomian Lectures, 1894.

Pus containing gonococci alone certainly seems to be less virulent in the peritonæum than pus containing some of the other micro-organisms. Shauta's statistics show that of fifteen cases of unmixed gonorrhœal pyosalpinx—where intraperitoneal rupture of the sac occurred during the operation—two, those just referred to, resulted fatally; and in these two there is some doubt in regard to the origin of the infection; while in eight cases, where the pus contained streptococci and staphylococci in which rupture occurred during operation, three resulted fatally.

Wertheim reports cases of virulent gonorrhœal pyosalpinx in which escape of pus into the peritonæum in no way interfered with recovery after operation. The virulence of the pus was proved by inoculation in the human urethra. The gonococcus has never been found alone in the human peritonæum in a fatal case of peritonitis. Wertheim believes that the gonococci do not infect the surface of the peritonæum, but penetrate to the deeper tissues; and if they were properly sought for in these tissues they would be found. In the present state of our knowledge it can be said that the gonococcus is one of the least dangerous organisms in the peritonæum. Perhaps occurring alone in an uninjured peritonæum it is harmless.

The staphylococcus, streptococcus, and bacillus coli communis are the organisms which usually cause peritonitis or peritoneal sepsis.

An interesting table is given by Treves : *

Cases of Peritonitis in Man in which Micro-organisms were found in the Exudation.

	Fraenkel found alone.	TAVEL AND LANTZ.	
		Alone.	In association.
Bacterium coli communi	11	15	16
Streptococci	7	3	15
Staphylococci	1	2	6
Pneumococci	1	0	2

The bacillus coli communis, as it occurs in the pus of a pelvic or abdominal abscess, seems to be very virulent. It alone is a very frequent cause of fatal peritoneal sepsis. The pyogenic organisms, the streptococcus and the staphylococcus, seem to differ in degree in their

**Loc. cit.*

action upon the peritonæum. The streptococcus seems to be the more virulent and is the one more usually found in cases of peritonitis.

Murphy* states that pus in which the staphylococcus and the inert bacillus coli communis predominated could be free in the peritoneal cavity for a long time and produce but very slight changes in the peritonæum. And such pus when injected into the peritonæum of animals caused no unpleasant symptoms. When, however, the streptococcus predominated, serious peritoneal lesions and sepsis followed.

Peritoneal sepsis depends not only upon the character of the organisms which have entered the peritoneal cavity, but also upon the character of the fluid in the peritonæum and the condition of the serous surface. All investigators agree that the healthy peritonæum has the most extraordinary power of absorption, and that peritonitis is most likely to occur when there has been chemical or mechanical injury to the absorbing serous surface, when a good culture medium remains in the peritoneal cavity.

Extravasations of blood or serum in the peritoneal cavity, long exposure of the peritonæum, and damage to the serous surface, all aid the development of peritonitis.

Experiments upon animals † show that injections of pathogenic organisms into the peritoneal cavity are most virulent if mixed with a culture fluid which is difficult of absorption, or if the peritoneal surface has been injured by some chemical or mechanical irritant.

An important fact in regard to the development of peritonitis is the immunity—natural or acquired—which the peritonæum possesses, in some cases, from infection. This fact has been recognized clinically by abdominal surgeons, and has been demonstrated by experiments upon animals. Several observers have shown ‡ that immunity from peritoneal infection by septic organisms can be produced artificially. A small dose of septic material is introduced into the peritoneal cavity of the dog, and after the animal has recovered from the disturbance produced, a larger dose is injected. This process is repeated with increasing amounts of the poison, until such a degree of immunity is acquired that the animal will survive a dose of septic

* *Medical News*, January 5, 1895.

† Pavlowsky-Ebendas, 1889, Bd. cxvii; Growitz, *Virchow's Archiv*, 1889, Bd. cxvi.

‡ Reichel, *Deutsche Zeitschrift für Chirurgie*, Bd. xxx, p. 1.

material which in a control experiment would cause death within twenty-four hours.

The facts determined by bacteriology and by experiments upon animals, which I have briefly recorded, have a direct practical bearing upon the surgical treatment of abdominal and pelvic diseases.

The subject of drainage, after cœliotomy, is one which has been discussed so much that I approach it now with hesitation. The phase of the subject, however, which I wish to present is one which has received but little attention, and some consideration of it may serve a useful purpose.

I assume that it will generally be admitted that, though drainage after cœliotomy should be avoided if possible, there are yet some cases in which the chances of recovery are greater with drainage than without it. The difficulty is to determine what cases absolutely require drainage. The chief object of drainage after cœliotomy is to remove from the peritonæum any material which is or which may become septic. Blood, or other material, suitable for the culture of bacteria may become septic, excluding operative infection, either from septic organisms existing in the abdomen before operation, or from infection through the intestinal wall after operation.

Infection by organisms existing in the pelvis before operation, part in fact of the pathological process for which the operation is done, is the usual cause of peritoneal sepsis after aseptic cœliotomy for disease of the uterine appendages.

Bacteriology, by demonstrating the sterility of the pus in the majority of the cases of pelvic suppuration which are subjected to operation, has eliminated from the class of drainage cases a large number in which, a few years ago, drainage was considered by many operators to be essential.

Though, in a good many cases, we can conclude, from the history of the disease and the symptoms presented before the operation, that the pus is in all probability sterile, yet we can never be positive of this fact without a bacteriological examination. Shauta says that we are unable to determine the septic or the sterile character of the pus from the history, or any of the symptoms before operation. The bacteriological examination can be made, in part at least, by the microscope during the operation. The microscope, unlike culture or inoculation, does not demonstrate fully the activity or virulence of the pathogenic organisms seen in the pus. But it does demonstrate their presence : and to that extent it furnishes the operator with knowledge which is of value in determining the best technique to follow in any case.

Shauta adopts the following plan of operation :

If the tubal abscess be small, an attempt is made to remove it entire, without rupture. If, however, the abscess should rupture during removal, the pus is immediately examined, and if it be sterile or contain gonococci the abdomen is closed without drainage. If streptococci are found, the field of operation is drained through the abdominal wound by means of iodoform gauze.

In the case of a large pelvic abscess which can be brought to the abdominal incision, a somewhat different technique is followed. The parietal peritonæum is sutured at a suitable position to the anterior surface of the abscess, and the rest of the abdominal incision is closed with sutures; a drop of pus is then withdrawn by means of a fine trocar, and a cover-glass preparation is immediately made. If the pus is found to be sterile or to contain gonococci, the abscess is opened and washed out, and the abdomen is reopened and the sac completely removed. If, however, the pus contains streptococci or staphylococci, the operation is discontinued. After the lapse of a few days, when the parietal peritonæum has formed adhesions to the abscess wall, the sac is incised and drained.

The objection to the latter part of the technique just described is that the disease in many cases is not cured by mere incision and drainage of the abscess. Incision of an abscess which has as its origin a pyosalpinx does not cure the disease. Therefore it seems to me best in every instance to remove the whole of the abscess wall—first aspirating if the cavity be large—and, in case the contents be septic, to trust to sponging, washing, and drainage to avoid peritoneal infection.

In most of the cases of suppuration of the uterine appendages which I have operated on since October, 1893, bacteriological examination of the pus has been made during the operation whenever intraperitoneal rupture of the abscess took place, and the necessity for washing and drainage has been determined by this examination.

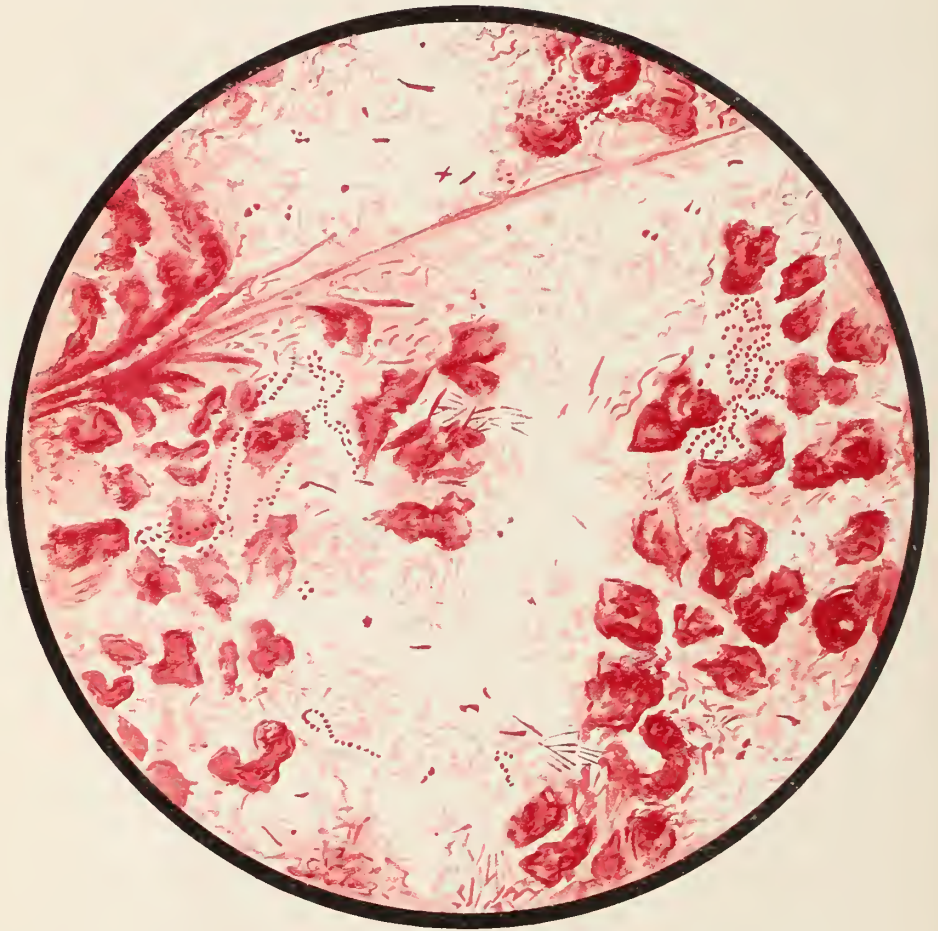
If the abscess can be removed without rupture, drainage is unnecessary. If rupture occurs and the contents are sterile, the pus is merely sponged out and the abdomen is closed. If rupture occurs and the contents are septic, the pelvis is washed with distilled water, or sometimes with a 1-to-2,000 bichloride solution, and is drained with the glass tube or with gauze. I have also made similar bacteriological examination in all cases of ovarian and tubal tumors—where there was doubt about the sterility of the contents.

The cases may be tabulated as follows :

Case.	No organisms.	Streptococci.	Staphylococci.	Gonococci.	Bacillus coli communis.	
I	I	Mixed organisms, bacilli and cocci.
2	I	....	....	....	....
3	I	....	....	....	....
4	I	....	....	....	....
5	....	I	I	....	....
6	I	....	....	....	....
7	I	....	....	....	....
8	I	....	....	....	....
9	I	I	....	....		Short bacilli, diplococci and a short bacillus resembling coli commune.
10	I	....	....	....	....
11	I	....	....	....	....
12	I	....	....	....	....
13	....	I	I	....	....
14	I	Diplococci, tubercle bacilli, a long bacillus.
15	....	I	I	....	I
16	I	....	....	....	....
16	II	4	4	I	I	

All of the women recovered from the operation. In none were there any symptoms whatever of general peritonitis or of peritoneal sepsis. There was, however, a marked difference in some cases in the local condition—the condition of the pelvis and incision—and this difference seemed to be, without doubt, dependent upon the character of the organisms found in the pus. The sterile cases recovered easily without inflammation or suppuration at any point. In two of the cases, however, in which streptococci were found there followed operation, suppuration of the incision, stitch-hole abscess, suppuration in the tube track, and fæcal fistula—phenomena which emphasized the fact that it was the drainage which prevented peritoneal sepsis. That these conditions were not caused by infection at the operation or through the tube is rendered probable by the fact that a similar combination of accidents never occurred in my experience in any case in which drainage was used for other than suppurative disease.

At present I use drainage whenever any pathogenic organisms are found, though there seems to be no doubt that the gonococcus and staphylococcus are less dangerous than the streptococcus and the bacillus coli communis. The bacillus coli communis demands drain-



DR. PENROSE: BACTERIOLOGY IN PELVIC SURGERY.

Case V.—Appearance of a Drop of Pus examined during Operation.

age not only on account of the intrinsic virulence of the organism, but also because its presence proves an intestinal lesion which itself requires drainage.

I feel confident that, in following this method, I use drainage more often than is necessary, and that future experience will enable me to restrict still further the drainage cases. Those cases which contain the gonococcus alone or a few staphylococci in all probability require no drainage; and there are some cases in which the organisms seen are dead, and, consequently, the pus sterile, though the microscope does not show this.

The examinations have been made for me by Dr. Beyea. Cover-glass preparations are made and are fixed in the flame of an alcohol lamp, and stained with carbol-fuchsin. A Leitz one-twelfth immersion lens is used.

The following cases, some of which have already been published, serve to illustrate this subject. The accompanying illustration shows the microscopical appearance of a drop of pus examined during the operation in Case V.

CASE I. *Tubo-ovarian Abscess with Sterile Contents and Chronic Endometritis.*—This woman had had septic infection after a miscarriage several years ago, and had since then suffered continuously with bilateral ovarian pain. Cœliotomy was performed, the appendages were removed on both sides, and the uterus amputated at the internal os. During the enucleation a tubo-ovarian abscess the size of a turkey egg was ruptured on the right side, and the purulent contents escaped into the pelvis and were removed with gauze pads. The contents were immediately examined and pronounced sterile. The abdominal incision was closed without irrigation and without drainage. Convalescence was easy. There was no elevation of temperature, and the woman has continued well.

CASE II. *Tubo-ovarian Abscess and Abscess of Broad Ligament with Septic Contents.*—This woman had septic infection following a miscarriage one year ago, and since then had suffered with repeated attacks of pelvic peritonitis. Cœliotomy was performed during one of these attacks. All the pelvic contents were found matted together by inflammatory adhesions, and the thickened omentum was adherent transversely across the pelvis. Both tubes and ovaries were removed, and the uterus was amputated at the internal os. An abscess cavity on the left side containing several ounces of pus involved the tube, ovary, and cellular tissue of the broad ligament. This abscess was ruptured, and the pus filled the pelvis. It was examined and found to

contain streptococci. The pelvis and lower abdomen were thoroughly washed out with warm water and drained with the glass tube. The woman had a slow, difficult convalescence, having a profuse discharge of pus from the drainage-tube, and after the first week a discharge of fæces—the result of intestinal necrosis.

CASE III. *Tubo-ovarian Abscess with Sterile Contents.*—The trouble in this case seemed to date from a labor nine years before. When cœliotomy was performed a tubo-ovarian abscess containing about one ounce of pus was found on the right side, and a chronically inflamed, closed tube and ovary on the left. Both appendages were removed, the abscess being ruptured during enucleation. The contents were immediately examined and pronounced sterile. The abdomen was closed without irrigation or drainage. Convalescence was very easy.

CASE IV. *Double Pyosalpinx, Tubo-ovarian Abscess with Septic Contents; Endometritis.*—This woman had had septic infection following a miscarriage five years before. She had a tubercular family history and was suffering herself with pulmonary tuberculosis. She had had frequent attacks of pelvic peritonitis, during the last of which, following a criminal abortion, she was operated upon. All the pelvic contents were matted together by adhesions, old and recent; a tubo-ovarian abscess the size of a child's head filled the left and posterior portion of the pelvis, reaching half way between the umbilicus and the symphysis pubis. The tubes, ovaries, and the uterus to the internal os were removed. The abscess cavity was ruptured and the pelvis and lower abdomen were deluged with pus. Bacteriological examination was immediately made and a small number of streptococci were found. The pelvis was washed out thoroughly with warm water and drained with a glass tube. Convalescence was remarkably easy. The tube was removed in forty-eight hours, and the tube tract was completely closed within a week.

CASE V. *Tubo-ovarian Abscess with Septic Contents.*—This woman had an acute attack of salpingitis following a miscarriage eight months before. Two weeks before the operation of cœliotomy the uterus had been curetted with the result of producing an acute suppuration of the left tube and ovary.

When the abdomen was opened a tubo-ovarian abscess about the size of an orange was found on the left side. The abscess was ruptured during the enucleation and pus escaped into the pelvis. Bacteriological examination showed large numbers of streptococci. The pelvis was washed with a 1-to-2,000 solution of bichloride, and drained with the glass tube. Convalescence was very easy.

CASE VI. *Tubercular Pelvic Abscess with Septic Contents.*—This woman was twenty-seven years old and had never been pregnant. She gave a history of having had an attack of peritonitis three years ago, which confined her to bed for nine weeks. She had been in bed with what she considered a similar attack for four months before operation.

When the abdomen was opened a large abscess cavity was found filling the pelvis and extending half way between the symphysis and umbilicus. The purulent accumulation was roofed by intestines, there being no defined abscess wall. A large quantity of very offensive pus escaped into the general peritonæum. The pus was examined and found to contain streptococci and the bacillus coli communis. The tubes—pyosalpinx—and the ovaries were removed, and the whole pelvis and lower abdomen were thoroughly washed out with hot water and drained with the glass tube. More careful microscopical examination showed the abscess to be tubercular. A fæcal fistula developed on the third day. The convalescence has been very tedious, on account of the extremely poor condition of the woman and the tubercular character of the disease.

THE VAGINAL ROUTE FOR OPERATIONS ON THE PELVIC VISCERA.*

BY D. TOD GILLIAM, M. D., COLUMBUS, OHIO.

It is not many years since all, or nearly all, operations on the supravaginal pelvic structures were done *per vaginam*.

In this category were operations for the removal of the submucous uterine fibroid, the evacuation of pelvic abscesses, hæmatoma, and other fluid collections, and later those for ectopic gestation. Following this came the craze for abdominal section.

The peritoneal cavity, so long the hobgoblin of surgeons, could now, thanks to aseptic methods, be invaded with comparative impunity. This gave a wonderful zest to the work, and it was prosecuted vigorously along all the lines. A flood of light followed the knife into the abdomen and pelvis, mooted questions were set at rest, false theories abandoned, and pathology revolutionized.

* Read before the Ohio State Medical Society, May 16, 1895.

Brilliant surgical achievements followed each other in bewildering profusion, and the infatuation spread. The knife was in every hand, and many women carried on the most prominent part of their anatomy the private mark of their favorite surgeon.

At this time the gynæcologist who was not an abdominal surgeon was clearly in disfavor. Did he attempt to remove a submucous fibroid, eliminate the uterine appendages, tap a pelvic abscess, or in any manner deign to interfere surgically with supravaginal structures through the vagina, he was ridiculed and characterized as a fossil. This more especially among English-speaking peoples. Meanwhile the Germans devised and perfected a technique for vaginal hysterectomy which slowly but surely made its way into general favor.

One of the cardinal rules governing the selection of cases for this operation was that the uterus should be freely movable—so movable, indeed, as to be easily drawn down to the vulva. An attempt to operate under other circumstances was regarded as reprehensible. Péan then conceived the idea of removing the immovable uterus. It was a bold thought and well worthy the genius of the great French surgeon. He succeeded. His success was the signal for a storm of antagonism. The operation was denounced as a wanton and wicked mutilation. To remove the womb for pelvic inflammation was treason to all the better instincts of humanity. "If," say they, "we remove the tubes and ovaries, open and drain abscess cavities, curette, cauterize, and pack the uterus, we have done all that is justifiable. Then, again, the mortality of Péan's operation must be appalling. Péan, it is true, with his marvelous skill, may meet with a measure of success, but the operation is not feasible and will die with him."

Péan replies: "A womb without tubes or ovaries is of no value. From it emanates poison that permeates and disrupts the pelvic structures. The Tait operation and curettage can not remove the trouble." A portion of the tube remains. It is infected. The ligatures that surround it are infected and the infection spreads again. The woman remains an invalid. Look at the anatomy of the parts. Observe how the blood-vessels and lymphatics center in and are distributed from the uterus. Observe, furthermore, how the natural drainage of the pelvis converges to the same point. If this organ be removed it will have the effect of removing a plug from the bottom of a basin. From a physiological standpoint the uterus is simply a nest for the reception and maturation of the egg—without appendages it is of no more account than a deserted bird's nest. From a pathological standpoint it is a hotbed of infection, distributing its deadly virus not only to

the adjacent pelvic structures, but at times by way of the blood and lymph channels, scattering it broadcast through the general system. As a diseased organ in the midst of diseased tissues, it blocks the way to a free and natural drainage, and retards or renders futile Nature's efforts to eliminate peccant matter.

As to the mortality, I find that it is even less than the best results in the hands of the best abdominal surgeons. In time Péan was joined by Richelot, Ségond, Jacobs, and others, and, backed by such spirits the operation was lifted to such prominence as to demand favorable recognition.

Let us look a little further into its claims. General pelvic infiltration and multiple pelvic abscess as the result of sepsis has always been the bane of the abdominal surgeon. He knows when he meets such a case that he is to grapple with difficulties sometimes insuperable. He knows that he must reach tubes and ovaries and pus cavities through coils of agglutinated intestines and jumbled viscera. He knows that the adhesions are often dense, that the tissues are often soft and friable, and that rents in the bowel or bladder are likely to occur. He knows that the evacuated pus frequently inundates the peritoneal cavity and wells up through the incision; that in draining he must drain against gravity. He knows that the immediate mortality is great, that convalescence is tedious with its loathsome accompaniment of discharging sinuses, that many cases never recover, but lapse into a state of hopeless invalidism. He knows that ventral hernia is almost a common sequence, that painful scars are even more so. He knows that the intrapelvic structures are often matted and disturbed in their relations, that intestinal embarrassment or obstruction is very frequent. He knows all this and much more. In the transvaginal operation the pelvic viscera other than the uterus and appendages are not disturbed. There is no handling of intestines, consequently but little shock. No breaking up of adhesions (except in so far as to liberate the uterus and appendages), no contamination of the peritonæum with purulent matter, but simply an elimination of irreparably diseased parts. These are taken from the central and under surface of the arch, and there is natural, free, and uninterrupted drainage. Under this all peccant matter is discharged, exudations absorbed, adhesions dissolved, resolution and restoration complete. The patient is well. The mortality is less than by any other method. There is no hernia, no painful scar, no sense of insecurity, no languishing to a long-hoped-for death.

Technique.—The instruments needed are a knife, two pairs of long-

handled scissors slightly curved on the flat, three bullet forceps, a set of Péan's retractors, four broad-ligament and several hæmostatic forceps. The retractors being introduced, the cervix is seized with bullet forceps and a semicircular incision made in front from side to side, being careful to avoid the vesical wall. A similar incision is made behind but not so close to the cervix. From the junction of these incisions a linear incision three fourths of an inch in length is carried outward on either side along the face of the broad ligament. This imparts greater mobility to the uterus, and increases the distance between it and the ureters. With finger and scissors the cervix is freed from the bladder, a retractor being inserted into the opening and materially facilitating the process.

In like manner the cervix is freed behind. Forceps are now applied to the broad ligament on either side so as to include the uterine arteries, and the portion thus secured cut through, keeping close to the uterine wall. The side retractors may now be dispensed with, the forceps taking their place. The cervix is next split up on either side, and the posterior half amputated. The anterior half is also amputated, but before complete severance a new hold must be taken by the forceps on the anterior uterine wall above. From this time on the operation consists in dissecting off the bladder, splitting the anterior uterine wall longitudinally in the middle line, seizing the same on either side and cutting it away piece by piece until it is destroyed and the fundus reached.

The anterior retractor should continually follow the finger into the depths of the dissection, and the traction forceps should always secure a new hold on the tissues above before a piece is cut away. When the peritoneal cavity is reached the narrow retractor should be substituted for the anterior one, and should be pushed up into the cavity. Traction on the fundus will now cause it to roll forward and out into the vagina. Forceps are now applied to the upper half of the broad ligament from above downward, and the uterus cut away. Should it be practicable, the annexæ are removed at the same time; otherwise they may be left. Pus deposits, whether in the tubes or elsewhere, are opened, washed out, and drained, care being taken to protect uninfected parts by gauze packing. Adhesions to the uterus can usually be separated under the eye after its inversion into the vagina. A pad of iodoform gauze is placed over the tips of the forceps, to protect the intestines from injurious pressure, and between the forceps and vaginal walls, to protect the latter. The forceps are removed at the end of forty-eight hours, and after gentle irrigation the dressing replaced.

The gauze pads above the vaginal vault are not removed for six days.

Notwithstanding the manifold advantages of the vaginal operation, as detailed above, it is not, as I believe, applicable to all forms of pelvic inflammation or all degrees of the same. There are limitations to its range of usefulness, as also its feasibility. For some years, under the domination of a passion for salpingectomy, every tube that could be made out to have undergone any pathological change was condemned to the knife. As a result there was a woeful and wanton unsexing of women, to the incalculable detriment of society. For the last two or three years we have been gradually coming back to our senses, and we find that under favorable conditions many of these ailments pass away entirely, while very few indeed pass on to a condition absolutely demanding operative interference or the sacrifice of the appendages. I do not think it proper, therefore, to remove the annexa in many instances, and certainly not to remove the uterus except in the most aggravated cases. The danger is that this, like all other popular movements, will be carried to extremes; and in the eager chase for notoriety, and oftentimes through self-imposed blindness, there will ensue such a rage for vaginal hysterectomy as will do irreparable damage.

It was the dread of multiple pelvic abscess, the fearful mortality attending the operation for the same, and the very unsatisfactory results ensuing, that impelled the cœliotomist to attack the diseased appendages at an early period, in order to forestall such dire consequences.

It is in this connection that the great value of the Péan operation is manifested.

Relative to this, it may be said that the cœliotomist's extremity is the vaginal surgeon's opportunity. In other words, when the destructive changes of pelvic inflammation have gone to such an extent as to be practically beyond the reach of the cœliotomist, Péan steps in and, by removing the uterus *per vaginam*, makes possible a perfect recovery. Knowing this, the conscientious surgeon will keep hands off. As a result, thousands of women who have hitherto been sacrificed to the misguided zeal of the surgeon will resume the functions of life and maternity, and tens of thousands of children otherwise unborn will add to the strength of nations.

INTRAPERITONEAL TREATMENT OF UTERINE DISPLACEMENTS.*

BY HERMAN E. HAYD, M. D., M. R. C. S. ENG.,

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Before adopting the intraperitoneal treatment of uterine displacements such measures should have been employed as will place the uterus in a healthy condition, as well as to establish, as perfectly as possible, the continuity of the pelvic floor. If the organ be large and subinvolted, it must be thoroughly curetted and packed with iodoform gauze. If there exists a pronounced laceration of the cervix, the lips must be denuded and be brought together by a properly performed Emmet operation; and if the pelvic outlet be stretched or torn, the perinæum and anterior vaginal wall must be restored by such plastic operations as are required.

Intraperitoneal operations are indicated where other measures have failed, or where other means have been employed without satisfaction. Often the various plastic operations, when properly performed, restore the woman to perfect health with the assistance, for a time, of a well-placed pessary or wool tampon, which keeps the uterus forward until it is able to resist and overcome the intra-abdominal pressure by reason of the contraction of the round ligaments.

Unfortunately, pessaries, tampons, and all other mechanical devices often fail to give relief, even though the pelvic floor be intact, or after having been properly repaired by operative measures. The organ can not be retained in position, the pessary is pushed out of place, or it provokes so much irritation that it can not be worn, or its presence, for months or even years, becomes an intolerable and unbearable nuisance.

There can be no question that a carefully applied pessary to a retrodisplaced uterus, which can be elevated and put in normal position, has a field of great usefulness; but pessaries, in cases where tubal and ovarian disease exist, or adhesions which interfere with the proper restoration of the organ, can do no good whatsoever and will provoke dangerous and irreparable mischief.

In certain forms of tubal and ovarian disease where the lesions

* Read before the Alumni Association of the Niagara University.

are not great and not easily demonstrated, pessaries are frequently employed even by the most capable and careful practitioners. And it is in just this class of cases that intraperitoneal operations should be more frequently resorted to.

A pessary which produces pain—and in the great majority of cases this pain is not on account of faulty adaptation—is contra-indicated, because the symptomatology is not due to a faulty position of the uterus, but to coexisting disease of the annexæ; and if this proposition be true, then the field for the pessary grows smaller as one's diagnostic ability and one's surgical aptitude and confidence increases, so as to deal properly with the diseases present, because uncomplicated malpositions of the uterus capable of producing much distress are comparatively few indeed.

It is also true that a uterus held forward by an Alexander operation, or by the intraperitoneal shortening of the round ligaments, or by ventral fixation, will not bring relief if such an organ be diseased, or has adventitious inflammations about it, or has not the proper basal support of a firm perinæum.

To place a uterus forward and hold it there by a fixed support is unsurgical, even if it be released from adhesions and diseased tubes and ovaries, if a continually and constantly increasing rectocele and cystocele exist to unduly stretch, pull, and irritate the anchored organ.

We may therefore profitably discuss this question under the following heads :

1. Cases of simple uncomplicated posterior displacement, with or without laceration of the cervix and perinæum.
2. Cases of posterior displacement associated with tubal and ovarian disease, with or without laceration of the cervix and perinæum.
3. Cases of extreme prolapse or procidentia, with or without disease of the annexæ.

The first class of cases are only attacked by intraperitoneal measures, where the tampon, pessary, electricity, the genupectoral position, and the various plastic operations have failed to keep the uterus in a healthy position; or when the patient, perhaps, by her own election chooses more radical measures in the hope that she may discard the annoying if not actually troublesome pessary. It is in this limited class of posterior displacements where the Alexander operation, or the extraperitoneal shortening of the round ligaments, has its sphere of undoubted usefulness. To condemn a woman to the life-

long use of a pessary is cruel, even if it can be worn with tolerable comfort.

In posterior displacements, which recur after subsequent pregnancies, where the vaginal vault is so much distended that the uterus simply turns on itself or even rolls backward into the hollow of the sacrum, tentative measures accomplish but little. Oftentimes a retroflexion or retroversion brought about by a septic endometritis following abortion or labor is cured by a subsequent pregnancy; but in those cases of recurring retrodisplacement after normal labors nothing short of operative measures will keep the uterus in an anteverted position. To balloon such a vagina with a great big pessary—which, sooner or later, causes untold mischief to the bladder and rectum—is wrong in view of what can be accomplished by modern surgery, with practically a nil mortality.

The second group is the most important, and embraces not only those cases where an operation is performed to free adhesions and to lift up a retroposed uterus forward, but where the abdomen is opened for advanced tubal and ovarian disease, and the uterus is found anchored in the hollow of the sacrum, or shows merely a disposition to bend backward. There can be no question that many of our failures in abdominal pelvic surgery are due to the fact that the abdomen has been closed without taking the precaution to fix the uterus in a normal anteverted position. This is accomplished by taking up a reef in the peritoneal fold of the round ligament and sewing the opposed surfaces together with fine silk or silkworm gut; or the round ligaments may be brought in front of the uterus and sewed on to its anterior surface (Dudley.)

I have now under my care three patients from whom I removed the appendages for advanced disease who suffer very much from retroversion. The organ perhaps showed a slight inclination to tip at the time of operation, its tissues were soft, and, having lost the supporting prop of the diseased masses, fell. Had I taken the precaution to pull the uterus forward and retained it in that position, if only for a few months, I should have saved the patients much annoyance and suffering, as well as myself embarrassment and disappointment. I have advised another operation to forcibly fix the uterus to the abdominal wall; but women who have gone through the suffering of one operation and are disappointed do not easily submit to a second one.

If the uterus is not too heavy, and the round ligaments too thinned out, this little device will accomplish all that can be desired. But in

case the uterus be very much enlarged, and with the retroversion there exists considerable prolapse, a ventral fixation is much to be preferred. Moreover, if the flexion be very marked and the uterus is with difficulty straightened on account of the dense character of the tissue at the flexion point, it is best to fix the organ to the abdominal wall.

An objection to this operation of intraperitoneal shortening of the round ligaments where normal tubes and ovaries exist, is that by forcibly drawing the uterus forward at its cornual ends the Fallopian tubes are bent, and thus an obstruction is offered to the possibility of future pregnancy. But I am inclined to believe that this objection is but hypothetical, since the band of adhesion which is necessary to hold the uterus forward need be so slight that undue tension can easily be guarded against.

In the treatment of the third group of cases much could be said about total extirpation of the uterus, because it is often a question whether a markedly prolapsed uterus, even with or without diseased tubes and ovaries, should not be removed *in toto*. However, given a case of complete procidentia, my usual practice is to curette the uterus if it is indicated; repair a laceration, if it exists, and perform what is always necessary—an anterior colporrhaphy; and then open the abdomen and examine, by touch and sight, the tubes and ovaries, free any adhesions, remove the annexæ, if they be diseased, and sew the uterus to the abdominal wall, leaving the posterior colporrhaphy or perinæorrhaphy for a subsequent operation—say in three weeks or a month later.

However, if one only has to deal with the prolapse of the vaginal walls, the uterus being healthy, all three operations can be done at once—namely, the anterior colporrhaphy, the perinæorrhaphy, and the hysterorrhaphy.

Perineal operations are difficult and often require a good deal of time to carefully adjust the parts and bring into perfect apposition the different tissues involved. Therefore I prefer to divide the treatment of procidentia uteri into two stages—the first to deal with the anterior vaginal wall and the hysterorrhaphy; and the second with the perinæum. To get good results and permanent relief all three operations, however, must be performed, and sooner than subject the patients to the dangers of too prolonged anæsthesia, the operation had better be done in two stages.

There can be no question that these intraperitoneal operations upon the round ligaments, and hysterorrhaphy, guarantee with rea-

sonable certainty a healthy replacement of a deviated uterus, and the objections raised that we are forcibly fixing an organ where Nature did not intend it to be has no place in this discussion, because disease has already altered Nature's symmetry, and it remains for us to correct by artificial means these abuses.

I have frequently brought the uterus forward by taking up a fold in the anterior peritonæum, and in the great majority of cases the organ has remained in its artificially created anteverted position. And five times have I performed hysterorrhaphy for complete procidentia with and without tubal and ovarian disease, and from none of these patients have I been able to get any complaint arising from the forced anterior fixation of the organs.

It is said that the function of the bladder is interfered with; yet in my cases, and those which I have followed from the hands of other operators, no inconvenience seemed to result from the imprisoned organ. And I am inclined to believe that if a little care be exercised and the organ be placed not too high up and not too low down, this possible source of bladder irritation will be obviated.

The operation of hysterorrhaphy is performed like an ordinary cœliotomy, but the incision is made a little nearer the pubes than usual. The uterus is grasped with a tenaculum forceps and drawn up to the abdominal wound and there steadied by an assistant. Its anterior surface is gently scarified and then two or three silkworm gut sutures are passed through the anterior surface of the uterus, taking care not to penetrate too deeply so as to enter the uterine cavity. These sutures are best passed with a spear-pointed curved needle, and they should take in a good bit of the peritonæum and fascia on each side of the incision. Then the peritoneal edges are to be carefully approximated and the sutures tied, but simply tight enough to insure immobility of the organ without severe constriction of the tissues. The other stitches are then passed through the abdominal wall and the wound brought together, after having cut off short the sutures which passed through the uterus, as these are buried and remain *in situ*. It is also well to leave in the vagina, behind the cervix, a tampon of iodoform gauze for a week, so as to lessen any strain consequent upon the vomiting which so often follows abdominal operations.

APPENDICITIS OF MILD TYPE.

BY CHARLES P. NOBLE, M. D.,

Surgeon in Chief, Kensington Hospital for Women, Philadelphia.

I wish to present to the Society this evening specimens from six cases of appendicitis of mild type for which I have operated. All of the patients made uncomplicated recoveries. Five of the cases have been operated upon within the present year.

In two of the patients the appendix was removed because it was adherent rather than because of any symptoms arising from its condition. In one of the cases the appendix was adherent to the right broad ligament in such a way as to put it on the stretch. The abdomen was opened in this case to do a hysterectomy. I removed the appendix because I felt certain that if left alone it would cause pain, and after separating it, it was so much wounded that I thought it best to take it out. In this case the appendicitis was probably purely a peri-appendicitis arising from a peritonitis of pelvic origin. In the second case the abdomen was opened to ligate varicose veins of the broad ligaments. The woman had a history of several attacks of peritonitis, of which there were no evidences found in the pelvis. On examining the appendix, it was found deflected to the left and adherent by old organized adhesions. These were separated, and the appendix removed. The convalescence was uneventful.

In one patient there was a history of many attacks of what had been diagnosed as appendicitis by several well-known physicians and specialists, the last of which I attended myself. The attacks were characterized by violent pain in the appendix region, marked vomiting, intense nausea, and extreme tenderness on pressure. The patient did not lie upon her back, but rather upon the right side. The attack which I saw I considered atypical, but having apparently a perfect history of repeated attacks of appendicitis, I concurred in the diagnosis of my predecessors, and some weeks later operated for the removal of the appendix. On delivering the appendix, which was free from adhesions, I was unable to find any morbid condition in it, excepting some injection of the vessels. There were, however, some few old, organized, flat adhesions on the ascending colon, showing that she had at least had peritonitis in that region. I thought it best to remove the appendix, and did so. The patient has since had one milder attack and one attack of the same description as that which

had been called appendicitis prior to the operation. The question is : What was the nature of the attacks? I have been unable to examine this patient, as she has passed beyond my control, but it is my suspicion that the attacks were due to a movable kidney and were due either to torsion of the ureter or to an obstruction in the renal veins. The patient's urine at the time of her operation contained some albumin and abundant bladder and ureteral epithelium.

The last patient has had three mild attacks of appendicitis, and the appendix was plainly palpable through the abdominal wall. There were no adhesions, but the organ itself was thickened and the vessels much injected. This patient has also a movable right kidney.

One case was of more than ordinary interest because of the extreme symptoms which were produced by the very moderate lesions which were present. The history is as follows : The patient is single, aged fifteen, whose general health has been good until the spring of 1894, when she began to suffer from occasional pains in the right iliac region. Shortly before this she had fallen downstairs, and the pains were attributed to the fall. In the early summer, while in the mountains, she had an attack of abdominal pain in the appendix region, with disturbances of the bowels, which the attending physician considered an inflammation of the bowels but not an appendicitis. From this time until her return home she was always in pain if on her feet, but quite comfortable if in bed. She spent the fall in bed with a mild appendicitis. The physician in attendance, recognizing the nature of the trouble, kept her in bed for a long time, with the idea that the long rest might effect a cure. She was in bed many weeks. From that time she was never comfortable unless off her feet. She could never go out without violent pain in the appendix region, which would put her to bed again. In the meantime her general health markedly deteriorated, and constipation became a very marked feature. I saw her first on February 9, 1895, and taking into consideration the history, more especially the continuance of the symptoms, advised an operation. There was so much tenderness over the appendix region that this organ could not be palpated until after the patient was etherized, when it was plainly palpable as a thickened structure under the abdominal wall. The operation was done on February 16th. The patient made an uneventful recovery and has had absolutely no symptoms referable to the appendix region since. Her general health has much improved, and the constipation is less marked than it was, although not perfectly relieved.

My object in bringing this matter to the attention of the Society is to emphasize several points in connection with appendicitis :

1. The appendix may become involved in a peritonitis of pelvic origin. If an abscess results, it may be impossible to determine whether or not the trouble is due to appendicitis or to pelvic disease.

2. I wish to call attention to the relation between appendicitis and a movable kidney, and to the fact that a renal colic, due to blocking of the ureter or to torsion of the vessels of the kidney, may simulate an attack of appendicitis. I believe the case reported to-night falls under this category. I have seen one other similar case.

3. The gravity and obstinacy of the symptoms due to a mild appendicitis is very striking. In several of the cases present the only lesion in the appendix found at the operation was a thickening of its coats and an injection of the vessels of the appendix ; in other words, a chronic or subacute inflammatory process was going on. In most regions of the body such a morbid process would give rise to few or no symptoms, but, as reported in these instances, it resulted in the absolute invalidism of the patient. Other illustrative cases have come under my observation, so that there can be no doubt as to the facts in the case.

The proper treatment of this type of appendicitis is one which must give a conscientious surgeon considerable anxiety. On the one hand, the apparently trifling nature of the lesions would lead him to oppose the performance of a major operation ; and on the other, the well-known insidious character of appendicitis and the suddenness with which an acute attack of the gravest nature may complicate a subacute or chronic appendicitis is a warning that a let-alone policy may be followed by the gravest disaster. In my judgment, the proper plan to pursue is to treat such cases by medical measures until it is demonstrated that this method of treatment will not effect a cure. If the symptoms persist in spite of medical treatment, and especially if appendicular colic is present, and the tender and enlarged appendix can be made out on palpation, this organ should be removed. It goes without saying that the social status of the patient has a certain bearing upon the propriety of operation, as it is more necessary in the case of those living remote from surgical aid, and of those who are so situated as to be obliged to work for their daily bread.

OBSTETRICS AS PRACTICED IN THE MOUNTAINS OF
NORTH GEORGIA.*

BY T. M. GREENWOOD, M. D., MINERAL BLUFF, GA.

When we think of the great importance of this, one of the fine arts of our profession, and look at the vast amount of literature (the product of the greatest talent of the world) that has been contributed from time to time on this subject, it is no small wonder that any people would look upon it as a mere commonplace thing and treat it with such utter indifference—dealing with it in so trivial a manner. Perhaps more than half, if not two thirds, of the obstetrical work in this section of country is done by midwives, called here—we suppose as they are called in all parts of the country—by a multiplicity of names, such as “night-riders,” “grannys,” “minute women,” “sheriffs,” etc.

Coming, as they usually do, from the more humble walks of life, it is seldom that we find one of them who can even read, knowing nothing of the responsibility resting upon them, and caring less, so far as the remote results are concerned. They have as little knowledge of the “germ theory” as a Hindoo has of theology, and have a total disregard for anything like ordinary cleanliness. Yet they are regarded by the illiterate class, from which they usually come, as the great panacea for all ills, but regarded by the more enlightened element as a sort of “makeshift.”

Their armamentarium consists of almost every species of herbs (“yarbs”) indigenous to this latitude. With the exception, perhaps, of those known to possess some medicinal virtue, every variety is looked upon as possessing some virtue peculiar from the others, and must be gathered in a certain place, on special days of the week; and if barks are gathered, they are “skinned” up or down, with special reference to the effect these persons desire to produce by its use. In short, all their doings are with the same superstition as that of the ancients. They will never yield a point, and, when once in charge of a case, will rarely admit that “anything is wrong,” and are highly insulted if the doctor is sent for. Notwithstanding all this, their immediate results are not altogether unsatisfactory. This can be better illustrated by the following:

* Read before the Georgia State Society, April 17, 1895.

I was called to see a lady some ten miles away who had been in labor (as they informed me) for two days and nights. I found her *completely* exhausted in the hands of a midwife, who assured me with emphasis that "the woman is all right, and only lacks time—nothing wrong." Among the many contrivances she had brought to bear, the following was the most striking: The child's head, which was presenting natural and a roomy pelvis, had failed to enter the "bones," she said. So, taking a sheet and folding it lengthwise, the midwife passed one end under the patient, bringing it up and passing it over the opposite side, decussating the ends just above the child, giving each end of the sheet to an assistant, whose duty it was to draw forcibly the loop thus formed, when the pains came on, thus squeezing the child out. Well, it had entered the "bones"—child, uterus, and all, but had stopped in time, as had the pains, to prevent any serious harm being done.

Yet the results of these "grannys" in general, in this country, will compare favorably with those of classic city doctors within our knowledge, and many of the large establishments, maternity hospitals, etc., can but envy their results, both as to child and mother. But the remote results are appalling, confining, as they do, "on the lap," digging and grabbling after the child, as does the canine for his prey when in the ground (like a dog in a "sink-hole," by Jacks!), making them "lie flat" in bed after confinement, without turning over or their clothes being changed for the favorite "nine days," or otherwise having them up in a day or so, and going about their usual duties before anything of the natural condition has returned, sowing subinvolution, cellulitis, pelvic abscess, lacerated perinæum, etc. (through the list), broadcast in our land, filling thousands of homes with sorrow, pain, and grief, for the suffering or the loss of a mother. Moreover—should I speak it softly?—this forms the greater part of the work of the practicing physician, and enables our specialists to build large infirmaries and crowd them with patients and fill their pockets with gold.

But I have said that their immediate results are not so bad. Now let us look into some of the reasons why this is true.

Our women, as mothers, contrary to the recent teaching of a prominent laparotomist of the South that healthy mothers are gradually "playing out" (his observation being largely confined to the cities), are nothing less than perfection in point of physical development. Their habits before puberty are all that Nature requires—plenty of pure fresh air; bodily exertion, as necessitated by their daily

avocations; clothing loose and suspended from the shoulders; diet plain and simple, but nutritious and plentiful. In girlhood they roam the fields and forests as boys, vying with them in strength and surpassing them in many instances in the athletic sports; when suddenly puberty arrives a change comes to them almost imperceptibly, and they are women, and very soon afterward become mothers.

Out of the one hundred nulliparæ which I have attended in labor and noted the age, seventy-five of them were eighteen years of age and under, the youngest being thirteen years and two months; I have heard of a case a little past eleven. They were all normal labors and made good recoveries—the younger the better, it seems. In view of these facts, I can not forbear to say that the writer referred to is incorrect as regards this section of country. Let it be ever so true in his field of observation, granting this, we must look somewhere for the cause, and I would suggest that colleges, corsets, and cork-heel shoes are the most potent evils the present generation of mothers are cursed with. So much for the mother and midwives.

Let us now come more closely to the subject and review the practice of the profession, which, in many respects, is similar to that just gone over.

As a general rule, we are not notified that we will be called to wait upon a certain case, and can not look into the condition of the patient's health or make any preliminary preparations. Generally called hurriedly to them and perhaps ten miles away, when we arrive the first stage is usually far advanced, if not completed. If this is not true, the woman is out "knocking about" the house and attending to some light duties which she insists on continuing for some time—not a bad idea, for dilatation will set in much earlier and progress much more rapidly when a woman is on her feet and changing her position than otherwise. Finally, when it is deemed advisable to make an examination—which we are never in a hurry to do—the woman is asked to lie down on the lounge, or more generally the bed, as the former is not usually found in this country. Our hands are cleansed with soap and water—soap being the only thing needed as a lubricant—and then a careful examination is made, never neglecting to note the condition of the bowels. If sufficient progress has been made to enable us to map fully the position of the child, and the pelvis is normal, we rarely make anything more than a casual examination till the membranes rupture and the water escapes; then we always make a thorough examination. But the parts may fully dilate and yet the membranes remain intact. This brings us to the point of interest to me,

which henceforward is based on my individual experience and observation of more than seven years, with five hundred and ninety cases in my own hands or in consultation, if such it can be called, with midwives.

What course shall we pursue? Shall we turn and deliver by the feet? Shall we rupture the membranes, chloroform the patient, and use forceps, or shall we give ergot and rupture the membranes at the same time—either, both, or neither?

The first—that is, turning—can be and is safely done; yet it is worse than useless in a normal head presentation. I would prefer it, in fact, to the use of forceps, and it is its use which, in our opinion, makes the chief point of difference in the practice here and in other sections of the country.

We were taught by our professor of materia medica and therapeutics in given cases to give ergot after the membranes had been ruptured. On the other hand, our obstetrician condemned this practice by saying that where ergot was indicated the forceps should be used. We have tried the former with some good results, but have abandoned it. We have scrupulously avoided the latter. We have frequently been tempted to use it, but have avoided it by leaving it at home, and have regretted it in only one case, where, owing to the extreme and long-continued pressure—caused, in my opinion, by the use of ergot before the child's head had time to fully mold itself to fit the pelvis—the child was stillborn, and could not be resuscitated. Had the forceps been used or the ergot omitted in this case, I believe the child could have been saved. Our plan is to wait, wait for the membranes to rupture—a reasonable time, and a reasonable time in a case of labor is a long time—and if the second stage sets in and still they do not rupture, then we rupture them by a very small puncture and wait. Should the parts become relaxed, the membranes remain intact, and second-stage or bearing-down pains fail to set in, we invariably rupture them, and have never regretted doing so. In our opinion, the great trouble with most accoucheurs is a lack of patience. In a leading literary journal, some time ago, appeared an article under the heading *The Lost Arts*, in which the writer gave patience as one of them, and dwelt at length upon the subject, showing in many instances where the ancients surpassed us in this regard—dealing more particularly with the arts and artisans. Going, however, into the sciences and literature, he showed how our boys attempt to accomplish in from one to three years an amount equal to a lifetime with them. Our chief plan, then, is to wait; but

be sure that there is no abnormal condition. We are loath to believe that our race has deteriorated; let other sections speak for themselves.

We see no reason why a physiological act (as this must be one) should be so often converted into a pathological one; but forty-eight or fifty-two hours are more than the average M. D. cares to devote to one case when his fee (as is the custom in these mountains) is only five dollars, besides all the discomforts of the average home of the ruddy mountaineer.

Without any desire to reflect upon the practice of our fraternal friends, we might add, before dismissing this point, that the forceps is not an entire stranger in this country. We know of two young men who practice in adjoining neighborhoods—both graduates of the same school that the writer has the honor to claim as his Alma Mater—who for the past two years have had fifteen forceps cases which were very well handled, and with a mortality greater than the whole seven years which we have passed.

We do not care to go into the various methods that are practiced to increase the pains; nothing would be gained thereby. Granting that the labor will terminate normally—that is, without instruments—and with perfect safety to both mother and child, this brings us to the third stage; but before we go into it we will give briefly the manner in which the child is usually handled by the midwives. The cord is immediately cut a little farther from the umbilicus, leaving more of the cord, than is done by the profession. It is not uncommon to find a cord left four, five, or even six inches in length. A large, soft cloth is then well scorched, smeared with lard, a hole burned in the center, and the cord drawn through it, when it is folded well about and left on top. But before this is done the child is thoroughly scrubbed with soap and water—not uncommonly lye or soft soap. It is then dressed and invariably given a dose of castor oil, sometimes a piece of fat meat to suck, and then put to bed with its mother, seldom being put to the breast until the milk appears. In our opinion, this part of the practice should be more strongly condemned by the profession, and the sooner it is entirely abandoned, the better for the child. We will not stop to assign any of the many reasons to support this assertion.

The mother is put to bed and allowed to remain there half starved for the favorite nine days, when she is taken out and her clothing changed for an out-and-out suit which has been well dried and smoked over burning bran or meal, when, if all is well, she goes about her usual household duties.

But this does not always come about so easily. A form of septic fever may and frequently does set up—the result, in part, of the manner of handling, as above referred to, and in part of the way the third stage is conducted. The midwife does not seem to have any special plan of proceeding in this, and rarely succeeds—in fine, often fails entirely. They have a great horror for the thought of introducing the hand, but “will do almost anything on the outside, but *never* go in.”

Our plan, after the child has been delivered, is to resuscitate it before the cord is divided, if easily done. We cut the cord an inch or so long, and tie it with soft cotton twist. We have tried several plans of fixing up, all of which have been more or less successful. We now cut or burn a hole through a soft piece of linen, preferably old, and *always clean*, draw the cord through, folding it neatly around, and laying it up and a little to the left. We use no ointments, no antiseptics, and have had no serious trouble since using this method. We do not wait as long as is usually directed in the text-books to complete the third stage of labor, and have always found waiting to add to the trouble if not to the danger. We proceed at once, after having attended to the child (handing it to the nurse), after the method of Credé—using more force with the hand on the abdomen, the womb is more firmly grasped than formerly. With the womb firmly between the thumb and fingers, there is little or no danger in drawing on the cord with some force, if we only cease to draw at the proper time. Eversion by this method has never occurred in our hands, and may be more theoretical than otherwise. When the contractions set up and the placenta is expelled, the membranes may or may not come entirely away, a small amount of which, if left in the uterus, can do more mischief than anything with which we are familiar, and is the prime cause of a large percentage of the bad recoveries in this country. To avoid this we draw the tumor very slowly from the vagina, through the vulva, finishing by so gently withdrawing what follows after the main portion that not a single shred is allowed to remain. This properly done, we never introduce the hand, or even the finger, or use any wash. Should there be any doubt as to whether or not any laceration of the perinæum has taken place, we prefer to give it an ocular inspection. The usual rules of thorough cleanliness are enforced, the woman made as comfortable as circumstances will allow, and given the following instructions: “Put your child to the breast as soon as you are sufficiently rested. Do not allow it to have anything—not even tea—unless it becomes sick: then call the doctor to see it. If there is no action of your bowels in twenty-four or forty-

eight hours, take a teaspoonful of 'salts' dissolved in hot water and repeat every hour or so till an action is obtained." (We have abandoned giving oil.) "Eat whatever suits you, omitting such vegetables as are hard to digest or are likely to colic you or your baby. After two or three days, or after the milk has appeared in your breast, if you have any deeply seated soreness situated in the lower part of the abdomen, a dull, heavy headache, with sweating or any bad odor about the bed, let me know it, provided these symptoms do not pass off after the free use of the 'salts'." (Unless this "takes place" we never see the patient in this case any more.) "Remain in bed at least ten days."

Out of five hundred and ninety cases we have had most all of the presentations. Of breach we have had four, and one death caused by pressure on the cord. We have seen the head presenting in almost every imaginable way, but have always succeeded in getting them corrected into one of the more favorable presentations, and have delivered them. Only three of shoulder and transverse have occurred. These were all changed to head presentations without introducing the hand—one excepted, in which case we introduced the hand and brought down the feet—the so-called "podalic version." Our footlings proper have been but two. Puerperal eclampsia, judging from our cases, is of rare occurrence in this part of the country. Two cases are all that have fully developed. In several cases we have had symptoms pointing to this much-dreaded trouble, which have subsided by the timely use of the "Griggs" treatment, either with or without chloral—*i. e.*, veratrum and morphine combined and given hypodermically. Only one case failed so far to yield to this as to necessitate active interference. She was a woman twenty-eight years of age, the mother of one child, and mentally was very weak. Her husband had left her with no promise of return. It was about the close of the eighth month of gestation that I was called to see her. On account of a severe headache early in the morning, feet swollen, etc., I was led to suspect eclampsia. Chloral was given and ordered kept up, with instructions to let me know in the afternoon how she was. About 1 P. M. I was sent for in great haste. I found her in convulsions. After trying the veratrum and morphine to no avail, I put her under chloroform and sent for assistance. After the arrival of the assistant we continued the chloroform and proceeded to dilate the os, which we found firmly contracted and no pains. It was dilated with the finger until the hand could be introduced, the child's feet grasped and brought down, and the labor completed without the use of instruments. The child had

been dead for several days. The vagina was washed out with a bichloride solution—only boiled water being thrown into the uterus, and a very small quantity of it at that. The chloroform was withheld and the woman allowed to come out, when the convulsions did not return. She made a good recovery, with no rise of temperature, and was up in two weeks.

Asepsis and antisepsis have been extensively practiced in other parts of the world, but neither had been used to any extent in this country when we began the present record—the former but little and the latter none. It had never been heard of, and dates with us. Quite well do we remember the first time we were called to see a case of puerperal fever with one of our best practitioners, who, when we suggested that a vaginal douche of a weak solution of the bichloride of mercury should be given, was almost dumbfounded, and exclaimed: “That is poison!”

The mortality in these cases was alarming. We have used them extensively from the beginning, together with “Epsom salts,” which we began a little later, some six years since. The douche, the salts, with opium occasionally, when indicated, and calomel to certain cases, have constituted the basis of our constitutional treatment. Externally we apply turpentine stupes, the same as in typhoid fever, very hot, and renewed sufficiently often to keep them so. Later, quinine, iron, and strychnine, with stimulants when necessary. This may not differ in any respect from the general practice in other countries, yet the mortality has been nil in our hands, and only one death in consultation. Surely our women do not have such grave attacks as other women in other sections, or they can withstand more of *this*, as they have less trouble in parturition. Certain it is, there is a difference. Out of the whole number attended, five children have been lost, as accounted for in the foregoing, except one, which was a monster and lived only a few moments. Development had been arrested in this case by the liquor amnii having escaped during gestation. What more could we add as proof of what has been written and in justification to ourself of the methods practiced, though they be ever so poorly set forth in this paper, than to tell you we have not lost a single mother? Surely the methods are ideal, or this is the most God-favored land in the world in which to perpetuate the race!

This is a day of scientific research. Men are making rapid strides in every department of science. Ours is the one above all else needful to perpetuate a great nation. There is no such thing as stop with us. Therefore we must go forward—we can not go backward.

ANALGESIA IN LABOR.*

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There is probably but one instance in all of Nature's work where she seems to have made a mistake. The child is born, grows, and develops, attains manhood, and gradually declines until from euthanasia the old man goes to sleep in death. And all this without pain. Digestion may be painful at times, but this is dyspepsia, and always brought about by errors of diet or habits. Painful sicknesses of various forms overtake us, but that is because the laws of life have been broken; old age is accompanied by painful infirmities, but not if Nature's laws have been observed. In other words, where everything is normal pain is absent; even natural death is painless. Pain is indicative of something wrong, and so it would seem that Nature has made one mistake, one bad blunder. "In sorrow thou shalt bring forth children" (Genesis iii, 16) was written centuries ago, and the same cry is heard to-day. The pangs of childbirth are looked forward to with anxiety by the young wife, and looked back to with horror by the mother in too many cases. Somehow Nature blundered here, or has humanity blundered? The animal brings forth her young nearly always without pain; the Indian squaw, we are told, does the same thing; the negress of the South and her wild sister of Africa have the same happy experience. Whether society, dress, habits of life, or what not be the cause, civilized woman brings forth her young in agony. Science, however, has stepped in, and offers to do what Nature failed to accomplish. Sir James Simpson was the first to use an anæsthetic in labor—on the 19th of January, 1847—when he gave ether to a woman with a contracted pelvis and turned and delivered the child without giving pain to the mother. He reported this to the Obstetrical Society of Edinburgh in twenty days after, and in eight days after the publication, Fournier, of Paris, used it for the first time in France. In six weeks nearly all the leading obstetricians of Europe had tried it, and all made glowing reports of its value. In this country Drs. Channing, Clark, Putnam, and others made reports of their experience later in the year. In November of 1847—the same year—Simpson, in conjunction with Drs. Keith and

* Read before the Lincoln Medical Society, November 13, 1894.

Duncan, discovered the new anæsthetic, chloroform, and the next month he advocated it in preference to ether as an anæsthetic in labor. This publication gave renewed impetus to the production of painless labor, and for a while all the leading obstetricians of the world were using it. Then there came a feeling of insecurity in its use from the fact that several deaths were recorded against it, although there were none in its use in obstetric practice.

It is amusing to look back and see the arguments that were used against the employment of anæsthetics in labor at that time. The warfare was waged with bitterness, but with consummate skill, on both sides, and it seemed as though every leading obstetrician of both continents was in the fray, one side or the other. On one side was Simpson, as the acknowledged leader, but with hosts of followers; on the other, Meigs, Hodge, Bedford, and Clark, of this country, Ramsbotham and Barnes, of Great Britain, and Siebold and Scanzoni, of Germany. Many of the arguments used against it were trivial and absurd, but some were logical and seem yet undecided. Among the arguments were: that the mother, not having suffered, would have no maternal instincts; that it was immoral, the condition being merely one of intoxication; that as erotic manifestations often occurred under anæsthetics, the lying-in chamber would become a scene of indecencies; that it would cause paralysis, insanity, epilepsy, and other nervous disorders. One of the most bitter opponents was Ramsbotham, who published an excellent work on obstetrics about that time. He gives (note, page 185) an account of a death which occurred near London—a case of multipara—who had taken it before in labor, and who died seven hours after the birth of the child. He makes the dogmatic assertion that death resulted from chloroform; but, judging from his own account, the anæsthetic had nothing to do with the result. He says: "Three instances have come within my own knowledge in which I have not the slightest doubt that puerperal mania was induced by the action of the anæsthetic."* Continuing, he says: "There is good reason to believe that paralysis has followed the administration of anæsthetic vapors; and true puerperal convulsions is another frightful occurrence that I should dread." Still quoting Ramsbotham, he says: "Of eighty-eight patients in the Maternity Hospital at Edinburgh, delivered under chloroform, without instrumental or manual assistance, one died of convulsions, which came on five hours after delivery and proved fatal in six days."† In other

* *Obstetrics*, p. 186.

† *Ibid.*, p. 88.

words, every death that occurred during or after labor, no matter what the cause, was attributed to the anæsthetic if it had been used. Even puerperal fever was caused by anæsthetics, according to some of these enthusiastic opponents of the new craze, so called. The greatest argument of all, however, was that it was sacrilegious. It was urged that it was a defiance of Providence; that it was trying to thwart the will of the Almighty, as he had sentenced woman to suffer the pangs of childbirth; and that "it would rob God of the deep, earnest cries that would arise to him in this hour of extreme trouble," *et cetera, ad nauseandum*. One wonders how, after all these anathemas had been hurled on their heads, these advocates of mercy dared ever to give chloroform again in labor, and it seemed for a while as though nothing could be said or done to stem the tide running against it. But about this time an event occurred that settled the question for all ages. It was an occurrence that made it fashionable, and all the arguments of all its opponents could not count in comparison with this. In April, 1853, the Queen of Great Britain was delivered of a son, and the world was immediately informed that Her Majesty used chloroform, and that she had a painless labor. That those who were responsible for its use—Snow, Ferguson, and Locock—were more or less abused by those who had opposed its use in natural labors goes without saying. The *Lancet*, in commenting on the occurrence, says: "In no case could it be justifiable to administer chloroform in a perfectly ordinary labor."* But from this time forward its use was legitimized, and those who wanted to do so used it, and those who did not had the privilege of letting their patients suffer.

When we realize what a boon it is to woman in this the most dreaded, the most agonizing, and the most critical time of her existence, is it not strange that chloroform is not more often used? Is not the agony of the lying-in chamber a disgrace to the obstetrician? Is the physician justified in sitting unmoved, doing nothing, as he listens to the agonizing moans of his patient in the throes of labor, when he has in his power the means to relieve her safely, easily, and with so little effort? For has he not remedies at his disposal to relieve her even from the beginning of the preparatory pains up to the last expulsive agony? The lying-in room, instead of being the chamber of horrors, as it too often is, ought to be a dream of the fondest hopes and an awakening to ecstatic realization of joy sublime. Why do we not make it so? Are there any arguments against the use of

* *Lancet*, May 14, 1853.

chloroform that are tenable? The arguments used by the old opponents have vanished. We know now that anæsthetics do not cause puerperal fever, convulsions, paralysis, mania, epilepsy, or insanity. We know that the maternal instinct is not obliterated, that it is not immoral, and that erotic manifestations never occur to cause indecencies in the lying-in room. The religious arguments have gone glimmering in the darkness of the past accompanied by the argument that slavery was a divine institution and approved by the blessing of God. No one argues that it is dangerous, for a death practically never occurs in the lying-in room from the anæsthetic. There are but two arguments that need to be noticed. These are (1) that chloroform retards labor, and (2) that it tends to produce post-partum hæmorrhage. The latter is a corollary of the former, possibly, for if the contractions are weakened, then hæmorrhage would follow. Simpson, in making his report to the Edinburgh Society, laid down four propositions which, I believe, time has proved to be true, viz. :

1. That anæsthesia gives immunity from pain or suffering in labor.
2. That it does not diminish the contraction either as to force or regularity.
3. That the contractions after delivery are perfect and healthy.
4. Its exhibition does not injure the child.

In discussing the action of chloroform on the uterine contraction it will be necessary to know what we mean by anæsthesia in labor. It is unfortunate, but true, nevertheless, that we have no word to describe the condition produced by the correct use of chloroform in labor. We might use the term obstetrical anæsthesia, and surgical anæsthesia for the state of complete narcosis, but the terms are inelegant and cumbersome. Analgesia is a better term, although not a correct one. In operative work the anæsthetic is pushed to such a degree that there is no contraction of the muscles, no flinching when the knife is used. There is then a complete paralysis of all the voluntary muscles of the body, and to a certain extent labor, in this condition, might be, and possibly is, retarded, but only in so far as the voluntary effort of the patient is concerned, and this amounts to very little. The involuntary muscles—and the greater part of labor is performed by these—go on in their work in other organs of the body even under surgical anæsthesia, for if they did not death would result. The muscles that control circulation and breathing go steadily along in ordinary cases of complete narcosis, and there is no reason why the involuntary expulsive efforts in labor should not also. But happily

we do not have to produce surgical anæsthesia, but simply analgesia, or that condition of deadening the extreme pain—taking the rough edge off, as it were. Chloroform used for its analgesic effect alone not only does not retard the pains, but, from the fact that the deadening of the sensibilities gives the woman more confidence, more courage, she will use the voluntary muscles to hasten labor, when before she resisted on account of the acute pain. So, rather than retard, the chloroform would increase the expulsive effort. A temporary cessation of the pain was noticed by the earliest users of chloroform, but it was explained, and correctly, that it was from the emotional elements which soon passed away. It is a common occurrence for the pains to stop for quite a little time when the physician first enters the lying-in room, and the same thing that causes the cessation of the pains in the one case does so in the other. In both instances it is only temporary, and need not be considered. In the earlier stages there may be cessation or diminution of the pains, but chloroform can have but little if any effect where the expulsive efforts are caused by the reflex stimulus produced by the descending head impinging on the nerve filaments of the canal. These reflex, involuntary pains are no more affected by analgesia than they are by the wishes of the patient. She could not stop these pains if she would, neither will chloroform unless pushed to complete anæsthesia, if then. My own experience teaches me that chloroform analgesia does not retard labor pains, but that there is a difference of opinion among medical men must be acknowledged. However, none of those who claim that it retards go so far as to say that the time lost amounts to much, certainly not to be taken into consideration when the suffering is considered. The effect of chloroform analgesia on the abdominal muscles, rather than retarding, more often increases the pain, as mentioned above, but under complete anæsthesia we will grant that the use of these muscles is possibly entirely obliterated. But, as complete anæsthesia is only produced when operative work is needed, this is of small account.

As authorities differ as to the effect of analgesia on the contraction, we are not surprised to find that the same differences exist in reference to post-partum hæmorrhage. This is always practically the result of the failure of the uterus to contract, so that if chloroform retarded contraction during labor we ought, at first thought, to expect post-partum hæmorrhage to result from inertia of the uterus where the anæsthetic was used. But, granted that chloroform does retard contraction during its use, no one has claimed that after it has been taken away the effect lasts. And as we seldom have serious

hæmorrhage until after the placenta comes away, and as that is generally from ten to thirty minutes after the chloroform has been stopped, we conclude that it has little if any effect on the hæmorrhage. I have given chloroform, or assisted where it was given, in over three hundred cases of labor, and I have not seen one case of post-partum hæmorrhage in all the number. I have seen one death from hæmorrhage in my hospital experience, and no chloroform had been given in that. I have had two very severe cases of post-partum hæmorrhage in private practice, and no anæsthetic had been used in either case. Dr. Fordyce Barker* was strongly convinced that chloroform did not promote post-partum hæmorrhage. His experience is remarkable, for, having given chloroform in several thousand cases, the only case of hæmorrhage that occurred was when the anæsthetic was not used.

I have referred to chloroform only because it is so universally accepted as the anæsthetic *par excellence* in labor that no other is thought of. Ether can be used, but it so often produces marked excitement, bronchial irritation, and other unpleasant conditions that chloroform does not, that the former has been displaced by the latter. Chloroform is more rapid in its action, is pleasanter, and there is not so much needed. Ether requires a special apparatus; chloroform does not, but can be used on a handkerchief, towel, or anything that comes handy.

At what time in labor shall we begin the use of the anæsthetic? Certainly not often in the preparatory stage, for it might be necessary under those circumstances to continue its use for hours. And furthermore, as I shall show further on, we have other things to use in the beginning if necessary. Except in extreme cases we would not think of using chloroform until the os was thoroughly dilated. The most painful time is, as a rule, when the head is engaging and stretching to the utmost the two soft circles, the os and the perinæum. Often when the head has thoroughly engaged the os and is being molded by the canal the pain is comparatively easy, and the anæsthetic is not needed again till the perinæum is engaged.

While there is no labor without some pain, still there are many cases where the pains are easily bearable, and nothing is necessary to ameliorate them. Again, there are some women who prefer not to use the chloroform, and unless the pains are very severe I would not urge it. But nine times out of ten when the pains are at all severe

* *Medical News*, February, 1887.

the offer of chloroform is gladly accepted. In muscular women of the lower or laboring classes it is not often needed, but in the nervous type, where luxury and indolence have been indulged in, the suffering is apt to be very acute.

The ideal method of using the anæsthetic in labor would be for the patient to give it to herself. In that case she would never be completely narcotized, and yet she would see to it that at the slightest return of pain the chloroform would be used. The inhaler for such purpose must be made so that it can be held by the patient and not stay over the mouth without conscious control. With the aid of such an instrument half the real objection—the extra care and watchfulness needed on the part of the physician—would be done away with. As it is, the physician must be on the watch all the time. The argument that he will have to neglect the perinæum if he gives the chloroform is fallacious, for while the right hand is protecting the perinæum and keeping in touch with the progress of labor the left is controlling the anæsthetic. The patient should never be entirely unconscious, and as a general rule chloroform should only be given when she asks for it.

Thus far my plea has been for a painless second stage; but often the second stage is far more easily borne than the first. In fact, many, if not the majority, of mothers dread the preparatory, the so-called false pains, much more than the true labor pains. And yet, as I have intimated above, we can not commence giving chloroform in that stage, for these miserable, nagging, discouraging pains may last an hour or they may last a day or more. And it is to the relief of this stage that I desire especially to call your attention. The aim of the physician is to relieve pain wherever he finds it. We do not hesitate to use our hypodermic syringe wherever we find pain at other times; why should we here? Some years ago I was called in the early morning to see a woman in her first labor. I found her crying and moaning, dividing her time in getting up out of bed, walking around, and lying down again. Examination revealed the os dilated to the size of a quarter of a dollar, but tense, hard, and sensitive. I waited for an hour, and have never seen a woman suffer more in the preparatory efforts. Having no chloral with me, I gave her one third of a grain of morphine hypodermically. In twenty minutes she was resting comfortably, and I left with instructions to the nurse to send for me when the true labor pains commenced. I did not hear from them, but called about noon to find expulsive pains just setting in, and in half an hour the child was born. On inquiry I learned that from the time

I left until a short time before my return the patient had rested comfortably and slept most of the time. That was the first time I ever gave morphine in labor; but I have given it many times since, and while I have never since seen quite as severe suffering to relieve, I have in every case been mentally or orally thanked for the relief I have given. Morphine, we are told, stops the pains, and it may have a tendency that way, although I am not so sure of it. It is not the ideal remedy for the early stages of labor, but I am sure it is not thought of as often as it should be. I have given one eighth to one third of a grain many times and not once have I regretted it, and I have never seen any ill effects on the child. But what chloroform is for the second stage of labor, chloral is for the first. Simpson again was in the van in the use of this remedy in labor. It was introduced into therapeutics in 1869 by Liebrichout—the same year Simpson used it in labor. He found that while the patient was deeply “hypnotized” by it, so as to be only partially aware that labor was going on, the uterus still continued to contract strongly and regularly.* The physiological effects of chloral are very similar to chloroform. It causes marked muscular relaxation, and is especially valuable in women of a nervous type, and in primipara where the os dilates slowly. It is especially valuable in cases of thin and rigid os where the pains seem to be doing no good, more especially if the woman is of a nervous and irritable disposition. It does not have any influence in diminishing the pains, but rather hastens matters by its relaxing properties. It restores pains to a normal, regular condition where they are spasmodic and irregular.

One is impressed, in referring to the many authorities upon the use of chloral in labor, with what unanimity they all laud its virtues and its advantages, there being no arguments against its use. It regulates the spasmodic pains, it soothes the irritable and nervous woman, it relaxes the tense, hard membrane, but it never retards labor or causes delay by weakening the contractions. Its anæsthetic power is decided and considerable. The suffering is lessened, but consciousness is always present. It should be used in all cases where the woman is nervous, hysterical, or irritable; where the pains are spasmodic and irregular; where the cervix is undilated or undilatable; or where dilatation takes place slowly. It is perfectly safe with ordinary caution. It should be given well diluted, in doses of fifteen grains every half hour, but with caution after the second dose. We

* *Medical Times and Gazette*, January 1, 1870.

must remember, however, that many patients are peculiarly susceptible to it, and also that when given it has passed our control, and is not like chloroform, which can be removed when the desired effect is attained. From its depressing effects on the heart it should not be given when that organ is affected, and it is also contraindicated when there is any disease of the stomach.

SOME POINTS RELATIVE TO THE USE OF FORCEPS
AND ANTISEPTICS IN OBSTETRICAL PRACTICE.
THE WALSCHER POSITION.*

BY COLLINS H. JOHNSTON, M. D.,

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The application of forceps in childbirth is the most frequently performed and the most important obstetrical operation in this country. American obstetricians resort to instrumental delivery much more frequently than many of their foreign *confrères*. Uterine inertia and a prolonged second stage, which are the most frequent conditions for the relief of which *we* apply forceps, are not recognized as indications for instrumental delivery by Leopold and many other German obstetricians. Nothing but the appearance of positive signs of danger to the mother or child justifies the use of forceps in the Dresden Clinic, and I have seen a primipara struggle away two days and five hours after rupture of the membranes before instruments were applied, the indication then being irregularity of the foetal heart. The result was a dead child. Weak pains *are*, however, recognized as a legitimate indication for forceps at the Basel Clinic, and when the proper conditions for their application are present, the second stage of labor is never allowed to exceed four hours. A comparison of some of the results obtained at these two clinics will therefore be of interest. In the *Archives für gynäkologie*, Band 36, Heft 1, is a study of 7,322 cases of labor in Leopold's service, and in the same journal (Band 47, Heft 1) is a report of 156 forceps cases at Basel. Forceps were applied in 2.8 per cent. of the cases at Dresden, and in 5.33 per cent. of the Basel cases. The maternal mortality at Dresden

* Read before the Michigan State Medical Society, at Bay City, June 6, 1895.

was 3.4 per cent., at Basel 1.28 per cent., but in no case in either institution was death attributed solely to the use of the instruments. The infantile mortality at Dresden was 17 per cent., at Basel 10.2 per cent.

Turning to our own country, we find a report of one thousand cases of labor in the Sloane Maternity published in the *American Journal of Obstetrics*, April, 1891. Forceps was applied in 8.3 per cent. of the cases—three times as frequently as at Dresden—and in 71 per cent. of the cases the indication was uterine inertia or powerless labor. The average duration of the second stage in these 1,000 cases was three hours. The maternal mortality was nil, the infantile 12 per cent.

With suitable aseptic precautions the use of obstetric forceps after the child's head has entered the pelvic cavity is a comparatively easy and safe procedure. At the brim, however, it is often one of the most difficult of obstetric operations, requiring for its successful performance an amount of tact and skill that is not possessed by every practitioner, owing in part to the deplorable absence of practical obstetric teaching in most of our medical schools.

The principal causes of delay at the pelvic brim are unusually large size or abnormal position of the foetal head and contracted pelvis. The generally contracted pelvis, which is the most common of the different varieties, is more frequent in this country, I believe, than it is commonly considered to be. There is a general relation between the height of a woman and the size of her pelvis. A tall woman usually has a large, roomy pelvis; a short woman one below the average in size. On the other hand, there is no definite relation between the size of a woman and that of her baby. The proportions of the latter are determined as much by the size of the father as of the mother. A short woman with a small pelvis and a tall husband may produce an average-sized or large baby. The result is a difficult labor, due in great part to the unrecognized contraction of the pelvis.

The diagnosis of retention of a foetal head at the pelvic brim is not always a simple matter. The prolongation of the head due to the unusual amount of moulding necessary to permit of its passage through the bony obstruction, and the formation of a large caput succedaneum often deceive the operator as to the amount of progress the child has made. A correct estimate is more easily made by abdominal palpation than by vaginal examination. I have seen such an expert as Leopold apply forceps to a head which he thought had entered the pelvic cavity and find it still engaged in the pelvic inlet.

As a rule, no living child should be perforated until a tentative effort is made to deliver with forceps. I have seen normal labor occur with a full-term living child and a conjugata vera of seven centimetres, which is the size of pelvis at which some operators perform an elective Cæsarean section or symphysiotomy. I shall never forget a most interesting case I saw at Dresden. The patient was a primipara, eighteen years old, with a flattened pelvis and a conjugata vera of 6.6 to 7 centimetres. Leopold considered the pelvis too small for forceps or version, and excluded Cæsarean section and symphysiotomy because the woman had been examined *per vaginam* so often that she was probably already infected. The foetal pulse was also weak and irregular. He therefore concluded to return in two hours and perforate; but when I returned at eight o'clock to see the operation I found that the child had come spontaneously half an hour before. It was strong and healthy, and weighed six and one fourth pounds.

The chief elements of danger in forceps deliveries are septic infection of the mother and fatal compression of the head of the child. The danger attending the high operation is much greater than with the low. The infant mortality at Dresden with the latter operation is 10.75 per cent; in the high, 26 per cent; 32 per cent of the mothers have fever after the low operation; 42 per cent after the high.

The less the force that is required to overcome the obstruction offered by the bones of the pelvis, the less is the pressure exerted by the forceps upon the foetal head, the fewer are the traumatismes of the maternal tissues, and the less is the danger of septic infection. To one means of diminishing the amount of tractile force necessarily used in the high operation, and, in some cases, of doing away with the use of forceps altogether, I wish to call your attention.

The following brief report of a recent case will serve to emphasize my point: Mrs. A., primipara, aged twenty-three years, had been in labor several hours when the sudden onset of weakness and irregularity of the foetal heart made it advisable to terminate the labor immediately in the interests of the child. The attending physician, who was an accomplished obstetrician, had determined to his own satisfaction that the head had passed the superior strait of the pelvis, and had exerted his utmost strength without securing any appreciable advance of the head. Becoming convinced that it was still engaged in the pelvic inlet, I suggested that the patient's lower extremities, which were flexed upon the abdomen in the usual manner, be extended and allowed to hang down over the edge of the bed. This was done;

but not believing that the change in position would exert any influence upon the progress of the child, the operator did not in the least diminish his tractile force. The result was that in less than one minute the head was very unexpectedly delivered, with a deep laceration of the vagina and perinæum extending into the rectum.

I have seen but few references to the Walscher position in American literature. It has long been known that there is a certain amount of mobility in the joints of the pelvis, especially during pregnancy. But it remained for Walscher in 1889 to show that the antero-posterior diameter of the pelvic inlet is not of a constant length, but varies with the position of the body. The sacro-iliac synchondroses are true joints with synovial membranes, articular cartilages, and strong supporting ligaments. The innominate bones revolve to a limited extent about the sacrum upon an axis passing through the sacrum several centimetres below the level of its promontory, and Walscher found that when the pelvis was, as it were, extended, the conjugata vera was from nine to fifteen millimetres longer than when it was flexed upon the trunk. The universal position of a woman when forceps is applied has been upon the back or side, with the thighs flexed upon the abdomen. In this position the symphysis pubis approaches the promontory of the sacrum, and the true conjugate of the pelvic inlet is shortened six to seven millimetres. On the other hand, if the thighs are forcibly extended, as in the Walscher position, with the patient upon her back and her lower extremities hanging down over the edge of a table or bed, considerable traction is exerted upon the anterior portion of the pelvis; it is forcibly extended, and the conjugata vera is lengthened six to eight millimetres. The increase in length, therefore, of the antero-posterior diameter of the pelvic inlet in the Walscher position over that in the position usually assumed in forceps operations is from one to one and a half centimetres. The importance of this fact, which has been many times demonstrated upon the living subject as well as upon the cadaver, is more apparent when we consider that the normal length of the conjugata vera is but ten centimetres.

By placing women in this position in the first stage of labor Fehling and others have secured spontaneous births in cases where forceps or other instrumental means had been necessary in previous labors. In Leopold's clinic the number of Cæsarean sections and perforations have been materially reduced in the past two years by performing prophylactic turning with the patient in the Walscher position. After a head has entered the pelvic cavity this position should be dispensed

with, as by the sinking in of the lower end of the sacrum and coccyx the antero-posterior diameter of the pelvic outlet is shortened.

As already stated, the chief danger to the mother in forceps delivery is septic infection. The increased amount of vaginal manipulation favors the introduction of pathogenic germs into the birth canal, and the more or less extensive lacerations of the cervix, vagina, and perinæum favor their absorption. The morbidity after instrumental delivery is therefore much greater than after spontaneous birth. A recent writer has stated that the observance of great cleanliness and the use of antiseptics in midwifery have so completely destroyed the evil consequences of the streptococcus pyogenes that post-puerperal diseases are now among the curiosities. I regret to say that the frequent cases of puerperal fever in Grand Rapids, and the four deaths from this disease in one week in the practice of a single physician show that the germs of puerperal sepsis are still alive in that city. As long as professors in medical colleges teach their students to make frequent vaginal examinations during labor, and to give daily vaginal douches during a normal puerperium, we will continue to see deaths from puerperal fever.

There is still a tendency on the part of many well-informed men to attribute their cases of puerperal fever to autoinfection, to pathogenic germs that are supposed to be present in the genital canal before the onset of labor. Now the sooner we recognize the fact that almost every case of post-partum sepsis is due to the introduction of pathogenic germs directly before, during, or after labor, the better it will be for our patients.

There are many men who do not consider it necessary to give vaginal douches before or after a *normal* labor who still think it necessary to disinfect the vagina before, and perhaps after, instrumental delivery. How to obtain asepsis in obstetrical practice is still a mooted question, and I wish to direct your attention to some recent experimental work of Krönig's on this subject.

It was long taught that self-infection of a parturient woman was common, and in those rare cases of pregnancy in women with pus tubes, pelvic abscess, etc., we must admit its possibility. The old belief, however, was that micro-organisms which were introduced into the vagina of a pregnant woman by cohabitation, vaginal douches, etc., weeks or months before the end of gestation, found conditions favorable for their continued existence, and could infect her during or after labor.

In order to settle this much-disputed point, Krönig, of Leipsic,

who is a most careful and enthusiastic obstetrician and bacteriologist, introduced various kinds of pathogenic germs into the vaginæ of a considerable number of women during the later months of pregnancy, and afterward, at various intervals of time, made cultures from the vaginal secretions. None of these women were ill after confinement. In twenty cases the bacillus pyocyaneus was used, and in ten to thirty hours they had entirely disappeared from the vagina. In fifteen cases staphylococci were introduced, and in every case the vagina was again aseptic in from six to twenty-four hours. Streptococci were used in but three cases, as only women in the seventh or eighth months of pregnancy were thought suitable for experiments with this germ. In six hours they were destroyed by the germicidal properties of the vagina. The longest time required for the destruction of any of the pathogenic germs used by Krönig in his experiments was two days. Hence it would seem that autoinfection, in the sense that germs introduced into the vagina weeks or months before labor can live and give rise to puerperal fever, is impossible. Krönig concludes that we can always consider the vagina of a pregnant woman to be aseptic in forty-eight to seventy-two hours after the introduction into it of any foreign substance, and that the vaginal secretion is a powerful antiseptic and disinfecting agent.

Now, supposing that the vagina of a pregnant woman becomes infected, can we by copious vaginal injections render it aseptic? To determine this point, Krönig made the following experiments: Bouillon cultures of staphylococci were introduced into the vaginæ of seven pregnant women, pyocyanei in seven, and streptococci in one. At the end of one hour the vaginæ were irrigated with two quarts of a lysol solution, and in a few cases the vaginal walls were at the same time rubbed with two fingers. Cultures made from the vaginal secretions at the same intervals of time as in the former experiments showed that in no case was the number of germs materially decreased by the antiseptic injections. On the other hand, it was evident that vaginal douches of antiseptics lessened the natural immunity of the vagina. For instance, in ten pregnant women whose vaginæ were injected with staphylococci and then syringed out with lysol, the average time taken by the vaginal secretions to destroy the germs was thirty-six hours—just twice as long as when no antiseptic injections at all were used.

Hence it is evident that the use of antiseptic vaginal injections before or during labor, with a view to sterilizing the vagina, are not only useless, but positively harmful.

These important experiments of Krönig's have already been pro-

ductive of good results, for during the past two years all vaginal injections, with but very few exceptions, have been omitted in Zweifel's clinic not only in normal, but also in operative labors. The results have been considerably better than formerly, when injections were used.

From January, 1886, to April, 1889, vaginal injections were used in all normal births in Leopold's clinic at Dresden. Seventy-eight to eighty-three per cent. of the women were without fever during the puerperium. From April, 1889, to January, 1892, injections were discontinued in all normal labors. The number of women who remained free from fever increased to ninety-one per cent.

The only respect in which a forceps case differs from a normal labor is that the operator's hands and instruments are introduced more or less into the vagina and lower section of the uterus. If only these are sterile, the danger of infection is not increased by the operation, and in these cases no reason exists for antiseptic injections. But everything coming in contact with the patient should be surgically clean. From the beginning to the end of every case of labor the hands of the obstetrician and his instruments should be as aseptic as if about to perform a Cæsarean section. After the hands are disinfected they should not be dried or allowed to touch the bedclothing or wearing apparel of the patient, as these are probably contaminated by many different kinds of bacteria from the patient's skin, etc. Before every internal examination or instrumental interference the long pubic and vulvar hair may be cut short with scissors, and the vulva, nates, thighs, pubis, and lower abdominal wall should be washed for five minutes with warm water, soap, and cotton, always working from the vulva toward the periphery in order that no infecting matter may be carried from distant parts toward the vaginal orifice. Especial care must be taken to clean the folds between the small and large labia, and between the latter and the thighs. After washing away the soap with fresh water the parts should be washed three minutes with a 1-to-2,000 solution of bichloride. To avoid infecting the hand while supporting the perinæum, a large, moist compress of cotton should be laid over the anus. But no vaginal douches of any kind should be permitted.

When in labor the cervix uteri is well dilated, the membranes rupture and a copious irrigation of the lower part of the birth canal with liquor amnii takes place. This is much more efficacious in sweeping infectious germs from the vagina, if any are present, than an ordinary vaginal injection, since it takes place from within out, while a vaginal douche is given from without in, and pathogenic germs existing in

the lower part of the vagina are easily carried higher up. Buchner also says that fresh liquor amnii possesses the same germicidal properties as blood serum. After the child is born the remainder of the liquor amnii escapes, and more or less bleeding follows from the placental site and the lacerations which always exist in the cervix and vagina. These discharges secure an aseptic condition of the birth canal much better than a vaginal douche of antiseptic agents.

92 MONROE STREET.

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EDITORIAL.

THE ABUSE OF OUR QUASI-PUBLIC HOSPITALS AND CLINICS—FROM ANOTHER POINT OF VIEW.

Last month we discussed this very important subject from the standpoint of general ethics, of justice to the poor and to our professional brethren who have the right to expect from us, who are attending surgeons at hospitals, at least such an amount of fair dealing and just consideration for the interests of those, who are associated with us in a bond of common endeavor, as constitutes the standard of conduct for men engaged in mercantile pursuits. More than this it would, perhaps, be impracticable to expect in the present state of our civilization; but this, at least, may be demanded and should be enforced by the overwhelming public opinion of those, who still believe that the medical profession is something more honorable than an opportunity for attaining financial success without the necessary investment of capital in money. There is no question that the modern view of our profession is a distinctly material one and that the saving clause "*Noblesse oblige*," which for so long a time held the profession to a salutary appreciation of its dignity as a body of scientific men, is to-day made of too little account, especially in this country. This is a great pity and of the shortest-sighted policy; for, almost in this generation, physicians of prominence were held by the community at large as of the greatest social importance and were literally autocrats in every phase of life in the cities in which they practiced. At the pres-

ent day, however, it is not to a man's advantage in our large cities, from a social point of view, that he is a physician, and this great change is due, not to the access of greater wealth, in the first place, but to the lower standard which medical men have placed upon the valuation of themselves. The merchant class, to which the majority of our more prominent citizens belong, have discovered that they themselves are not only as well educated as the majority of medical men but that the latter have begun to rival them in their own peculiar *métier* namely, special shrewdness and the maintenance of a material standard of personal notoriety and self-centred ambition. We are afraid that the business man accepts the fact that he is, from an intellectual as well as from an ethical point of view, the better man of the two and refuses to accord special honor to one who is merely a merchant hiding unsuccessfully under the cloak of Science.

It is not difficult to find in the above arraignment how distinctly injurious to himself is the policy which induces an attending at a hospital, for the selfish gratification of adding another case to his list of operations, to accept as a free patient one who can easily pay for the attention received ; and it is from this point of view that we would discuss the subject in this Editorial. We would show that even from the standpoint of immediate advantage to the attending surgeon himself, the practice is vicious and that it induces a train of evils which not only far outweighs any personal gain but which does affect the surgeon's personal reputation and, in the end, his material prosperity.

So long as the majority of the lay public believe the medical man to be actuated by principles, in the conduct of his profession, not altogether dominated by self-interest, so long will we hold that respect, which the world never fails to give to those who consistently practice a virtue higher than its own standards will permit for itself. For many hundreds of years the medical profession has proclaimed and maintained that, though a just recompense for its labors was as necessary for its existence as it is to every pursuit of man, pecuniary gain and self-interest held a secondary place in its relations to the community at large and that these mainsprings of human action, which form the acknowledged standard of other avocations of men, would ever be subordinate to the pursuit of scientific knowledge for the amelioration of the physical ills of humanity. This is our professed position before the eyes of the world.

At first glance it may seem that this dissertation upon the abstract duties of the physician were a very broad principle to bring forward for a very small application. But it is not so. Were the abuse of

hospital facilities, of which so many of our attending surgeons are guilty, a matter which stood by itself, then would it be supererogatory to call to our readers' attention the ethical basis of our pretensions; but it is not difficult to show that this particular abuse is "a mark of the times" and indicates a tendency which, unless checked, must eventually convert our profession into a purely mercantile pursuit.

As we showed in last month's Editorial, the attending surgeon, who knowingly admits to his free services at a hospital or clinic patients who are capable of paying a just remuneration for efficient services, deliberately sacrifices, for the sake of an immediate advantage over his fellows, first, the rights of the poor; secondly, the just interests of his professional brethren not connected with hospitals, which, through his bond of professional brotherhood, he is equally bound to respect. But the injury he does to himself and, through him, to the public reputation of the whole profession, though not on the surface so apparent, is much more radical and far-reaching in its evil effects.

The well-to-do patient admitted to the free services of an hospital attending knows quite well the motive of this discrimination in his or her favor. No grandiloquently expressed reason can destroy for a moment the consciousness on the patient's part that, if she be in a gynæcological institution, she is in collusion with the surgeon to keep some poor woman out of the bed which she unjustly occupies; nor is she unaware that because he is independent of her possible fee, he has "euchred" some other surgeon out of it. She is not deceived by the pretense of a greater personal interest in her case or herself. She knows that this "personal interest" would suffer no diminution if she paid a fee. She realizes that she is being offered a premium, in an under-hand way, that she may be induced to accept this man's services rather than those of another. She knows that the surgeon is actuated by the most sordidly selfish motives and her respect for him as a physician is proportionately lost. For, the argument of the free-lunch counter, permissible to the saloon-keeper, is an inducement in practice not in accord, in public opinion, with the pretensions to dignity of a learned profession. It has long been the recognized and familiar method, on the other hand, of the charlatan and the quack. The more prominent and highly considered the surgeon who practices this abuse, the more likely is he to be considered by such patients as a type of a class of professional men—the higher the surgeon the larger the supposed class—who are not ashamed to "drum up trade" by the same ques-

tionable methods. When these patients return to their homes, it is with no feeling of gratitude or respect that they accept their improvement or cure; they feel that the surgeon has been paid all he was worth; else he would have asked more. And they are right, so far as that particular man is concerned; though it is equally true that he has missed the avocation in which his peculiar talents would find an untrammelled development.

When patients of this stamp have had one experience of this kind, they never willingly pay a doctor's bill; nor do they conceal from their equally rich friends their fortunate experience but laugh at the guilelessness of the latter who may have paid for medical services—perhaps of their family physician—when they might have obtained those of a specialist, *gratis*, at a quasi-public institution. And the incredulity of their friends is satisfied with the explanation that, in our large cities, so great is the competition among surgeons to get interesting cases (for advertising purposes) and so anxious to increase their roll of board-paying and medicine-paying patients (for the yearly prospectus) are the hospital and clinic authorities, that these institutions are now charitable only in the sense that it is considered a charity for a well-to-do patient to pay the board at one institution rather than at another. Nor do we feel that we are drawing too much upon our imagination, if we represent the conversation between the patient under consideration and her friends as ending thus: "Oh! but that was only Doctor A.; he, I suppose, wanted all the patients he could get to work up that operation he is always doing." And then comes the answer: "Oh! I guess they are all alike."

Thus, not only does the surgeon at fault suffer in his reputation and personal dignity, but the whole profession is lowered, in the estimation of the public, through the selfish policy of its individual members.

As we are ourselves an hospital and a clinic attending, we have less hesitation in speaking strongly upon a subject with which we are thoroughly conversant. And yet, were we not such officials, we would still feel it our duty to strive, so far as our voice could carry, to protest against this great abuse of trust and this injustice to the poor and to our fellow-practitioners.

Of one thing we are certain, that this abuse will never be checked until the majority of the medical press of the better class take up this subject editorially. If it is to be effected, editorial opinion must form medical public opinion in such a manner that those medical men whose consciences are proof against their own voiceless protest may at least

be so dominated by universal protest, that they will at least cease to practice this abuse openly.

We know that a reform in this respect is greatly needed, and probably nowhere more than in this city of New York ; and we also know that in thus strongly protesting against it we are not trying to kill sparrows with cannon. We believe that such an attempt at reform is altogether practicable and that if our Esteemed Contemporaries will seriously take up the cudgels with us, such reform will be accomplished.

The abuse exists everywhere to some extent, but little or great as it may be in any given community, no place may long remain free from its baneful effects ; for the rich would-be beggars among patients exist in every township, and no medical man is so far removed from the great medical centers, that his own status at home will not become affected by all that tends to lower the honor and dignity of his profession at the fountain head of its inspiration.

It is, therefore, to the attention of all medical editors that we respectfully bring this subject. It is a question which must interest all, because it affects all.

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL
SOCIETY.

June 6, 1895.

GEORGE M. BOYD, M. D., in the Chair.

DR. CHARLES P. NOBLE read a communication on

Appendicitis of Mild Type.

(See page 115).

DISCUSSION.

DR. JOSEPH PRICE: There is scarcely a physician present who has not had personal experience with this very common trouble, probably no more common at present than in the past, but now recognized more frequently because physicians of the present day are better diagnosticians than they were a generation ago and are able to make a more precise diagnosis than they were a few years ago. They are not satisfied with leaving a question in doubt but try to make out the exact nature of the pathological problem.

In his communication Dr. Noble has alluded to palpation of the vermiform appendix. It is worth while for us to bear the anatomical relations of this organ in mind. A great deal has been said about palpation of the appendix, but it is simply impossible to map out the appendix in the acute, suppurative forms of inflammation. To rely upon doing this is to make an attempt at diagnosis liable to cause pain and injury by undue manipulation. The appendix may be three or seven inches in length, and its free extremity may touch the kidney and be entirely posterior to the cæcum, where all the refinements of diagnosis will hardly reveal its existence. It is a fact that those who make the most of palpation have made the most errors of diagnosis. A certain New York surgeon has written a good deal about palpation of the appendix, and also palpation of the kidney, but his views are based upon speculation rather than on practical observation.

With reference to floating kidney I would say that all the symptoms of floating kidney vanish in his operation after anchoring the gland. But later he says that fifteen of these cases have returned with symptoms of appendicitis, and this is very interesting in this connection. A secondary operation is performed by the same operator to relieve the appendicitis. It is only necessary to reflect for a moment in order to realize the errors such a man is capable of committing; if he should be in any public capacity it would be the duty of the managers or those in authority to stay his hand. The danger of such teaching can hardly be appreciated. Dr. Noble has alluded to the danger of confusing ovarian abscess and pelvic inflammatory trouble with appendicitis. This has been alluded to many times previously, and a careful pelvic examination is sufficient to settle the seat of trouble.

With regard to the treatment we have two schools—one is the operative school, the other the non-operative; the latter proceeding to treat appendicitis as a catarrhal condition.

Then there is another class of surgeons who refuse to operate for the acute, increasing, septic forms of appendicitis. For instance, a prominent surgeon in this city says to physicians, "I would rather not be sent for when cases become septic." These are just the cases which should be operated upon promptly and not treated by medical means; hot stove plates and poultices are out of the question; they just cause the delay which leads to failure. The palliative treatment and delay Dr. Noble has referred to can only result in late operation and a high mortality. I can not for a moment counsel such a course of treatment. In such cases delays are always dangerous. The

diagnosis is either made or it is not made. If it is made, appendicitis is there and an operation should be done; if it is not there, operation is not to be thought of.

Now, as regards the method of operating and the results of the cases treated by the lateral incision. Take an acute, septic form, with distention of the abdomen, nausea, and vomiting, catharsis impossible—about all these cases are failures with the lateral incision. We have in appendicitis two operations unquestionably: For simple abscess, with bowel movement, without distention and without peritonitis, there is the lateral opening for the abscess and drainage, which is a very slight operation—very little more than opening a boil. But in the acute form, with increasing sepsis, the lateral incision is very little more than playing with the case. When I have such a patient I make a median section, freeing all adhesions and obstruction with an irrigation and drainage, and the case gets well. Only lately a case was reported in this room by a prominent surgeon which was treated simply by lateral incision and imperfect drainage. I hold that this is trifling and incomplete treatment. The patients are simply dying from bowel obstruction and sepsis. The lateral incision is simply death to them. A short time ago, in a prominent discussion, a surgeon said: "I want you to tell me how to save patients who die a few hours after operation or the second or third day after the lateral incision with obstruction?" I hold there has been no well-directed effort to save such cases; only a little incision and drainage. This still leaves the patient where he was before, with obstruction and a dirty peritoneal cavity. The only operation to do to save lives is the central incision in the abdomen, making a complete operation, freeing all adhesions with douching, toilet and drainage, and the patient will be saved. They are serious cases, I will admit, but they can be saved by prompt operation by the right method and have been saved in large numbers.

The treatment of appendicitis will depend upon the nature of the case. I insist upon first grouping the cases. In what is called simple appendicitis many of the cases are simply those of impaction or loaded bowels, and calomel, Rochelle salts and castor oil are sufficient to cure the case. These are the so-called mild cases which are curable by simple catharsis; inflammation or sepsis does not exist. For these we might revive the old nomenclature of typhlitis and perityphlitis; they all belong to the same group. We have a class of surgeons doing hysterorrhaphy, anchoring kidneys, and other needless operations, and others removing a healthy appendix, which is simply

needless. In actual appendicitis the symptoms are so marked that the general practitioner all over the country constantly recognizes them. I find in going about from Mississippi to the seaboard, that the general practitioner is able to make the diagnosis of appendicitis. In the last month I have gone South twice to see such cases and found the general practitioner correct in both instances. Each case had a gangrenous appendix and was very ill.

I wish to emphasize two points: First, no operation should be done before the diagnosis is made. I have had numbers of patients with appendicitis sent to me for operation from the adjoining States, and have lost a small fortune by refusing to operate. I have taken them into the hospital and given them a cathartic, and the next morning all evidence of local mischief had disappeared. The patient returned home without operation, and the invariable result has been that the interval between the attacks has been three times longer. What better demonstration could we have that the condition of appendicitis did not exist? The next point is one mentioned by Pepper; it is the importance of rectal examination in cases of supposed appendix trouble. My last point is this: We have two operations for appendicitis—the lateral incision for abscess without obstruction or sepsis, and the central incision for those acute cases with vomiting, obstruction and increasing sepsis.

Dr. JOHN C. DA COSTA: There are a great many unnecessary operations for appendicitis, and a great many cases called appendicitis which are not appendicitis at all. It is fashionable to have appendicitis, and fashionable to be operated upon for it. Let me recall a case seen recently in consultation. Two surgeons were present besides myself—one an abdominal surgeon and one a general surgeon. The instruments were laid out, and everything was in the house ready to go on with the operation. But I found the patient had improved and that the temperature had fallen two degrees since morning in consequence of the preparation for the operation, and I advised delay. In two days the patient was so much improved that there was no question of operation, in two days more was convalescent and finally got well without operation.

As regards palpation, my success has not been good. I think that my fingers are pretty well trained, but I often fail to find the appendix, especially when it is tucked up under the colon. I question whether there is any man in the room with a finger long enough to map out the appendix through the vagina or rectum, and we all know the uncertainty of outlining it through a fat belly.

I am fully in accord with Dr. Price as to the question of operation. The lateral incision is not the operation for appendicitis when the general abdominal cavity is involved. In it you merely open an abscess cavity and wash it out. But in the case where the appendix has burst and let its contents out among the intestines the lateral operation does no good whatever. The only thing to do in such a case is to open the abdomen in the center, release the intestines, break up the adhesions, wash out the pus and remove the sloughing appendix. You will not find this among the mild cases but in the acute grave form which Dr. Price has referred to.

Dr. L. J. HAMMOND: I have never dealt surgically with any of these mild cases that Dr. Noble speaks of. I would ask what amount of time it is necessary to wait before making the median operation. My experience has taught me that the inflammation is confined to the appendix region for a certain length of time, and if the operation is done within this period the lateral incision will both open up the abscess and also serve satisfactorily for dealing with the appendix. I have seen three cases in the last two months, in which the operation was done in seventy-two hours after the onset. The lateral operation was done, and the appendix found and removed with but little difficulty. Pus and fæces were present in two of the cases. As regards the removal of the appendix, it seems to me that the lateral incision is the ideal operation, for by it you come directly upon the appendix, and the danger of infecting the entire cavity is greatly lessened. In but one case that was operated upon by this method did I have any trouble in removing the appendix, due to extensive adhesions of the appendix to the bowel. The patient made an easy recovery.

Dr. NOBLE: I would suggest that the operation was done upon cases of mild appendicitis, and not upon peritonitis or anything else.

Dr. JOSEPH PRICE: The question does not alter my position at all. In the case just referred to the toilet was apparently complete. There is no question whatever but that the operation by the lateral incision is the one which is able to reach the appendix; but it is difficult to satisfy the surgeon who does this operation that the toilet of the abdomen is complete and all adhesions freed. The treatment in the cases just mentioned was very prompt; there was no time for general peritonitis to occur. By the central incision there is no danger of leaving any adhesions; but these are just the class of cases which the general practitioner calls upon us to treat. Within twenty-four hours there are masses of lymph thrown out between the folds of the intestines.

This is a condition which the lateral operation does not reveal and fails to treat.

There is one point which I forgot to allude to. There are a great many cases of so-called appendicitis which are not appendicitis at all. Many of the virulent acute cases in which the patients die in twenty-four hours are not appendicitis but perforating ulcer. Many of these cases have been reported as typhoid fever; many of them are walking cases of typhoid, in which perforation and death occur. The profession has fallen into the habit of reporting everything as appendicitis, and forgetting or overlooking these cases of perforating ulcer. On opening the abdomen in these cases there is a faecal odor.

With regard to the mild cases of appendicitis, I insist that it is straining a point to include cases which are cured by catharsis, which the surgeon does to fortify his position in unjustifiable and indiscriminate operating. Diseases of ovaries and tubes and other organs in the pelvis are not appendicitis at all, but simply simulate appendix inflammation, and I insist that they shall not be reported as such. Such cases should never go on record except as complications of other troubles.

Dr. NOBLE: The first point that I will speak about in replying to the questions raised in the discussion is that of palpation of the vermiform appendix. I may say that I have given some attention to the palpation of this organ, and I must confess that I have been very much surprised at the facility with which even the normal appendix can be palpated. In some cases, of course, if the abdomen is fat or rigid this is not true. When it was first proposed to palpate the normal vermiform appendix I was very skeptical as to what could be learned by this procedure, but experience has convinced me of its value. When it is recalled that the anterior abdominal wall is movable and that the posterior wall is not, it becomes apparent that the contents of the abdomen can be accurately palpated provided the anterior abdominal wall can be sufficiently depressed to make it approximate the posterior wall at every point. This is feasible in almost all cases in the appendix region.

The position of the *root* of the appendix is fairly constant, and is found on a line from the umbilicus to the anterior superior spine of the ilium. In practice, the patient being in the dorsal position, with the legs drawn up to relax the abdominal muscles, the examiner's hands are placed upon the abdominal wall about on the line before mentioned, and the common iliac artery is felt as a landmark. Then following the direction of the line toward the ilium, every point of the

posterior abdominal wall is felt. The appendix will be recognized as a small cord which rolls under the finger. Should this organ be enlarged or thickened by inflammation, it is very much more easily felt than when normal unless, of course, there is so much tenderness that the abdominal muscles are rigid.

As to the practical application of this, I may refer to a recent case. A medical man called me in to see an obscure case, which had started as an attack of grippe. It was a question as to whether it was an irregular case of grippe or whether the condition was complicated by an attack of appendicitis, many of the symptoms of this condition being present. I found it perfectly possible to outline the normal appendix, and thus to decide by exclusion that it was a case of the grippe.

It has been said that many of these cases are not cases of appendicitis, but cases of impaction of the cæcum. This statement is contrary to the experience of all surgeons of large experience in this field. The statement is attributed to McBurney that he has never found the cæcum impacted, and that he bases his opposition to purgation in the treatment of appendicitis upon this fact. In my own experience, covering the time when I did a general practice as well as my more recent surgical experience, I have only found two cases in which the cæcum was impacted; therefore I believe that Dr. Price is wrong about this being a common occurrence.

Dr. Price states that many cases which are called appendicitis are really not appendicitis and proceeds to say that unless the appendix has burst and a localized abscess has formed about this organ, or a spreading peritonitis results from the rupture, appendicitis is not present. I wish to point out that these conditions which Dr. Price calls appendicitis are really not appendicitis, but merely two of the unfortunate results which may grow out of this disease. He has confounded the results of the disease with the disease itself. As a matter of fact, these points should not have been touched upon in the discussion, as the subject of my contribution was "mild appendicitis."

With regard to the operation, my own opinion is that the lateral incision is best in almost all cases. When an angry general peritonitis, with general sepsis, is present, the experience of all surgeons is that the patients die whether the incision is made in the median line or lateral, or not at all. If under these circumstances the patient recovers, it is a question whether or not it is due to the operation. Some patients will recover under the most adverse circumstances,

and it is to this we may attribute such recoveries rather than to the fact that the operation was done in some particular way.

Dr. CHARLES P. NOBLE presented a communication entitled

Remarks on Abdominal Hysterectomy for Fibroids, with Report of Cases.

I wish to present to the Society specimens from a number of cases of fibroid tumor of the uterus upon which I have operated recently. These specimens illustrate the various complications met with in dealing with fibroids, and the histories of the patients furnish examples of the smoothness of the recovery which usually follows a hysterectomy for this condition. Another year's experience in dealing with fibroid tumors has only served to confirm the opinions I expressed in a paper on uterine fibroids written a year ago. It took me a long time to get over the effect of early teaching concerning this condition. I tried to persuade myself that patients suffering from fibroid tumors were comfortable in spite of the evidence to the contrary. The traditional opinion concerning the gravity of hysterectomy for fibroids likewise had a strong hold upon me, and it was not until I was driven to operate upon a number of them, and saw for myself how smooth the convalescence was, that I appreciated the fact that hysterectomy for fibroids is a comparatively simple and safe operation. As my experience increases, I am the more convinced of the ease and safety of hysterectomy for fibroids when it is done early, before the patient's general health has been broken down, and before complications such as degeneration of the tumors or disease of the uterine appendages have taken place. I am thoroughly convinced that hysterectomy for what may be called a healthy fibroid tumor of the uterus, when done by an expert, is as safe, if not more so, than ovariectomy.

The patients from whom these specimens were taken have all been operated upon by the method of amputating the uterus at or below the level of the internal os, securing the ovarian and uterine vessels by ligatures placed in the connective tissue of the broad ligament, and the closing over of the wound in the broad ligament and the stump of the cervix by suturing the peritonæum, which has been stripped off the anterior face of the tumor, over the field of operation, thus leaving the stump extraperitoneal. Increasing experience serves to commend this method the more, as meeting every indication in hysterectomy for fibroids and as rendering the convalescence as short as that of simple ovariectomy. The results of this method of operation, as reported during the current year, show that its mortality is

less than that of the *serre-nœud*, even in the hands of the most prominent exponents of this method; so that it seems to me that the method of so-called extraperitoneal treatment of the stump with the use of the *serre-nœud* has outlived its usefulness.

This series of cases includes one case having a fatal termination, in an old lady sixty-six years of age, upon whom the operation was done because of the severity of her suffering, and in spite of the fact that her arteries were distinctly calcareous and the amount of urine secreted distinctly below the normal. Before the operation no tube casts were found in the urine, but after it they were found. She died of suppression of urine four days after the operation. No post mortem was permitted, so it is not possible to exclude a ligation of one ureter; but there is no reason to believe that this took place, as the amount of urine secreted during the first twenty-four hours after the operation was above rather than below the normal.

I have done hysterectomy by abdominal section in twenty-seven cases. Those reported at this meeting are typical of the entire number. All of the simple cases made uncomplicated recoveries, and most of the seriously complicated cases have done extremely well. Two of the patients have died. One of the deaths has been reported to-night and the other one in the paper on fibroids read before the State Medical Society in 1894. In both of these cases the tumor had existed for years. Death resulted in one of them from septic peritonitis due to the rupture of a diseased appendage, and in the other to degeneration of the kidneys. I have no doubt that both of these patients would have recovered had they been operated upon early in the history of the growth—provided, of course, that the surgery of the period had been that of to-day.

My own experience, and what I know of this work in the hands of others, has led me to take a decided position with reference to the treatment of fibroid tumors. It is clearly demonstrated that hysterectomy and, when this is feasible, myomectomy, in the hands of the expert, is followed by an extremely low mortality, and that when the operation is done upon women in good condition, before the tumors have become degenerated or the uterine appendages diseased, it is almost unheard of for a death to follow the operation. We have then in favor of early operation in fibroid tumors the demonstrated fact that the patient is thereby definitely relieved of her tumor, and that the risk she runs is as little as, if not less than, that of any major operation. Certainly the half of one per cent. or one per cent. should cover this risk. I have no doubt also that, if the plan were

followed that fibroid tumors should be operated upon before they attain a considerable size, it would be possible to do myomectomy much more frequently than is the case at present. In other words, that the patient could be rid of her disease and the sexual organs be preserved intact. As contrasted with the results which are and can be obtained by early operation for fibroid tumors, we know that in a small percentage, but still a percentage, death results from hæmorrhage or from pressure upon the ureters or bowels. Fibroid tumors, as a complication of pregnancy, is likewise at times a cause of death. In addition, a definite number of deaths are due to the inflammation, suppuration or necrosis of fibroid tumors. Other deaths are due to the various forms of degeneration of these tumors, more especially cystic and malignant degeneration. I have myself seen four cases of sarcomatous degeneration of fibroids and two cases in which a fibroid uterus was complicated by a cancer of the cervix. The deaths due to the causes just enumerated will more than balance those due to early operation. Now, when it is recalled that the mortality of hysterectomy for fibroids, as performed at present on cases as they present themselves early and late, is about five per cent., and that this percentage is practically confined to those operated upon late, it seems to me that the argument in favor of early operation on these tumors is complete. I think it may well be asked what good is to be accomplished by permitting a fibroid tumor to remain in the uterus. It certainly will not make its possessor either healthier or happier. The special point which it is desired to bring out is that fibroids should be removed early, because they can be removed more safely at this time, and that thereby the patient will be saved the years of invalidism or semi-invalidism which they occasion if permitted to remain. And also because, if operated upon early, the operation of myomectomy will be more frequently feasible, and thereby it will be possible to cure the woman of her disease and, at the same time, leave the sexual organs intact.

DISCUSSION.

Dr. JOHN C. DA COSTA: In this connection I will refer to the clinical histories of two grave cases which had no symptoms, and one of them bears somewhat upon the paper which was read earlier in the evening. The case was a peculiar one. The woman was tumbled into the hospital, bringing a letter from a doctor which simply stated that she needed an operation. The abdomen was slightly distended, but not especially so, on the right side. The only symptoms were ob-

stinate constipation and some vomiting; there was no fæcal matter in the vomit but a little bile and whatever food she took into her stomach. The woman gave the history that her bowels had been opened two or three times on the morning that she came into the hospital. There was no pain on the right, but some on the left side of the abdomen; no elevation of temperature. I tried to build up the woman for a day or two, thinking that she might have to be operated upon. At the end of thirty-six hours I told the resident to get her ready, for she was failing and would surely die if unrelieved. The temperature did not go above 99° nor below 98.5° for two days. I could not get her bowels moved while she was in the hospital. On the morning of the operation she told me that Dr. Price had seen her a week before and had told her she should be operated upon at once. I opened the abdomen; the intestines at once bulged out, and a mass of pus came out in my hands. The colon burst open from distention and rottenness. There was general peritonitis. As I broke up the adhesions the woman passed flatus upon the operating table. When I got to the right side, there was an appendix which had a slit in it about three quarters of an inch long and which had poured its contents into the abdomen. There was pus among the intestines and in the pelvis, and pus and lymph everywhere. I sewed up the hole in the colon, flushed out the peritonæum, and put in drainage. The next morning, to my surprise, the woman had two well-formed, solid stools and was improved. For thirty-six hours she felt very well, then slight delirium set in and the next day in a few hours she sank and died. I think that the operation was perfectly justifiable and the only chance for her life. She was in a very dangerous condition when operated on, but there were no symptoms of appendicitis except those noted above, and pain was only on the left side. Here was a case in which all the palpation in the world could not map out the appendix. The mass on the right side was not a tumor but broke up in my hands as a mass of lymph and adhesions.

The second case was one of ovarian disease. It was the largest ovarian abscess I have ever seen. The woman came into my hands four weeks ago. I outlined a mass which I thought was an ovarian cyst on the right side. The woman had three or four inches of fat on her belly. I put her in training to reduce her weight, which I did considerably. During the three weeks she was under observation she only complained once of pain, and that she referred to her liver. Her temperature was 98.5° to 99° . I opened her abdomen at the beginning of last week and found an abscess of the ovary nearly as

large as a man's head. Everything was adherent. This case I drained, and the woman has made a perfectly uneventful recovery. The stitches were taken out on the seventh day. I report these two as cases presenting such a grave condition with so few symptoms.

Dr. PRICE: I also wish to report cases of this character. Only three days ago a case came to me which I wish to mention for the special purpose of emphasizing the contradiction of the charges so emphatically made, even here on this floor, and such criticism as you have heard of want of skill and want of courage. This woman had two gallons of pus. I flushed it out with hot water and drained, and she is now getting well. I feel ashamed for my profession when gentlemen say that these cases can not be saved. The only treatment for these cases of septic peritonitis is free opening, washing out and drainage. The other case I referred to was a woman, who had been treated for two weeks for typhoid fever. She was very ill—so ill that I was inclined to refuse to accept the case. I opened the abdomen and emptied out pus with a fæcal odor. The abdomen was full of lymph, which I wiped off with gauze and snipped off with scissors, and the bowels seemed disorganized. I thought that this case was perfectly hopeless; yet this woman made a good recovery after a flushing and drainage.

Now, these two cases are typical of a class which is refused by some surgeons because septic and dying. I recall a case that was reported to me by the physician who said he was sorry that I did not see it. He called in a gentleman, now in this room, who refused to operate. The patient lived for four days, so there was ample time to do the operation. This was surgical cowardice.

I remember a few years ago being called at midnight to see a patient on Chestnut Street. She had been singing in the church choir in the evening and was a prominent contralto. She was taken sick at church, and in eleven hours after leaving the choir I opened her abdomen and removed half a gallon of pus, irrigated with several pitchers of water, and she recovered and has been well since. In the case of a prominent man in the South, who was playing billiards twelve hours before the operation for appendicitis, there was pus in the abdominal cavity. Many persons are walking the streets with pus in their abdomens. A few years ago a child was injured by a fall while coasting, and some time afterward, while attending school, died suddenly. The coroner's physician found pus in her abdomen. I think it very unfortunate that any physician should object to operate in these cases because there is pus in the abdomen. McMurtrie,

of Louisville, believes that suppurative peritonitis is curable. Some seven or eight years ago he announced his opinion at the meeting of the American Medical Association. McMurtrie reported that he had been called to see a physician in the country with typhoid fever who had a belly full of pus. He operated, the patient got well and was present at the meeting.

I always regret these attempts to throw discredit upon an operation designed to save the lives of dying patients. Of course, in the case of the removal of a little fibroid tumor there is no question about the results of operation. There is no reason why there should be even half of one per cent. of deaths. Keith had forty-two cases with two deaths, but the tumors were large throughout the series.

I question very much whether there is an operator in America capable of handling the same series with a mortality so low.

I wish to report one more case. On the third day after delivery the patient had a general chill followed by signs of peritonitis. I looked upon the case as perfectly hopeless, and I dreaded to put the patient upon the table. I found the uterus perfectly fixed and all the adhesions possible. The exploration was complete from the kidney to the iliac fossæ. The patient made a good recovery after an irrigation and drainage. This was only one of a group of primary cases which have got well and are getting well when treated early.

Dr. NOBLE: Following the example of my predecessors, I will report a case for its general bearing upon the questions at issue. Some years ago I operated upon a woman for double ovarian tumors. One of these tumors contained fifteen quarts of pus. This woman had been septic for weeks and, indeed, had been treated for consumption, as during the existence of the tumor she had had an attack of grippe with some broncho-pneumonia. My object in referring to this case is to emphasize the fact that it is not a question as to how much pus there is in the abdominal cavity, but as to whether or not this pus is walled in by some sort of a sac. In this particular case it was the sac of an ovarian tumor. But I wish to point out that it is just as rational to say that this woman was suffering from a general suppurative peritonitis because her belly contained fifteen quarts of pus as it would be to say that she had the same condition as would exist if the pus was walled in by agglutinated bowels, omentum, etc., so that a large part of the peritoneal cavity remained free from contamination. The point at issue is not whether patients have recovered with one ounce or one gallon of pus in the abdomen, but whether or not patients with general puerperal purulent peritonitis have recovered. So far

as I am informed, there is no such case of recovery on record. A number of cases have been reported in which, after rupture of pus accumulations, either about the appendix or elsewhere, the abdomen has been opened promptly, the peritoneal cavity cleaned out, and recovery has ensued. In these cases the operation was done before there was time for a general peritonitis to be set up. Reference has been made to the discussion at the Baltimore meeting of the American Medical Association. The speaker who made the statement at that meeting that he had operated upon hundreds of cases of general suppurative peritonitis, puerperal and non-puerperal, and that not ten per cent. of them had died, also said that he operated through a short incision of about two inches, and that he did not use the Trendelenburg posture. I wish to call the attention of the Society to the fact that under these circumstances it is not possible for any one to say how extensively the peritoneal cavity is invaded. The use of vision is out of the question, and through such an incision the fingers can only explore some three or four inches, as that is their length. In other words, for an operator under these circumstances to say that the pus invaded the entire peritoneal cavity is simply to state what he assumes, and what he can by no possibility know.

Dr. NOBLE also presented a

Specimen of a Colloid Ovarian Cyst in which there was a Dermoid Growth in one portion of the Tumor ; also Two Ovarian Tumors Growing with Separate Pedicles from the One Ovary.

The patient from whom these two tumors were removed also had a colloid ovarian tumor on the opposite ovary, containing some eight gallons of material, which was largely diffused through the peritoneal cavity, the cyst having ruptured prior to operation. This woman also had a fibroid tumor of the uterus as large as an adult head. The patient was almost moribund at the time of the operation and died some hours later from asthenia, presumably induced by the removal of pressure from the portal circulation, which resulted in the accumulation of blood in these veins, with consequent syncope and death. It is an interesting fact that one woman had three ovarian tumors and a uterine fibroid.

Adjourned.

FRANK W. TALLEY, *Secretary.*

TRANSACTIONS OF THE STATE MEDICAL ASSOCIATION OF GEORGIA.

THE GYNÆCOLOGICAL AND OBSTETRICAL PAPERS
(AND THEIR DISCUSSION).

Forty-sixth Annual Meeting, Savannah, April 17, 18, and 19, 1895.

The *President*, WILLIS F. WESTMORELAND, M. D., of Atlanta, in the
Chair.*Abstract of a paper entitled*

LAPAROTOMY DURING PREGNANCY.

BY VIRGIL O. HARDON, M. D., ATLANTA, GA.

It is comparatively seldom that the surgeon is called upon to open the abdomen of a woman who is normally pregnant. When conditions present themselves which would justify such a procedure in the non-pregnant woman, the existence of pregnancy offers a complication which leads us to consider seriously whether the interests of the patient would not be better served by postponing the operation until after confinement. There is always present a fear of interruption of the process of gestation involving a sacrifice of the life of the child in an effort to save that of the mother. Many cases, therefore, which would otherwise be legitimate subjects for abdominal section can no longer be so regarded when two lives are at stake instead of one. Urgent symptoms threatening one or the other of these lives constitute the sole indication for surgical interference under such circumstances. The altered conditions imposed upon the pelvic organs by pregnancy give a new and entirely different aspect to many diseases. The physiological engorgement and the rapid structural changes which accompany pregnancy give to such diseases a different clinical history, and must be taken into consideration in discussing the prognosis and the treatment. The rapid development of tissue, most notable in the womb, but present also in other organs, extends to the new growths in these organs and causes rapidity of development of pathological processes proportionate to the rapid development of normal tissue. This fact must always be borne in mind as a factor in the prognosis. Another question to be seriously considered in such cases is the effect which the diseased condition will have upon the development of the fœtus *in utero*. Still another point to be consid-

ered is the effect which the operation itself will have upon the continuance of pregnancy. Experience has proved that operations for the removal of the ovaries and tubes, and even pedunculated subperitoneal fibromas, are not incompatible with the continuance of pregnancy. It has been shown that such operations not only do not produce miscarriage, but that they have no effect upon the subsequent development of the fœtus. Probably the most frequent pathological condition that we are called upon to consider in this connection is that of fibroma of the uterus. The technique of laparotomy upon the pregnant woman differs in no material respect from that of ordinary operations.

Dr. Hardon then reported two interesting cases in which he had opened the abdomen during pregnancy.

Abstract of a paper entitled

REPORT OF A PART OF MY SURGICAL WORK FOR
THE SIX MONTHS ENDING APRIL 15, 1895,
WITH REMARKS.

BY J. B. S. HOLMES, M. D., ATLANTA, GA.

The author reports fifty-one cases. In no case had an ovariectomy been performed simply for the relief of nervous or reflex symptoms. He had operated only for disease—conditions that he knew could only be relieved by surgical procedure—and careful examination, post operative, had confirmed his opinion in every instance. While he believes in conservative measures, the most radical are often the most conservative. He is ready to admit that the abdominal cavity had often been ruthlessly invaded and organs removed that should not have been touched. They had been removed for nervous symptoms due entirely to other causes, and for which they were in no wise responsible. On the other hand, tinkering gynæcology was responsible for many diseased tubes and ovaries that could only be cured by removal. The introduction of various caustic remedies into the uterus caused destruction and sloughing of the mucous membrane, with a cervical canal in many cases previously constricted, and the organ became so affected by the applications that the decomposing masses could not pass out. What follows? A septic endometritis, which soon extends to the tubes and ovaries, producing trouble that nothing but the knife will relieve. The latter must be resorted to or the poor woman is frequently doomed to permanent in-

validism, a condition sometimes worse than death. Many of the cases that the surgeon is censured for using the knife upon are caused by such treatment. He does not condemn all local treatment; when properly directed, he believes there are many conditions where it is not only admissible but demanded. He does not wish to be understood as advocating the removal of every diseased ovary. Far from it. He declines operation in many cases where the patient is anxious for it. He tries to be conscientious and operates only where the disease is so advanced that it has rendered or is likely to render the woman an invalid and is incurable by any other means.

The author's experience with catgut as sutures or ligatures has been unsatisfactory. He never uses it except when he does a trachelorrhaphy and perinæorrhaphy at the same sitting. It is hard to sterilize, is soft, slips easily, is hard to tie with any assurance of safety and is absorbed too quickly.

While he has always deprecated the use of opium in abdominal work, he has used it with great care and caution. Increasing experience convinces him that those cases in which it is not given at all do much better, and their convalescence is more satisfactory in every respect. Where the pain is so intense and threatens to exhaust the patient from continued suffering, he thinks it advisable to use opium moderately and with great care.

At the conclusion of the paper Dr. Holmes exhibited a few specimens removed from women who had been the victims from one to three years of the so-called conservative treatment with iodine, iodized phenol, nitrate of silver, nitric acid, carbolic acid and other similar caustics.

DISCUSSION (*on Dr. Holmes' Paper*).

Dr. J. G. HOPKINS, of Thomasville: I would like to ask Dr. Holmes one question. I lost track of the details in relation to one interesting case which he described, and that is the case of tubal pregnancy. What time elapsed between the rupture and the operation?

Dr. HOLMES: The rupture occurred early Monday afternoon, and the patient was operated upon on Friday morning about nine o'clock.

Dr. HOPKINS: How long had pregnancy existed?

Dr. HOLMES: About eleven weeks.

Dr. WILLIS F. WESTMORELAND, of Atlanta: There is one point in the doctor's paper in regard to the use of ether and chloroform that I desire to discuss very briefly. I do not know what the experience of

the rest of the gentlemen is in regard to them, but there is no question in my mind about the safety of ether over chloroform, if it be properly given, or the safety of ether over the mixtures that combine ether, alcohol and chloroform. According to reliable statistics, we have on an average one death in every twenty-five hundred cases where chloroform is administered, and only one death from ether in about twenty thousand cases. I shall continue to use ether. I should feel, if I gave chloroform to a patient and he died, as if I had forfeited about seventeen thousand chances against his death. This being such a well-known fact, I believe one of the States has made it manslaughter if a patient dies from chloroform.

There is another point in the doctor's paper concerning appendicitis or abscesses and the use of peroxide of hydrogen that interested me very much. I suppose the doctor meant only in cases of circumscribed suppuration.

Dr. HOLMES: Yes, where the abscess is walled off.

Dr. WESTMORELAND: In a walled-off abscess in appendicitis we have no idea of the thickness of the wall. Cases have occurred with such degree of frequency of perforation following the use of peroxide of hydrogen that I am a little chary in using it. There is no question but that proper drainage of the abscess in appendicitis will give us good results, and I am satisfied in a number of cases that the patient will get well more rapidly through the non-use of peroxide than he will with it. With a large incision and proper drainage I think we get as good results as with the use of peroxide of hydrogen, and I certainly prefer it.

OBSTETRICS AS PRACTICED IN THE MOUNTAINS OF NORTH GEORGIA.

BY T. M. GREENWOOD, M. D., MINERAL BLUFF, GA.

(See page 118.)

DISCUSSION.

Dr. J. B. S. HOLMES, of Atlanta: I would like to ask Dr. Greenwood about his percentage of mortality, or how many stillborn children he has had.

Dr. GREENWOOD: One.

Dr. HOLMES: I want to congratulate the doctor on his results in saving children and in the non-use of ergot. I think ergot has done more damage to lying-in women than any other one agent—perhaps all

other agents combined. It is responsible for more lacerated cervixes and subsequent ill effects than any one remedy. I differ with him, however, in regard to the use of forceps. I would no more think of going to see an obstetrical case without my forceps than I would think of going without my shirt. I think they are most conservative to the mother and life-saving to the child when properly used. I also congratulate the doctor upon another point, and that is the ocular inspection of the perinæum after delivery. I think it is the duty of every obstetrician to be careful to inspect the parts; if he detects a laceration and fails to repair it, it is criminal.

Dr. V. H. TALIAFERRO, of Atlanta: I congratulate the doctor on his percentage of mortality in his practice in the mountains of Georgia. It was very hard, while the doctor was reading his paper, to separate his own ideas from those of the midwives, as everybody knows that a great majority of obstetrical cases, the young practitioner's especially, go to them, expecting normal delivery. But we all know in a certain percentage of such cases we must have some abnormal condition to deal with; and by waiting as long as the doctor says he waits in order to make the diagnosis clear, we know it is then too late oftentimes to select an operation. By making a diagnosis early of presentation, when we have abnormal conditions to deal with, we have a great many operations at our command, whereby we can save those cases that the doctor says he sometimes loses.

There are a great many points in the paper that are extremely interesting to us, because we all know in city practice that our women when in labor are subjected to a certain number of dangers which country women seem to be perfectly free from. The anatomical perfection which is so easily obtained in the country by these women through outdoor exercise makes them peculiarly free from all of the dangers that we have to contend with in city practice.

I have seen two cases which will perhaps be of interest in showing the ease with which women sometimes are confined. In passing a hotel in Atlanta, I saw a negro woman, finely developed, grunting on the sidewalk, with a bundle of clothes under her arm and a crowd of inquisitive people surrounding her. I asked what was the matter, and she said she thought she was going to have a baby. In fifteen minutes she had given birth to a large child. She picked up the baby, wrapped it up in the bundle of clothes and went on her way.

Another woman, a perfect specimen physically, gave birth to a child in about twenty minutes after she was in labor. She had only three or four strong labor pains. After the birth of the child she got

out of bed to get something that was needed in the preparation of the child.

I again congratulate the doctor on his successful results and hope he will have them in the future in his practice in the mountains of north Georgia.

Dr. WILLIAM A. LOVE, of Atlanta : I, too, congratulate the doctor on his success ; and I speak from an extensive practice among those people who, in the rural districts or mountains of Georgia, are blessed with good health by following the laws of Nature, taking considerable outdoor exercise, etc., and at the proper age go forth and fulfill the divine command : " Be fruitful, multiply, and replenish the earth " ; they are eminently successful in that business. When labor takes place they give an account of their stewardship.

There is one point in the doctor's paper that attracted my attention, and to which I desire to call the attention of the Association, and it was with reference to the absolute removal of the membranes. Old Dr. Hodge, of the University of Pennsylvania, was my tutor, and he taught me always in the removal of the placenta from the vagina to do this : That just as soon as the placenta had passed the vulva, to commence with a succession of regular turns of it and make the remaining portions of the membrane that remained in the cavity of the uterus in the form of a twisted rope, and thus, by removing every part of the placenta from the cavity of the uterus, avoid septic infection.

Just one word about the use of ergot. Dr. Holmes has made a very apt allusion to the use of this drug. The action of ergot is to produce a tonic spasm. It commences with pain, then contraction, and the contraction continues like the contraction that we find in cases of lockjaw. It is a continuous thing, and something must give way. The child must be expelled, the uterus must rupture or the pressure brought to bear upon the child must interfere with the circulation *in utero* and produce death ; therefore I am, like the doctor, opposed to the administration of this drug, unless it be subsequently for the purpose of producing tonic contraction of the uterus to expel the coagulated blood from the uterine sinuses.

Dr. K. P. MOORE, of Macon : I have a case to report which is directly in line with the doctor's paper. It was a very unusual and unique one to me, it having occurred about fifteen months ago in my practice. A lady about eight and a half months advanced in gestation was startled by a sudden gush of water, and I was sent for about ten hours before she was delivered. Labor went on without any unusual symptom ; but after delivery I waited the usual length of time,

then introduced my hand and found the placenta firmly adherent and filled with a calcareous deposit. Around the margin of the placenta was a thick rim of this calcareous deposit, which I had some difficulty in getting loose at first; but after getting it started by introducing my hand behind, it was very easy to deliver it. The most unique thing was this: that so far as I could discover there was no amniotic sac at all. The placenta came away absolutely clean. When I delivered it I carefully examined it to see whether there were any remains where the placenta was intact. Finding no amniotic sac, I felt curious to know what had become of it and thought possibly it might have remained inside the uterus. I reintroduced my hand and found nothing. The uterus was clean. I examined the flux that had passed out and could not find it in that. There were a few shreds which seemed to have covered over the internal os so as to prevent the escape of water. The question is, What became of the amniotic sac? There must have been one originally. I was very curious about this and for two or three days revolved the question in my mind. Thinking it might still have escape me, I examined the patient again two days subsequently, finding the uterus and vagina clean. I do not know what became of it. I wrote private letters to Lusk and others, and they could not account for it in any way. I had the pleasure of reporting the case to the Macon Medical Society, where it was freely discussed, and the most plausible explanation of the loss of the amniotic sac was advanced by Dr. Gilmer—namely, that there was such a degree of endometritis during gestation, and possibly inflammation of the amniotic sac, that adhesion might have occurred between the amniotic sac and the uterine wall, and it had become so adherent that it was lost in that way. Also, there may have been exfoliation subsequently during the period of recovery. The patient went through the usual course of involution, which lasted the usual length of time. She was feeble. The baby was necessarily frail and delicate, as most of these children are whose placenta has a good deal of this calcareous deposit, which interferes with the proper growth of the child. The child was born viable, lived and is now a fine child.

The case is an unusual one from the fact that I have been unable to find any literature at my command bearing upon this subject, and the obstetricians with whom I have conversed have never known of such a case.

Dr. LOVE: I would like to ask if the patient had had rheumatism?

Dr. MOORE: Yes. The woman was confined to her bed about six months before her confinement.

Dr. GREENWOOD (closing the discussion): I am very much pleased with the opinions that have been expressed on my paper. As to the time of examination, I make it as soon as I deem it advisable, and I mean by that as soon as I know the women are in labor. Dr. Taliaferro must have misunderstood me in regard to this point.

As for the difference between my own work and that of the midwives, it is probably due to the manner in which the paper was read, or the doctor may have failed to catch what I said.

With reference to the mortality of the children, there have been five deaths altogether: one from the escape of the amniotic fluid; another, a breech presentation, from pressure on the cord; one from the use of ergot; and another where, if I had had my forceps, I could have saved the child. But the point I wish to emphasize most is the wonderful protection in the physical development of country women, and another point is the lack of patience. I have no doubt in my mind that a great many practitioners rush these things too rapidly.

Another point which deserves special attention is the absolutely aseptic condition of the parts without any special care being taken whatever. We scarcely have any septic results from wounds or anything else. To make this point more forcible, I will say that not very long ago I had a wound to contend with that was seventeen inches in length, made with a knife, which I closed with continuous catgut sutures and never saw it until ten days afterward, when it was firmly united without the formation of abscess. Of course I used antiseptics in washing out the wound.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

March 15, 1895.

The *President*, FRANKLIN H. MARTIN, M. D., in the Chair.

Pus Cyst.

Dr. H. T. BYFORD: This small specimen is, I think, interesting from a pathological standpoint. It contains a cyst which was filled with pus, and what appears to be the fimbriæ of the Fallopian tube

entering it. I can easily pass a probe into the tube from the abscess cavity. An ovary is attached, but forms no part of the cavity of the tube. The question arises, What is this sac composed of, if not of the ovary or the tube, and yet of something that I could enucleate? The pathologist, Dr. W. A. Evans, finds muscular tissue and a few epithelial cells in its walls. What appear to be the fimbriæ are nothing but the folds of the mucous membrane partly expanded and partly hypertrophied at the beginning of the dilatation. If the ovary had been flattened over this pyosalpinx it would have been mistaken for a tubo-ovarian abscess, or what Bland Sutton calls ovarian hydrocele.

According to Sutton, these cases in which the tube opens into the sac and in which the so-called fimbriæ are shown, as in this specimen, are not cysts of the tube, but are ovarian hydroceles. When there is a tubo-ovarian cyst or abscess, I believe with Sutton that the tube first becomes occluded at the abdominal end and therefore can not enter the cyst as the result of inflammation. The communication between the tube and the ovary indicates inflammation and ulceration or pressure atrophy at the point of contact. But when the tube opens directly into the cyst with this appearance of fimbriæ spreading over the inner lining, the condition is one of pyosalpinx or hydrosalpinx, whether the ovary be flattened over it or not. This case can not be an ovarian hydrocele, for the walls of the sac were easily enucleated and contain the elements of the walls of the Fallopian tube.

Exhibition of Specimens.

DR. FRANKLIN H. MARTIN: This specimen,

A Hydrosalpinx,

is not exhibited on account of its pathology, but to illustrate another point. The walls of the tube have been stretched until they are very thin. The patient from whom this specimen was removed had a similar tube on the other side. As the symptoms of the patient indicated infection, I dilated and thoroughly curetted the uterus before opening the abdomen. This I did with reasonable amount of care, but possibly with less care than if it were not to have been followed by abdominal section.

While manipulating the uterus I felt something break, and on opening the abdomen for the purpose of removing the appendages I found that the tube corresponding to this one had ruptured into the peritoneal cavity. This experience illustrates the necessity of using extreme care in making a diagnosis, and of not curetting the uterus,

where infected tubes are present, without at the same time removing them.

Multiple Myoma of the Uterus with Double Ovarian Hæmatocele.

Dr. A. H. FERGUSON: This specimen was removed a week ago to-day from a woman twenty-nine years of age. She commenced to menstruate when nine years old and was regular until a year ago, when her menses became more frequent and there was some disturbance for a couple of months. After this she became regular again and remained so until about three months ago, at which time there was the same irregularity as before. With this exception she did not suffer any inconvenience. Dr. Burdick examined her three weeks ago and diagnosed a double ovarian tumor with enlarged uterus. Under anæsthesia I verified his diagnosis, opened the abdomen, and found two large ovarian hæmatoceles, the one on the left side about the size of a large orange, and the one on the right about the size of an apple. The walls were very thin in places, and in the effort at removal the cysts broke. The contents had a tarry appearance. The interesting part of the specimen is that the uterus is myomatous. Some of these myomatous growths are submucous, some intramural, and others subperitoneal. The small amount of disturbance with such complications is to me very interesting, and it is the first time I have met multiple myomata of the uterus with double hæmatocele.

DISCUSSION.

Dr. F. B. ROBINSON: I think Dr. Martin's specimen is a tubo-ovarian cyst, which was no doubt once a pyosalpinx. I have examined a great number of such specimens, and I feel certain of its nature. I believe a pus sac was present, was absorbed, and later the tube opened into a Graafian follicle.

Dr. MARTIN: Tell us exactly what you understand by a tubo-ovarian cyst.

Dr. ROBINSON: The fimbriated end of the tube becomes attached to the ovary in such a manner, that it communicates with a ruptured Graafian follicle. The sac thus formed is distended by the secretion of the epithelium of the follicle. I do not believe Dr. Byford's specimen is an ovarian hydrocele consisting of a portion of the peritonæum, because I believe ovarian hydroceles are distended Graafian follicles. The follicles may be so changed as to obscure their identity. I have examined a thousand tubes and ovaries of women and animals for these cysts, and in my opinion the peritonæum can not secrete and

make ovarian hydrocele. I do not think they should be called peritoneal cysts; they are remnants of the mesonephron. Nearly always the cysts appear in distinct places and must be of a definite structure. Therefore I would presume to criticise the report of Dr. Byford.

Uterus removed by a Porro Operation.

DR. BYRON ROBINSON: This uterus was removed by a Porro operation. About twenty days ago Dr. Walter Fitch called me to see a woman who had been in labor fifty hours. Her pulse was 120, the liquor amnii had almost entirely escaped, temperature 120° in the mouth; she was suffering severely. After examination I advised evisceration of the child, because in early life the woman fell on some sort of instrument which displaced the lower lumbar vertebræ forward so far that it was utterly impossible to deliver the child. Dr. Fitch called his father in consultation, who also said that it was impossible for the child to be born, that it must be eviscerated or delivered by some other operation. The only operation that could be done with safety was the Porro operation. I did not think Cæsarean section was safe, because the liquor amnii was absent. The presentation was a breech, and I could hear the foetal heart sounds. It was decided to do the Porro operation instead of evisceration. I do not think the child could have been delivered alive, and delivery *per vias naturales* would have killed the mother. She was taken to the Woman's Hospital and operated immediately. Dr. Walter Fitch and Dr. Lucy Waite assisted me in the operation. The incision was made very long in order to deliver the uterus; I will not apply a ligature around the uterus in the abdomen unless the waters are present. After delivery of the uterus I closed part of the incision to prevent escape of the intestines. Dr. Waite and I examined and found the placenta anterior and to the right side, and therefore the uterus was incised to the left, which proved to be at the left border of the placenta. I attempted to deliver the child by traction on an arm, but failed. I then seized the head and readily delivered the child; active bleeding followed, which was quickly controlled with the ligature. The child was easily resuscitated. I was tempted to amputate the body of the uterus and to cover the stump with peritonæum, but Dr. Waite induced me to do the Porro operation. After applying a ligature to the upper portion of either broad ligament, I passed a long needle armed with a ligature under the uterine artery on each side, and tied. The peritonæum was then closed about the stump level with the elastic ligature. The pulse dropped to 105 after the infected uterus was removed.

The patient suffered but little pain after the operation. The next day the abdomen became very tympanitic from reflex irritation of the ligature involving the abdominal brain. I never saw an abdomen so distended by gas. Salts and calomel were administered, and now, the twenty-ninth day after the operation, her pulse is 80 and her temperature is 99°. For the last five days the temperature at night has been 99°, which I think is due to infection of the stump.

Specimen of a Three Months' Pregnant Uterus.

This uterus, I should think, was about three months pregnant. The woman from whom this uterus was removed had a pyosalpinx and a suppurating dermoid; the entire pelvis was solid. Dr. Van Hoosen did the operation and I assisted her. Before the uterus was removed the peritonæum was stripped down and on each side the uterine and ovarian arteries were ligated; the stump was then thoroughly turned in and the peritonæum was sewed over it with catgut. The patient is now well, twenty-six days after the operation. The abdominal incision suppurated and a metastatic abscess occurred from infected ligatures. I am becoming afraid of the animal ligatures.

I have been doing this operation for six months, and the recoveries are absolutely smooth and beautiful; they are much smoother, in my opinion, than when the tubes and ovaries are simply excised. I do extirpation of the uterus for bilateral disease of the appendages, if I think the woman will stand the additional operation. All must acknowledge that many ligatures cause suppuration. About half the women who come back to me for treatment after abdominal operations are suffering from infected ligatures; therefore I am trying to place the ligatures outside of the peritoneal cavity.

DISCUSSION.

DR. MARTIN: I would ask if the diagnosis of pregnancy was made before the operation.

DR. ROBINSON: Yes, it was a deliberate operation; Dr. Van Hoosen made the diagnosis.

DR. MARTIN: Do you perform hysterectomy without the use of ligatures?

DR. ROBINSON: In abdominal hysterectomy I split the peritonæum and tie the uterine arteries extraperitoneally, and then cover the ligature with peritonæum. I did this operation for several reasons: First, the uterus was infected and would have certainly produced puerperal fever; second, the woman was forty-three years of age, and probably

would not become pregnant again; third, the promontory of the sacrum, which projected far forward, and the infection contra-indicated symphysiotomy; fourth, the woman desired a living child.

Dr. E. C. DUDLEY: I sympathize very much with what Dr. Robinson has said about infection from ligatures. Three or four years ago I had a great deal of trouble in this way; every year there were ten or fifteen cases of sinuses where the ligature had become infected. These sinuses discharged through the lower part of the wound for months, and sometimes for a year or two. Suppuration of this sort may even continue so long as to produce degenerative changes in other organs, such as the kidneys. For the past eighteen months I have used catgut entirely in the abdominal cavity, and have no reason to regret its use. The catgut sold by instrument makers and druggists is very apt to be unreliable, but since our nurses at St. Luke's Hospital have prepared it we have had no trouble.

In my abdominal work of the past ten months at St. Luke's Hospital, not selected, but including many very grave cases, there has been no death from any cause. If carefully prepared catgut were unsafe, there would doubtless have been some deaths from sepsis. From that experience it follows that catgut, if properly prepared, is safe. Catgut is absorbed in a short time, that is the end of it, and any needed quantity may be used. When the wound is closed there is no fear of a long-continuing sinus which must last until the infected ligature has sloughed out—a frequent experience with silk.

Dr. H. P. NEWMAN: I would suggest that this case would seem to have been a perfectly proper one for symphysiotomy.

Dr. A. H. FERGUSON: Dr. Robinson's operation may have been justified by the high temperature and by the infected uterus. Under these conditions it is probably good surgery to do a hysterectomy to prevent puerperal septicæmia.

Abstract of a paper entitled

A CASE OF POST-MATURE LABOR.

BY FRANK A. STAHL, M. D.

The author, under the above title, says that "missed labor," according to Playfair, "is applied to an exceedingly rare class of cases in which, at term, labor does not begin, or, having commenced, the pains subside and the fœtus is retained *in utero* for a very considerable length of time." Parvin states that the term "missed labor, in-

troduced by Dr. Oldham, applies to cases in which, a fœtus dying after the period of viability, Nature makes an effort but fails to expel the child at term, and the pregnancy continues for an indefinite period." In Playfair's conception, it appears that missed labor is an unsuccessful effort on the part of Nature to expel its mature fruit at term. In all the cases he presents the fœtus died, yet his language leaves room to believe that fœtal death does not always occur. "I would define the term missed labor as a case of utero-gestation in which, at term, Nature endeavors to expel the fœtus, but fails through a want of proper parturient action, and the fœtus is retained *in utero*. The fœtus may continue viable or it may die. In all cases of missed labor pregnancy should be terminated as soon as the life of the fœtus becomes endangered. Sufficient compensatory hypertrophy of the uterus may take place, in case of missed labor, to expel the fœtus."

He suggests "the adoption of the term post-mature labor to apply to labor which takes place after term."

Von Winckel gives the following varieties of labor: Sixteenth week, *partus abortus*; sixteenth to twenty-eighth week, *partus immaturus*; twenty-eighth to thirty-eighth week, *partus prematurus*; thirty-eighth to forty-first week, *partus maturus*; forty-first week, *partus serotinus*.

The term post-mature labor is certainly more definite than those usually given. Protracted labor is sometimes understood to mean labor occurring beyond term, or it may mean tedious labor. There can be as little confusion in the use of the term post-mature labor as there is in the use of the familiar term premature labor.

The following case is one of post-mature labor:

The mother is German-Bohemian and has a progressive sacral promontory, which diminishes the antero-posterior pelvic diameter. This was her fifth pregnancy. Two years ago she had considerable trouble in giving birth to a child; the labor continued several hours longer than usual, and her pains were considerably more severe than in previous labors. The child born at that time, she says, was about one half the size of this one. Her first three labors were normal. Her weight is one hundred and forty pounds, her height five feet one inch; her physique, other than the pelvis, is normal. The mother states that her last menstruation occurred March 15, 1894. She was delivered by Dr. Stahl, January 11, 1895, the pregnancy continuing three hundred and two days. She had expected to be delivered about Christmas. On December 22d she experienced pains similar to those of former labor, and prepared for labor, believing

herself to be parturient. After three hours of strong, regular labor pains the pains grew weaker, the intervals more protracted, and gradually ceased. Examination, January 11, 1895, revealed a large abdominal tumor, implying a large fœtus, a first position, with right parietal portion fixed in the superior strait. She demanded assistance, as she felt that something was wrong with this labor. Vaginal examination revealed dilated cervix, membranes ruptured, and liquor amnii almost entirely escaped. Version was performed. Much difficulty was experienced in turning and delivering. The body was with difficulty drawn through the pelvis. To deliver the after-coming head was very difficult, as it presented a development which would do credit to a year-old infant. At the beginning of the version the heart sounds were irregular. When the head was at the superior strait I hoped to save the child by introducing my fingers into its mouth to depress the inferior maxillary, and with back of hand and fingers and by pushing aside the vagina and cervix to permit air to enter its mouth. The vagitus-uterinus respiration was heard several times very plainly. It was of no avail, as immediate delivery of the head could not be accomplished because of the contraction of the antero-posterior pelvic diameter, the large size of the fœtal head, and the increased resistance offered by the premature ossification of the cranial bones. The head was delivered through the superior strait with the Martin-Wigand (Winckel) method of expression and traction. There was no difficulty in bringing the head through the pelvis. No disarticulations or fractures occurred. The perinæum lacerated to the third degree, involving fully an inch of the rectal wall. No injury, to speak of, to the uterus resulted. The perinæum was united with catgut sutures. To-day, six weeks post partum, the rectum and anus are normal in function; the perinæum is yet granulating but well restored. The woman is about and doing her housework, though still improving in health.

Measurements.—Fœtus: Head diameters, occipito-frontal 15 centimetres, biparietal $13\frac{1}{2}$ centimetres, bitemporal 12 centimetres; circumference, occipito-frontal, 41 centimetres; diameter biacromial trunk, 24 centimetres; length, 22 inches = 56 centimetres; weight, 12 pounds 8 ounces; placenta and secundines, weight, 2 pounds.

Among the points of interest this case presents may be mentioned the following:

On the part of the mother:

1. The longer duration of pregnancy.
2. The missed labor.

3. The post-mature labor.

On the part of the fœtus—the unusual development.

Long duration of pregnancy has often been the subject of dispute. Professor Parvin in his work presents some interesting phases of this question. Medico-legally the longer duration of pregnancy is of great moment. In this case I am led to believe the statements of my patient, since she is an intelligent woman and has no reason to conceal or misrepresent facts.

Being an intelligent woman, it is not fair to attribute her symptoms of December 22d to hysteria. Further evidence is found in (1) the contracted pelvis, nine and a half centimetres; (2) the enormously developed child with its premature cranial ossification, tending seriously to embarrass normal labor; (3) the comparatively quiescent interval of three weeks' duration, though at times there were irregular pains. Her testimony, linked with these facts, completes the chain of evidence which establishes that the attempt at labor of December 22d was one of "missed labor."

At term there was present a greatly diminished uterine expulsive force opposed to an increased resistance from fœtus and parturient canal, and an unsuccessful labor resulted. This effort was followed by a period of recuperation in which continued maternal and fœtal physiological function was perfect. The time came when Nature made another effort to deliver, which was January 11th.

As regards unusual development of the fœtus, Cazeaux and Tarnier write: "The weight and length of neonati have been wonderfully exaggerated in many cases. Thus some are recorded of a yard or more in length, and others that weighed eighteen, twenty, twenty-four, and even thirty pounds. Their statements must certainly be great exaggerations, for the most voluminous of three thousand neonati under my charge, either in the Hôtel-Dieu or at La Clinique, weighed ten pounds, and it was an enormous one. Mme. Lachapelle states that of four thousand at La Maternité, only one weighed twelve pounds."

There are quite a number of cases on record reputed as weighing above twelve pounds. Professor Parvin mentions several such cases, and Professor Harris that of the Nova Scotia giantess weighing twenty-three pounds. She was a woman seven feet nine inches in height, with a husband seven feet seven inches in height. The report states that the fœtus was thirty-nine inches in length—a forty-two per cent. average of length of fœtus compared to the average ninety-two inches of length of the parents, an unusually large average for the fœtus.

DISCUSSION.

Dr. SAMUEL I. WEBER: I am sorry that the paper read did not go more fully into details. I do not think that we can draw conclusions from this brief synopsis of the case. Dr. Leopold and others have shown that our basis for calculating the period of gestation is an uncertain one; that it is not necessarily the ovum of the last menstruation that was impregnated, but that it may be an ovum of the next menstruation that was due which was impregnated, or an ovum that came from a Graafian follicle that ruptured at some intervening time. Our ordinary calculation of two hundred and eighty days from the last menstruation may therefore be in error as much as twenty-eight days. Dr. Stahl's case, in which the woman was delivered three hundred and two days after the last menstruation, can easily, therefore, be explained under this heading, and need not at all be considered a case of missed labor. The first attempt of the uterus to expel its contents in this case was very likely a beginning premature labor.

Dr. F. A. STAHL, in closing the discussion, said: Dr. Weber's remarks apply, as a rule, to all cases of pregnancy, but not to the exceptional ones. The case I present is an exceptional one which proves the rule. What Dr. Weber has said is true. The French code recognizes legitimate birth when it occurs between one hundred and eighty and three hundred days from the absence of the husband. In this case the woman, who has no object whatever to misrepresent, is intelligent and knows distinctly the date of her last menstruation. The woman is not of a nervous or hysterical disposition, and there was no traumatic cause which might produce the semblance of labor. The pelvis measured antero-posteriorly about nine and a half centimetres. If labor did commence on December 22d, why did it not continue to termination?

Many cases of missed labor are on record. Playfair relates a case where the fœtus remained *in utero* eleven months after missed labor without being recognized and removed. Playfair tells us that in his case Nature did make an attempt to force out the contents of the uterus, but it was not successful. There are reasons in my case why the mother could not give birth to the child at the time of the missed labor; pregnancy continued two weeks, then Nature made a second attempt to cast off the fœtus.

Abstract of a paper entitled

SUSPENSION OF THE RETRODISPLACED UTERUS BY
THE UTERO-OVARIAN LIGAMENTS.

BY REUBEN PETERSON, M. D.

Under the above title Dr. Peterson says: "This paper does not contain the description of any new operation devised by the writer for the cure of retrodeviations of the uterus. While the endeavor to evolve the ideal operation for the correction of certain uterine malpositions is praiseworthy, one should continually keep in mind that all such new operations should be based upon the conditions present and the laws of mechanics. A review of the literature of the past five years upon the operative procedures for the cure of retrodisplacements of the uterus will, however, reveal more than one new operation the principles of which are so unsound as to make one wonder at the temerity of the originator, not so much in attempting to put it into practice upon his trusting patients, as in publishing it and thus exposing himself to merciless criticism."

He does not attempt to go deeply into the subject of displacements, but to give his experience with the operation which he has used in all such cases. Other methods of treatment will be considered only for comparison.

The operation alluded to is the one described by Howard Kelly in the *Johns Hopkins Bulletin*, vol. i, 1890. Whenever it became necessary to open the abdomen for certain intractable retrodisplacements of the uterus, in order to attach the uterus to the abdominal wall, Dr. Kelly urged that the sutures be passed around the ovarian instead of the round ligaments, which had been the custom up to this time. The idea upon which this operation is based is that when the woman is upright, if the uterus is swung forward or backward, the intra-abdominal pressure will tend to press it still farther backward or forward, as the case may be. The ovarian ligaments, which lie on the posterior surface of the broad ligaments, should be selected in preference to the round ligaments when supports are made use of to suspend the uterus from the abdominal wall. The natural tendency of a uterus thus suspended is to fall forward, or, as Kelly expresses it, "necessarily throwing it into ante flexion, just as the body of a man would be bent forward if he were caught by the shoulder blades and drawn up against the ceiling." The same principle holds good if the sutures are passed through the body of the uterus instead of around the liga-

ments. Yet, from the descriptions of such operations which have appeared in the literature, it will be seen that the sutures have, in almost all cases, been passed through the anterior wall of the uterus.

The conclusions arrived at from the study of the seventeen cases reported will be considered under the following headings :

1. Indications for the operation.
2. Technique of the operation.
3. Immediate results of the operation.
4. Remote results of the operation.

1. *Indications for the Operation.*—No operative measures should be instituted for the cure of posterior displacements of the uterus until the recognized non-surgical methods of treatment have been given a fair trial. The treatment of certain retrodisplacements of the uterus by abdominal section has become a well-established surgical procedure. Its advantages and disadvantages should be carefully weighed, and if the operation is clearly indicated it should be chosen in preference to the so-called conservative methods. It is not conservatism to employ tampons, tincture of iodine, and hot-water douches indefinitely.

The author divides posterior displacements into the adherent and the non-adherent.

Alexander's operation has been advocated for and restricted to the latter cases. While the value of this operation for small retroflexed uteri is admitted, better results can be obtained by cœliotomy and suspension whenever we have to deal with a large, flabby, subinvolved uterus, or where there is prolapse of one or both ovaries. With a large subinvolved uterus the body falls over the posterior bar of the pessary, however well the instrument is selected and adjusted. The use of the intra-uterine stem pessary to prevent the falling backward of the body of the uterus after an Alexander operation is dangerous and poor surgery. The failure of Alexander's operation in these cases illustrates that the wrong part of the uterus has been used in the suspension. When the round ligaments are shortened the pull comes from the anterior surface of the broad ligaments and uterus, and therefore the uterus is lifted at a disadvantage, and held at a still greater one when lifted. It is a well-known fact that the fundus so suspended falls backward and that the intra-abdominal pressure forces it to its original position.

In many cases the mere replacement of the uterus will not be accompanied by a restoration of the prolapsed ovary to its normal

situation. The relaxation of the broad ligaments permits the ovaries to remain prolapsed, and hence congested and inflamed. No method of treatment can be more direct or more productive of good results than the one under discussion, because the approximation of the ovarian ligaments to the abdominal peritonæum must raise the congested and prolapsed ovary from the pelvic floor, and must be instrumental in removing the distressing symptoms produced by the abnormal location.

The varicosed condition of the veins of the broad ligaments, which all engaged in abdominal work have noted scores of times, is best relieved by direct support of these ligaments. In retrodisplacements of the uterus and prolapse of the annexa these varicosities may reach the size of the little finger, and may be productive of much of the pain which is complained of in the groins and back. This condition is present in a large percentage of the cases under consideration, and the relief following the operation is due to the restoration of these veins to their normal caliber.

The second class of cases comprises those in which the retroverted or retroflexed uterus is bound down by adhesions which have failed to yield to treatment through the vagina. The suspension of the uterus will usually be a secondary operation in these cases, because the symptoms from which the patient suffers result in great degree from the diseased annexa rather than from the malposition of the uterus, although this latter condition always produces marked symptoms. Schultze's operation should be abandoned, because it is dangerous and very unsurgical to attempt to break up adhesions the extent and attachment of which we can not determine. The cases are rare where the fundus of the retrodeviated uterus is attached to the rectum by firm adhesions without disease or malposition of the appendages. The pelvic peritonitis causing these adhesions arises, in the great majority of cases, from infection through the Fallopian tubes, which, together with the ovaries, will be found adherent to the adjacent organs. Hence an abdominal operation will only occasionally be performed for the sole purpose of restoring an adherent retrodisplaced uterus to its normal position. If the adhesions can not be softened by appropriate local treatment, the abdomen should be opened and both sight and touch be employed to separate the bands binding down the appendages and uterus. If the annexæ are found to be diseased, they should be removed, and the uterus secured in its proper position by the operation which has been described above. The experience of the past year or two has shown me that freeing the

appendages from their adhesions and approximating them to the abdominal wall will often prove sufficient.

2. *Technique of the Operation.*—The operation of suspension of the uterus by the ovarian ligaments is extremely simple. If it be a primary operation a very small incision in the median line, nearer the pubes than the ordinary abdominal incision, will suffice. The parietal peritonæum should be caught with catch forceps on either side low down and drawn outward. This will tend to prevent non-coaptation of the cut edges of the peritonæum when the abdominal stitches are passed. The fundus of the uterus is brought up to the abdominal wall and a suture passed around each ovarian ligament into the abdominal wall, through peritonæum, muscles, and fascia, back again through the same tissues, and the free ends tied within the abdomen. The Cleveland ligature passer is preferable to the needle for placing these sutures. The sutures should be passed just at the point where the ovarian ligament can be most easily approximated to the abdominal peritonæum when the uterus is in normal position. More than one suture on each side is unnecessary. Both catgut and silk give good results. It is safer to employ silk.

Where the operation is secondary to the removal of one or both of the appendages it is best to pass the suture before the ovary and tube are excised, and a long pedicle should be left. After the adhesions have been released the passing of the sutures will require but a short time.

3. *Immediate Results of the Operation.*—When the operation is employed solely for the purpose of rectifying a retrodisplacement without adhesions, with or without prolapse of the appendages, it is devoid of danger to life.

When suspension of the uterus is secondary to an operation the mortality of which is much higher, or when extensive adhesions of both uterus and appendages are present without requiring the removal of any organ, the situation becomes more grave. The mortality, however, even in cases presenting grave pathological changes, is very low, and a death can often be traced to neglect on the part of the operator. The only death in the seventeen cases tabulated in this paper (Case 3) arose from failure to recognize extensive disease of the kidneys and from the long duration of the operation.

4. *Remote Results of the Operation.*—About two months after the patient in Case 4 had been operated upon she had an attack of intestinal obstruction due to the constriction of a coil of small intestine by a band of adhesions. Cœliotomy was immediately performed and

the constriction relieved, but the patient died of exhaustion within twenty-four hours. The section showed the uterus to be in the normal position and the stumps of the excised appendages loosely adherent to the abdominal wall. The band of adhesions had no relation to the appendages or uterus.

Reports have been received from the remaining fifteen patients. In fourteen cases the uterus was in normal position and in ten the fundus was freely movable. Adhesion of the fundus to the abdominal wall should be guarded against, as it interferes with mobility and may cause trouble in subsequent pregnancies.

Of the fifteen patients, twelve have been so far relieved that they have resumed their occupations, two show improvement, and one (Case 11) states that she is no better than before the operation; the repair of a badly ruptured perinæum may, however, give her some relief. Of the patients showing improvement only, one (Case 12) has become addicted to the use of morphine. The other (Case 5) is suffering from chronic endometritis, probably gonorrhœal.

Summary.

Total number of cases.....	17
Single, with no children.....	5
Single, with children.....	2
Married, without children.....	2
Married, with children.....	8
Retroflexion.....	13
Retroversion.....	3
Right lateral version.....	1
Endometritis noted in.....	11
Retrodisplacements with adhesions.....	5
Removal of appendages of both sides.....	4
Removal of appendages of right side.....	5
Removal of appendages of left side.....	1
Cases in which appendages of neither side were removed..	7
Cases in which portion of right ovary was removed.....	1
Cases in which portion of left ovary was removed.....	2
Prolapsus of right ovary.....	2
Prolapsus of both ovaries.....	6
Uterus curetted.....	6
Trachelorrhaphy.....	3
Perinæorrhaphy.....	2
Catgut used for sutures around ovarian ligament.....	8

Silk used for sutures around ovarian ligament.....	9
Immediate recoveries from cœliotomy.....	16
Deaths.....	1
Death from accidental cause two months after operation.	1
Number of cases from which reports have been obtained..	15
Examined personally.....	10
Examined and reported on by other physicians.....	4
Report received from, but no examination made in....	1
Uterus found to be in normal position in.....	14
Examined from two to three years after operation.....	3
Examined from one to two years after operation.....	5
Examined less than one year after operation.....	5
Symptomatic recovery in.....	12
Improvement in.....	2
No improvement in.....	1

DISCUSSION.

Dr. H. P. NEWMAN: 'The paper has been presented in a very admirable manner and must interest all who have heard it. It is a subject which concerns every gynæcologist, because uterine displacements at the present time are treated very much more than formerly by surgical procedures rather than by temporizing or by palliative measures.

I have not done the operation described by the essayist, but I have practiced for two or more years a similar method described by Kelly, which consists in anteverting the uterus and placing the sutures in the posterior surface of the uterus. This operation anteverts the uterus and draws the fundus forward against the abdominal wall. By obtaining close approximation the intestines are prevented from slipping down in front of the uterus, between it and the bladder, where, if they find their way into the anterior *cul-de-sac*, are liable to become strangulated. I should fear that the method proposed by the essayist would be particularly liable to this accident.

I must take exception to the practice of leaving silk sutures in the abdominal cavity subject to irritation from more or less constant movement. I believe sutures will do what they are intended to do in ten or twelve days, and should then be removed. In practicing abdominal fixation I formerly used buried sutures, but having had disagreeable consequences in several cases I have given up this practice. I have had patients, where complete union had taken place and the

general health had been excellent, return after a year to be treated for a sinus caused by the irritating suture.

The comparison of this operation with others—Alexander's, for instance—as regards remote and immediate results, is out of place, because all of Dr. Peterson's cases, with the exception of seven, had accessory operations in the pelvic cavity, such as removal of ovaries, cysts, etc., so that the good results obtained may have been due to the removal of other pathological conditions as well as to the mere suspension of the uterus. The essayist speaks of having had subsequently to resort to perinæorrhaphy, or of having a case in which results were not satisfactory, and suggests that if a badly torn perinæum were repaired it would perhaps remedy the symptoms of the patient. I do not care what the operation may be, to leave a large, gaping vaginal orifice or a wounded perineal floor that will give rise to rectocele and cystocele, thus dragging upon the uterus and bringing the cervix forward, which, with the superimposed intra-abdominal pressure, will negative the good results of any suspensory operation done from above. I would not counsel any operation for suspending the uterus without the accessory operations on the floor of the pelvis. I should prefer to do them at the same time, as they are minor plastic operations and would not complicate matters if done at the same time.

Exception might perhaps be taken to the remarks made in regard to Alexander's operation. The results obtained by those who have shortened the round ligaments a considerable number of times have been extremely favorable, and many permanent recoveries have been reported; but the operation must be properly done. An inch or two of the round ligaments is not sufficient to draw the uterus forward and antevert it, as is the intention of the operation. This operation has the advantage of not opening the peritoneal cavity.

Dr. SAWYER: To what depth do you pass the suture in the tissues of the uterus—how far from the fundus?

Dr. NEWMAN: It is my custom to select the posterior surface of the uterus, about an inch from the fundus, for the first suture; the second is placed about half an inch below to a depth of an eighth of an inch or more into the uterine tissue.

In this connection I wish to present a specimen which will show how firm the adhesions may become in abdominal fixation of the uterus. I removed both ovaries for pyosalpinx in this case, and at the same time hysterorrhaphy was performed for a retroverted and adherent uterus. The woman subsequently suffered from a fistulous

opening leading down to the uterus and a continued septic condition of the endometrium. While attempting to explore the sinus and find the suture, it was thought best to remove the uterus entirely. This was done *per vaginam*, but with great difficulty. It was large, and after tying off the broad ligaments I found that there was a strong attachment of the fundus to the abdominal walls, which I was not able to separate easily with my fingers, so I peeled up the external muscular layer of the uterine wall and tied it off rather than to take any chances from mutilation of the peritonæum. There was perhaps three fourths to an inch in one direction and an inch and a half in the other, as you can see, in which the outer layer of the uterus was dissected off. The patient made a prompt recovery and is now free from her former troubles.

Dr. E. C. DUDLEY : I did not intend to say anything, because the paper itself covers the ground very well. *Suspensio uteri* as described by Kelly—that is, to fasten the posterior wall of the uterus to the anterior wall of the abdomen—is based upon a correct principle. This operation can never be much in competition with the Alexander operation. The Alexander operation must be confined to cases of small retrodisplaced uteri which can not be retained in place by non-surgical means ; but since small, non-adherent uteri can usually be replaced and retained by non-surgical means, it follows that the Alexander operation has a relatively limited field. *Suspensio uteri*, on the other hand, is efficient in cases of very large, heavy uteri for the retention of which the weakened supports are inadequate. Even after shortening the round ligaments these uteri are apt to go back. *Suspensio uteri* is, however, especially indicated in cases of displacement with uterine adhesions which can not be broken with safety or efficiency until the abdomen has been opened. Large uteri and adherent uteri with retrodisplacements are very common. Therefore *suspensio uteri* will have a much larger field than Alexander's operation. The essayist is to be congratulated on the logical, clear manner in which he has treated the subject.

Dr. A. H. FERGUSON : I would like to call the attention of the Society to the approximation of peritonæum to peritonæum with the idea of getting strong adhesions. If I am correct, the writer of the paper thinks that scarifying the peritonæum is of little value. The approximation of peritonæum to peritonæum is a normal condition in the abdomen, and no adhesions take place unless an inflammatory trauma through germs, or some other trauma, such as direct injury, occurs ; therefore the adhesion of peritonæum to peritonæum after

an operation takes place as a repair of the trauma of the stitches. If these stitches are far apart, leakage takes place between the points of adhesion, as has been so frequently proved in intestinal surgery. Greig Smith has recently brought this subject very forcibly before the profession. I could point out from a number of cases in my own practice that where peritonæum is simply sewed to peritonæum the adhesions are liable to pass away very rapidly, particularly when the operation is done aseptically and where only sufficient inflammation follows for reparative purposes—that is, only a plastic inflammatory product is thrown out at the points of trauma. The importance of scarifying the peritonæum in order to get more abundant plastic material thrown out upon the surface to secure strong adhesions is therefore evident. The operation pointed out by Dr. Newman allows of a good deal of vivification in the incision itself, and brings directly in contact with the uterus a broad raw surface which would cause, I fancy, pretty strong adhesions. We know that in colotomies, where the peritonæum is sutured to the skin, an ectopic condition of the bowel is more liable to take place than when the operation is done hurriedly and the bowel adheres to the fascia, the muscular tissue, and skin, as well as to the peritonæum, which gives a strong fibrous union. A feeble semi-fibrous plastic formation occurs when peritonæum is approximated to peritonæum. So, in all cases where permanency is expected, sufficient trauma should be done to the peritonæum to give an opportunity to the tissues to throw out the plastic material so essential for the formation of fibrous material.

Dr. H. T. BYFORD: I am very much pleased with the paper. I do not think it is necessary to argue this subject upon theoretical grounds. We know that if the uterus is attached to the abdominal wall by ligatures it will usually stay there, and the displacement will be cured, whether attached by its posterior or anterior surface or by the round or ovarian ligaments, provided the cervix be held near the sacrum by the utero-sacral ligaments or by operations on the vagina. As a possible objection to the operation described, I would say that in case pregnancy should occur there might be disturbance from traction upon the ovaries.

Dr. T. J. WATKINS: I wish to congratulate Dr. Peterson on presenting this subject in such a complete manner in a brief paper. I believe, however, there is a tendency to do abdominal operations too frequently for retropositions of the uterus. These malpositions may be conveniently divided into :

1. Retroposition without adhesions without prolapse of the append-

ages. These cases, I believe, can be usually, if not always, cured by non-operative procedures.

2. Retroposition of the uterus without adhesions with prolapse of the appendages. Relief of the displacement will usually correct the prolapse, but occasionally it will be impossible to effect a cure without doing an abdominal operation. I believe the operation described by the essayist excels all other abdominal operations for retroposition of the uterus. It is extremely important to bring the posterior wall of the uterus against the anterior abdominal wall in ventral fixation or suspension, for the reason so clearly given by the essayist—that is, to direct the intra-abdominal pressure against the posterior wall of the uterus.

3. Retroposition of the uterus with adhesions without prolapse of the appendages. These may require ventral fixation or suspension of the uterus.

4. Retroposition of the uterus with adhesions and with prolapsed appendages. These call for radical operative procedures to effect a complete cure. Dr. Peterson spoke of the ætiology of adhesions of the uterus. Adhesions of the uterus seldom if ever occur without adhesions of the appendages. It is therefore usually necessary to open the abdominal cavity, to treat the diseased appendages, before we can treat the malposition of the uterus; the diseased uterus is secondary to disease of the appendages. I would ask Dr. Peterson whether he would employ suspension of a retroposed uterus in cases of bilateral suppuration, or whether he would do hysterectomy.

I believe that an examination under anæsthesia should always be practiced before resorting to abdominal operations for the cure of retropositions of the uterus, because frequently a uterus which seems to be fixed when examined without the aid of an anæsthetic is readily retroposed with the patient anæsthetized.

Dr. BYRON ROBINSON: I think it is the general consensus of opinion that Dr. Peterson has presented a very clear, concise, and complete paper. I am not, however, in favor of the operation in very many cases. If Dr. Ferguson will read my treatise, *Intestinal Surgery*, published six years ago, he will find what he referred to Greig Smith's recent paper—that is, how peritoneal bands lengthened after operation, etc. These peritoneal bands will lengthen and separate after a while.

I wish to take issue with Dr. Dudley regarding the correct principle of the operation—that is, to fix a viscus to the abdominal wall. I think it correct not to fix any movable organ to the abdominal wall;

Nature can not be improved upon by attaching any movable organ to the belly wall.

When ovaries are large and prolapsed they must be infected—gonorrhœal—and it is utterly impossible to cure gonorrhœa of the appendages. Therefore I fail to see wherein this operation is so useful. In case of bilateral removal of the appendages I think I can offer an improvement on the operation described, which consists in not fixing the uterus to the abdominal wall, but in shortening the broad ligaments; this will leave the uterus free and keep it up. In case of volvulus of the intestines we do not fix the intestines to the abdominal wall, but we shorten the mesentery. I prefer to do the operation I introduced two years ago—namely, to shorten the broad ligaments on each side. As I understand the doctor, he examined some of these cases some time after the operation was done, and found the uterus in normal position and yet fixed. How can a uterus be normal that is fixed? Any uterus fixed permanently is dislocated, and a dislocated uterus is not in normal position. The respiratory movement of the uterus will soon separate the adhesions fastening it to the abdominal wall. In case the appendages are prolapsed an anterior colporrhaphy or a Tait operation will push the cervix back to the sacrum and will relieve the patient. I have done these operations over seventy times for relief of prolapsed uterine appendages, with good results.

Dr. E. C. DUDLEY: When I said it was a correct principle to fix the posterior wall of the uterus to the anterior abdominal wall, I did not mean that the organ would remain fixed and immovable in this position. There is no fixed normal position for the uterus. The position of the organ must vary within the range of its normal movements. Those cases which are suitable for the operation under discussion are cases in which the normal ligamentous supports are inadequate. The object of the operation is to make an additional supporting ligament. This is done by fixing the uterus by adhesions; these adhesions become stretched, and form, as it were, an artificial ligament, which makes up for the defect in the natural ligaments. The operation is not indicated in every retroplaced uterus; it is, however, for certain select cases in compliance with a correct principle. The oval denudation upon the anterior wall which Dr. Robinson has mentioned is manifestly incorrect in principle, for it shortens the anterior vaginal wall by contraction of the cicatricial tissue, brings the cervix forward toward the pubes, and thereby favors rather than prevents a backward displacement of the corpus. I do not understand

that Dr. Peterson has advocated suspensio uteri as a universal panacea. Other modes of treatment, operative and inoperative, are definitely indicated in appropriate cases. For certain select cases suspensio uteri is a very satisfactory procedure, and, I repeat, in such cases the principle is correct.

Dr. BYRON ROBINSON: I do not claim any originality in describing the lengthening of peritoneal adhesions. Dr. Peterson is trying to make one support do the work of another support—the lateral ligaments support the uterus.

Dr. FRANKLIN H. MARTIN: I have had an opportunity to examine one of the cases Dr. Peterson has reported. Her home is in this city, and Dr. Peterson asked her to come to my office for the purpose of having an examination made in order to make his report more complete. I examined the uterus thoroughly and found it perfectly movable. It could be lifted in the pelvis; it could be pushed to one side or the other, and the cervix could be drawn forward. By drawing the cervix well forward and pushing the fundus backward I could retrovert the uterus sufficiently to enable me to feel it in the posterior *cul-de-sac*; but as soon as I would let go of the organ, and before I could examine again, it would be in normal position. I could feel resistance against these movements, and the tissues to which the uterus was attached were loose enough to permit the free mobility. This examination proved to me that the operation would not interfere with pregnancy. In other words, the adhesions were superficial and did not involve the deep fascia, so that the uterus would easily rise and fall. The examination showed a very gratifying result. It is easy to understand, if the pelvic floor is perfect and the sacro-uterine ligaments nearly normal, that very little influence need be only occasionally exerted in order to keep the uterus in anteversion. In the operation which I have done I have put two or three deep chromicized catgut stitches through the fundus of the uterus a little posterior to the crest, and then, by flexing the patient's limbs so as to relax the abdominal wall, with a curved needle I have carried them through the deep tissues of the abdomen, including the peritonæum, subperitoneal tissue, muscle, and deep fascia, and tied within the abdominal cavity. When I expect to do ventral fixation I neither carry the abdominal wound low nor do I have the wound over the place of attachment of the uterus, in order to avoid the possibility of infection from a stitch-hole abscess. The abdominal incision is the point most liable to infection. If the abdominal incision becomes deeply infected the buried stitches will become infected. Therefore I condemn any stitch inserted

through the abdominal wall and tied which has for its purpose the fixation of the uterus.

Dr. REUBEN PETERSON, in closing the discussion, said: I am deeply gratified with the way the paper has been received and with the thoroughness of the discussion. The position taken that the operation may give rise to a constriction of the bowel in the space formed between the uterus and abdominal wall is not tenable, because, although this operation has been done a great many times, no such accident has been reported. In the case reported in the paper, where a secondary cœliotomy for intestinal obstruction was made two months after the primary operation, I feared that such an accident had occurred because of the theoretical arguments advanced against the operation. For this reason I carefully examined the appendages to see if either they or the uterus had caused the constriction, but I found that the strangulation arose from a point higher up in the abdomen.

One of the advantages of this operation is that it leaves the uterus, not fixed, but movable; and I think that Dr. Robinson must have misunderstood me, as I said that in the ten patients examined the uterus was found freely movable and not attached to the abdominal wall.

Dr. Ferguson's point—that the approximation of normal peritoneal surfaces does not cause adhesions—is a good one. If this principle were not true, all kinds of adhesions would result from abdominal surgery. The reason I assign for the fact that the fundus does not become adherent is that, from the nature of the operation, it is not approximated as closely to the abdominal wall as when the sutures are passed through the body of the uterus. Whenever sutures are passed through any portion of the peritonæum inflammation results, which explains the adhesion of the fundus to the abdominal peritonæum in those cases where the sutures were passed through the body. In the operation I have described the ovarian ligaments are fixed to the abdominal wall by the inflammatory process produced by the sutures. The operation, therefore, suspends the uterus, but does not fix it, because the sutures do not pass through the fundus. The mobility of the uterus is clearly shown by the examination of the fourteen patients.

I have been somewhat afraid to use catgut in the abdominal cavity, because of the results of the bacteriological examinations which have been made of it, even after it has been thought to have been perfectly sterilized. I prepare catgut by boiling it for two successive hours in

absolute alcohol, using the apparatus devised by one of your members, Dr. Van Hook, which is especially adapted for this purpose. More recent microscopical examinations of catgut prepared in this way have not, however, been entirely satisfactory, and for this reason, and knowing that silk can be made absolutely sterile, I have been more inclined to use silk. If boiling catgut in cumol, which subjects it to a very high temperature without detriment to its integrity, as recently done in Germany, proves to be satisfactory, and if the most approved tests then fail to reveal the presence of bacteria, we can probably use catgut thus prepared with safety in the abdomen. Objection was raised to the use of silk because of the danger of fistulæ, etc., and the point was brought out by Dr. Martin that the ligatures are not passed through the skin. Welch, of Johns Hopkins, has shown conclusively that when ligatures are passed through the skin there is danger of suppuration, on account of germs which lie deep down in the lower layers of the skin and can not be removed. For this reason I have always avoided passing the sutures through the skin.

Dr. Newman's remark in regard to the need of repairing the ruptured perinæum prior to any operation for the rectification of a displacement is a good one. I do not believe this operation should be attempted until perinæorrhaphy or trachelorrhaphy or other necessary operation be done; but in one case, because the patient was extremely neurotic and was in a very weak condition, I did not consider it advisable to repair the perinæum at the same sitting. The suspension operation I considered to be the most important operation, and I thought I would do that first, and if she did not get better I would repair the ruptured perinæum afterward.

My experience, which is limited in comparison with Dr. Byford's, is that the ovaries are not lifted up by Alexander's operation, and I have shortened the ligaments as much as was necessary for the correct performance of that operation. I do not agree with Dr. Byford that whatever way the operation of suspending the uterus is performed, whether the ligature is passed around the round ligaments or through the fundus, good results are obtained. I have seen the operation performed a number of times, have seen the sutures passed around the round ligaments, and have seen many failures, which were in my opinion due to the fact that the proper position of the uterus was not obtained. In a lecture which I heard Dr. Byford deliver at St. Luke's Hospital upon an operation he had devised for a retroflexed uterus, he showed very graphically on the blackboard that the operation had not succeeded because the intra-abdominal pressure had got be-

tween the abdominal wall and the uterus and had forced the latter backward.

I do not by any means think that this is the only operation that can be done for the relief of retrodisplacements of the uterus. I chose this method because I thought its principles correct and wished to give it a fair trial.

The question has been asked whether in bilateral suppuration of the appendages requiring excision I would also remove the uterus. In many cases we do not cure these cases by removal of the tubes and ovaries. I have a number of patients who come to my office for treatment, although the uterine appendages have been removed. In two instances I have been obliged to subsequently remove the uterus in order to cure the patients. If the patient's condition is such that she can stand the added shock of a hysterectomy, it would be well in certain cases to remove the uterus at the same time with the appendages. Dr. Robinson's point of shortening the broad ligaments, and thereby holding the uterus up in proper position when the appendages are removed, I do not consider at all sound. It does not bring the uterus up in its normal position. It may hold the fundus upright, but it does not throw it into anteflexion nor does it raise it up out of the pelvis. For this reason I would prefer the additional operation of passing the sutures as described.

Dr. A. H. FERGUSON: I wish to make a statement in regard to the priority of a stitch which was disputed by Dr. Senn at the last meeting. Not being then positive but that somebody had used the stitch before I did, I have taken pains to again look over the literature carefully, and I have since had a conversation with Dr. Senn in which he said: "Your stitch, as I understand it now, is quite different from Gussenbauer's; it is a good one, and I am going to use it." Gussenbauer's figure-of-eight stitch is different from mine, which I am now calling the inversion suture.

April 19, 1895.

The *President*, FRANKLIN H. MARTIN, M. D., in the Chair.

*Hydronephrosis; Right Kidney removed by Abdominal Nephrectomy;
Exhibition of Specimen.*

Dr. REUBEN PETERSON: This specimen, a hydronephrosis of the right kidney, which I thought might be of interest, was removed by

abdominal section. The patient, aged twenty-two, a housemaid, gave nothing peculiar in family history except that she thinks her father died of some kidney trouble. When eight years old she received an injury to the right side, which was followed by fever for about two weeks. One year later she began to pass bloody urine, which continued until she was eighteen years of age. She had continuous pain in the right loin and groin, which was worse whenever the bloody discharge from the bladder increased. Some two years ago she consulted Dr. J. B. Murphy, of this city, who discovered a tumor in the right hypochondriac region, which he aspirated and made a diagnosis of cystic kidney. Fever, probably inflammatory, followed the aspiration. She later entered Dr. Senn's service in St. Joseph's Hospital. The inflammatory action produced by the aspirating needle must have caused the tumor to become adherent in its bed, for Dr. Senn could find no evidence of a cystic tumor, and she left the hospital. Dr. Henrotin examined her, diagnosed, and removed a left ovarian cyst. The pain, however, did not cease, and the patient was incapacitated for work. I examined her, and could find no evidence of cystic kidney. She was not at that time passing bloody urine, and I considered the pain in her right side was probably due to the irritation from the ligature about the stump of the excised appendage. I therefore treated her with ichthyol tampons, etc., which gave no relief. After consultation with Dr. Boise, of Grand Rapids, I decided to make an exploratory laparotomy.

An incision three inches in length was made, in the right linea semilunaris, over the appendix. The appendix was found to be perfectly normal. Nothing abnormal could be found about the stump of the excised ovary and tube; no silk ligature was present. A fluctuating tumor was found in the region of the right kidney underneath the peritonæum. The left kidney was immediately examined, and to all appearances was normal. Incision of the peritonæum over the tumor revealed a blue-walled cyst firmly imbedded in adhesions, which were separated with considerable difficulty. Enucleation was finally accomplished and the pedicle tied with silk and removed, separate ligatures being used for the ureter. A large cavity remained, and the peritonæum which had been excised was dropped down into the cavity. As the peritonæum seemed to come together naturally, no stitches were used. The abdominal cavity was not irrigated, as very little blood was lost during the operation, and no drainage-tube was used. The abdominal incision was closed with catgut for the peritonæum, buried interrupted silkworm-gut sutures for the fascia, and

catgut for the muscles and skin. The incision was long, as it had to be enlarged until it reached the border of the ribs. To guard against a subsequent hernia, the method described was employed. The patient made an uninterrupted convalescence. The wound healed by first intention. The following is the report of the pathologist:

Pathological Report by Dr. J. B. Whinery, Grand Rapids, Michigan.

—"The specimen is a fluctuating, lobulated, kidney-shaped tumor. The length is six inches, the breadth four inches, the weight one pound. The surface is smooth and shows no evidence of any inflammatory action. On palpation, calculi ranging in size from a grain of sand to a pea or a little larger can be detected. The calculi are scattered through different parts of the tumor. On making an incision into the mass, twelve ounces of a brownish-colored liquid escaped. No chemical or microscopical examination of the liquid was made, on account of the tumor having been in a preserving fluid for some time and the likelihood of osmosis having taken place. Most of the kidney structure had disappeared, and there remained only pouches separated from each other by septa of fibrous tissue. In these pouches free calculi were found, about two dozen in all, some of a dark clay-colored appearance, others of a dark brown. A thin crust of crystals covered a few of the calculi. Firmly imbedded in the mouth of the ureter was a dark-brown calculus, the size of a hazelnut, completely occluding the lumen and preventing the passage of urine. Of the kidney structure only a small portion, varying in thickness from a mere shell to three quarters of an inch, was left. Microscopical examination of this remaining kidney structure revealed atrophy and a functionless condition of the secretory elements."

The specimen is unique because one calculus was situated at the mouth of the ureter and effectually prevented the passage of the urine from the kidney into the ureter. The small calculi which I show here were scattered through the sacculated portion of the kidney. It is interesting, from an ætiological point of view, to consider whether this hydronephrosis could have been due to traumatism or whether it was due to calculi. From the obscure history of the case it would look as if the fall, striking on the right side, was a coincidence, and that the true cause of the hydronephrosis was due to the calculi. These small calculi may have been in the kidney for some time, and may have caused the frequent discharges of blood. The larger calculus finally lodged in the mouth of the ureter, became firmly attached, and produced the hydronephrosis.

Exhibition of Specimen of Necrotic Uterus containing Sloughing Submucous Fibroid; Gangrenous Intestinal Adhesion; Operation; Recovery.

Dr. T. J. WATKINS: This specimen is a necrotic uterus which contains a sloughing submucous fibroid. Attached near the fundus of the uterus was a very firm adhesion which extended to the mesentery of the small intestines and which had become gangrenous. The intestine above the attachment of the adhesion was very much distended, probably paretic, and inflamed. The intestine below the adhesion appeared perfectly normal. The patient from whom this specimen was removed was perfectly well until five days before the operation was performed, when she was suddenly taken with nausea, persistent vomiting, and pain across the abdomen. The vomiting, twenty-four hours before the operation, became stercoraceous; absolute obstruction to the bowels, however, did not occur, but the fæces probably came from the intestine below the adhesion. As much of the gangrenous adhesion as possible was excised and abdominal hysterectomy performed. Gauze drainage was used, and the patient made an uninterrupted recovery. The uterine canal was completely obstructed by the sloughing intramural fibroid, which had caused amenorrhœa for some months.

EXHIBITION OF SPECIMENS.

I. Parovarian Cyst containing Papillomata.

Dr. HENRY T. BYFORD: The first specimen is a parovarian cyst, so-called, containing papillomata which grew neither from the portion of the ovary near the hilum nor from the parovarium, but from under the tube. The Fallopian tube crosses the whole tumor, and on one side of the tumor is located the normal parovarian body with its tubules, which can be sufficiently seen to show its exact shape. The specimen is an exact resemblance to some Kosman has described, on the sides of which are two accessory ostia or tubes. He claims the tumor is a portion of the Fallopian tube, either an accessory tube or an evaginated portion of the tube. He believes that the papillomatous developments in these broad-ligament tumors are from the tube, and are only to be found in those structures which contain the mucous membrane of the tube. Both ovaries were removed, and the distance of the ovary from the cyst would make it almost impossible for the tumor to have originated in the hilum of the ovary.

II. *Fibroid Uterus containing a Fœtus.*

The next specimen is a pregnant fibroid tumor of the uterus. I exhibit it to illustrate the almost impossible conditions under which pregnancy will occur. The fœtus is high up inside of a large mass of tumors, and below it, beside it, underneath it, in front of it, and all around it are the tumors.

III. *Uterus removed by Vaginal Hysterectomy preliminary to Removal of a Large Subperitoneal Ovarian Tumor.*

This specimen was removed by vaginal hysterectomy for the purpose of enabling me to enucleate a large subperitoneal ovarian tumor. The uterus and some shreds of uterine is all of the solid tissue I procured. The patient had not had a child for about twenty years; a miscarriage ten or twelve years ago; pelvic disease for a long time, which was undoubtedly the result of salpingitis. One year after the menopause uterine hæmorrhages commenced; she also had large watery discharge which would saturate a number of large napkins every day. About this time she commenced to have pain, and a tumor was found behind the uterus. After watching the case for three months I suspected the tumor to be a hæmatoma; I aspirated and got a thin, bloody fluid similar to the discharge from the uterus. After aspiration the pain and the flow stopped. The tumor filled again and the flow from the uterus commenced. Examination shows congestion of the endometrium, which is the usual result of these tumors of the broad ligament. As this woman had had pelvic inflammation for fifteen or twenty years, and as the tumor was bound down in the pelvis, I was afraid to operate through the abdomen, and therefore concluded to operate through the vagina. I removed the uterus, evacuated two cysts, and scooped out, rather imperfectly, the lining membrane of the tumors. It is now about four weeks since the operation, and the opening in the vagina is closed the same as after vaginal hysterectomy.

IV. *Fœtus, Uterus, and Placenta removed two Days after attempted Abortion.*

This is an interesting specimen of a four months' old fœtus, uterus, and placenta removed two days after an attempt at abortion, at which time the uterus was perforated and the fœtus and placenta extruded into the peritoneal cavity and remained there two days. When I saw

the patient her temperature in the morning was 101° , pulse 90; in the afternoon, temperature 102° , pulse 120 and more or less thready. General peritonitis with abdominal distention developed rapidly. The opening in the posterior part of the uterus is now more or less contracted, but is still nearly two inches long. In performing the operation by vaginal section I cut the uterus in the center and was going to employ morcellement, but I found the uterus so very flexible that I merely divided it in the center almost to the fundus, and had no trouble in getting it down and putting forceps on the broad ligaments. It made really an easy operation, considering that in the pelvis I found this foetus which had been eviscerated. I found quite a hæmatoma posterior to the uterus, about the remains of the placenta. The right ovary and tube were removed. About two weeks after the operation a slight phlebitis developed which caused some soreness and swelling in the left limb, but which has now, four weeks from the operation, disappeared.

Exhibition of Specimen of Cyst of the Ovary, Tube, and Broad Ligament.

Dr. J. A. LYONS: This specimen I removed nine days ago by abdominal section. I saw this patient four days previous to the operation, when she complained of severe pain in the left ovarian region. Examination revealed a tumor half the size of a child's head; the uterus was displaced to the right.

As I had occasionally treated the patient for several years for pelvic disease, I was aware that the left ovary was diseased. About seven months ago she miscarried at about the fourth month of gestation, and since then she has had a severe attack of gonorrhœa. I therefore concluded that the case was septic. After opening the abdominal cavity, and after separating some adhesions on the left side, I found a cyst that not only involved the tube and ovary, but also the entire broad ligament and a portion of the lateral wall of the uterus. An inflammatory action must evidently have taken place, attaching the ovary to the uterus and to the broad ligament. The cystic ovary had discharged its contents into the broad ligament. After enucleation of the cyst I had to fold the broad ligament upon itself and to quilt it together to control hæmorrhage. For fear of hæmorrhage I used a glass drainage-tube, which was removed eight hours after the operation. The right ovary and tube were inflamed, and on the right side was a small parovarian cyst; these were removed. I removed the stitches yesterday, and the wound has healed perfectly. The

deep sutures measured about six inches, which demonstrates the exceptionally thick abdominal wall.*

It is somewhat difficult to say for a certainty just where these compound tumors originate. I am inclined to think, however, this one originated in the ovary, and is of the follicular variety described by Rokitansky and ably discussed by Pozzi. One of the follicles discharges into the broad ligament and another into the tube, both ends of which were obstructed by a previous inflammation.

Abstract of a paper entitled

THE RELATION OF MENSTRUATION TO THE OTHER
REPRODUCTIVE FUNCTIONS.

BY A. W. JOHNSTONE, M. D., CINCINNATI, O.

(*By invitation.*)

Under the above title the author says that "menstruation, which occurs in all erect animals, is simply a shedding of the superficial layers of the endometrium, and is a kindred process to the molt in birds, to the dropping of the horns and hair in the deer tribe, and to the loss of the dermal structures which occurs periodically in so many animals." He says that the old belief, that rut and menstruation are synonymous, has been gradually abandoned. The skepticism beginning with Siney has grown until there are few left who still adhere to this ancient belief. He considers that it is demonstrated that the ovaries are active before birth, and that during menstrual life not more than four or five Graafian follicles ripen per year.

In a recent paper by Mr. Walter Heape, of Cambridge, England, he has demonstrated that a condition exists in the monkey similar to that in woman. We are therefore forced to the conclusion that the rhythm of ovulation is not coincident with that of menstruation, and that their association, whenever it occurs, is accidental and in no way interdependent. They are totally independent functions, both of which are essential to reproduction, and the cessation of either produces sterility. The only connection between them is that if the four or five ova which form during the year happen to ripen near the end of the menstrual cycle, the congestion of the pelvis incident to menstruation so softens the ovary that the follicle is more liable to rupture.

* The patient developed a severe attack of pleurisy on the twelfth day, from which, however, she has entirely recovered, and is now up and about her room.

Some centuries ago rut and menstruation were declared identical, and the error has been transmitted without question from one generation to another until the last decade, when some of the more thoughtful minds began to be skeptical and advanced reasons for their disassociation. No one has heretofore systematically studied these functions, therefore the author depends largely upon his own studies.

In considering rut in wild animals, he takes the deer as an example, and shows that the period of rut comes at the time when the conditions of climate and vegetation have placed the animal in the best condition to leave off active efforts to maintain existence and to devote its energies to the efforts necessary for procreation.

In all wild animals the rut occurs only when the climatic and other conditions favor the highest physical development. This law holds good in all wild birds, for it is then only that they can stand the strain incident to love-making. The common crow (blackbird) is a very good type to study. In the winter he travels around the rice fields of the South, leading a tramp's existence in a country foreign to him, and to which he goes only to escape the rigors of the northern climate. For several weeks in the spring he goes about the fields, gathering up the worms and grubs. After his long flight from the South he experiences several weeks of an almost ideal existence; his food is plentiful, he becomes strong and hearty, and then he turns to thoughts of love.

In the pairing season he does more work than at any other time in the year, which consists in fantastic dances, racing and chasing after the females, and savage fights with rivals. He endures more than would be possible in his ordinary physical state. Then come the care of the young and the long flights for water and food during the drought of the summer. After the molt, autumn finds him once more in flock, and with the first frosts he is off again for the South. In the wild state the "rut" is the capstone of perfect physical condition.

The same law obtains in the tropical carnivora; the "rut" comes with them when food is most plentiful.

The law is different in domesticated animals, for their food is plentiful at all times, and, as a result of continual high nutrition, changes occur in the reproductive functions.

All animals, whether viviparous or oviparous, have a desquamation time, which follows the procreative season.

In birds the rutting season begins in the spring, and the principal part of the molt occurs in the autumn, after the rutting season is over. Some birds, however, have two molts—one in the very early

spring, before the breeding season begins, when they lose a few of the protecting feathers and in some cases grow most fantastic plumage, which is really a part of the sexual ornamentation and plays quite a rôle in sexual selection.

Menstruation is only a shedding. It is a process for getting rid of over-ripe material, which is formed for a special purpose and must be disposed of to make room for newer and stronger material.

In the study of human menstruation it must be remembered that woman is the only animal in which the "rut" is omnipresent. The endometrium of woman is, however, different even from that of the monkey, in the sense that it must always be kept in readiness to receive the ovum. The monkey generally has but one breeding season each year, though some of them, it is said, have two. This usually occurs in the autumn in monkeys with the longest period of incubation; but in some, in which the gestation is comparatively short, a secondary breeding occurs in the spring. The endometrium consequently does not have to be kept in the rich protoplasmic condition in the monkey as in the human being. In the human being nutrition is kept at the highest point all the time, and is not affected by climatic and other conditions which affect the lower animals. Our nervous and circulatory systems are normally always in good condition, and consequently the human female is the only animal always ready for copulation, and her endometrium is continuously in a higher state of development than that of any other animal. In order to keep her endometrium in this condition, its over-ripe material is frequently thrown off, and this is all menstruation means.

Nature gets rid of that material, when conception is missed, by the lymphatics. The corpuscles undergo granular degeneration, are reabsorbed, swept away through the lymphatics, and used up in the economy. This process is identical in all horizontal animals. When an animal becomes domesticated he is fed regularly, his nervous system is always in good condition, and he is thus prepared for more frequent "rut" than when in the wild state. The changes in the endometrium necessary to the reception of the egg require a longer or shorter interval.

Only two papers of value have been written upon the menstruation of monkeys. The first was read by Bland Sutton before the British Gynæcological Society in June, 1886; the second, by Walter Heape, M. A., Balfour Student of the University of Cambridge, was published in the *Philosophical Transactions of the Royal Society of London*, Form B. 101, 1894. Heape says that the *Semnopithecus entellus* menstruates

with fair regularity at least five or six times a year. He adduces one of the strongest arguments for the separation of ovulation and menstruation—namely, that although these animals menstruate five, six, or more times a year, they have but two breeding seasons. His description of the endometrium is identical with the author's observations on the little girl who was just beginning to menstruate, and on the dog in the mid-interval of the rut.

Remak's law has been one of the greatest objections to the author's views, but has demonstrated their validity.

In 1876 the author undertook studies to demonstrate how the lymphatic corpuscle is manufactured. After working one winter he succeeded in establishing that the granules in the threads of this reticular tissue gradually grow, become full-grown corpuscles, separate from the threads, and float away in the lymph. He never understood the correct idea of the reproduction of epithelium in the adult state until 1886-1887, when, by the study of feather development, he found that the little granules in the hyaline layer gradually grow and protrude into the rete Malpighii until the full-grown epithelial cell of the deep layer is made. The only difference between the epithelial and connective tissue is that at a certain point the undifferentiated protoplasm begins to secrete a gluey substance, which marks the line between sustentacular and protective tissue. To demonstrate this, Mr. Walter Berry has made two drawings, one of the feather papilla in the quiet state—namely, when the plumage is full grown—and the other in the molting condition, when the young feather is just beginning to extend through the skin. In the first the feather papilla is ordinary mucous tissue, with large nuclei and corpuscles branching in every direction. The feather papilla contains a number of blood-vessels even in the quiet state, because the tissue is so abundant that transudation is not sufficient to nourish it and a better blood supply must be had. In the active state, where plenty of rich protoplasm is necessary, every function is found intensified.

Observation of the gradations from the beginning, at the bottom of the feather, up to the columns, will demonstrate the gradations of the neutral protoplasmic corpuscles into the full-grown epithelial cells. This illustrates the law of supply for the waste of all epithelial tissues in adult life. Karyokinesis is the process used in cell production in the embryo, but in adult life the cell is produced from the granule, and is the source of supply for the tissue waste from the wear and tear of every-day life. This method of cell production has not been described before. Remak's law has accomplished a purpose,

and, like the scaffolding around a building, it must come down after the building is completed ; for as long as the law stands, the study of the source of the supply for the repair of the tissue waste of the body must remain stationary. Remak's law takes no cognizance of the fact that the mesoblast is made up from both hypoblast and epiblast.

1. The epiblast makes the sensory apparatus; it has to receive impressions, reason, and issue orders. In order to accomplish this, the epiblast must enter very largely into the composition of the skin, and very few realize how much information the skin really imparts. Next to the eye, it gives us the most impressions that we receive, and consequently the epiblast must be its principal component. The millions of touch corpuscles and nerves which the skin contains could not develop from the other membranes. The epiblast, if you will allow the simile, is the general to whom all information must come and from whom all orders are issued.

2. The mesoblast forms the muscles, bones, and everything that goes to make the locomotive apparatus, and, with slight assistance from the epiblast, it makes all the muscles, bones, connective tissue, and the generative and the renal and other excretory organs. The mesoblast, then, is justly compared to the army proper.

3. The hypoblast simply deals with the food that is supplied to it, and is therefore only the commissary department.

By keeping the functions of these three great subdivisions in view all the time in future study, a far clearer understanding would be obtained of what these three membranes mean, and how it is possible from this original trinity to form one great whole.

The reticular tissue found everywhere in the body has the function of producing protoplasm ; this protoplasm in turn makes tissue epithelium, bone, or whatever may be needed. After shedding, it manufactures a new set of antlers for the whole stag tribe once every year. The procreation of the race very largely devolves upon it, for it manufactures not only the organs with which impregnation is accomplished, but it goes further and makes the organs of sexual attraction, and in this way is an important factor in the preservation of the race.

Summary.—1. The hyaline layer, with its various modifications, is the matrix of all epithelial tissues, and from it spring all the varied sexual ornaments.

2. The feather papilla, the hair papilla, and the endometrium are only local hypertrophies of this same structure for specific purposes, and that only upon the wearing out of this structure does extreme old age appear.

The one great pathological doctrine to draw from this is that we have at last a key to what cirrhosis really is, because the hyaline layer, with all its reduplications in the capsules of secreting organs, can easily, as a result of slight irritation, instead of forming secreting cells, take another course and form connective tissue.

DISCUSSION.

Dr. BYRON ROBINSON: The relation of menstruation to other reproductive functions, so far as I understand the subject, resolves itself into the simple question whether menstruation and ovulation are separate or combined in man.

To demonstrate that menstruation and ovulation are divorced in man, one must pursue comparative methods of study, as is required to comprehend the structure of the peritonæum. The genitals in the lowest organisms are very simple and do not demand sexual congress. The lowest observed definite genitals consist of holes in the body, out of which ova are extruded. From this genital apparatus arises the ovary, Fallopian tube, and uterus, the three final divisions of man's genitals. To realize some of the radical evolutionary stages involved in the development from simple peritoneal pores to the ovary, duct, and uterus, one need only mention some of the changes which any one can observe in the radical changes found in the Wolffian body and the vermiform appendix—an appendix which is no doubt a remnant of a herbivorous stomach and is fast passing out of existence. No organs have so demonstrably changed by evolution as the genito-urinary. The animal of low development started with a pronephros and a duct. The pronephros has long ago disappeared in man, but the duct still remains to carry semen in man and eggs in woman.

The second evolutionary change relates to the mesonephros, which serves to secrete and carry off urine for several weeks in man. The whole mesonephros shrinks in woman to the parovarium, and in man it disappears.

The third evolutionary change is the introduction of a kidney and duct. The two tubes coalesce in the center to form a gestation sac. In the bird one side of the whole genital apparatus is lost by atrophy. To all this change in structure and function is added in man a periodic function known as menstruation. The oviduct gradually separates from the ovary in the ascending scale of animal life, and the number of young at each birth diminishes. In most fishes there is no oviduct; only pores exist, out of which the numerous eggs are expelled. The same pores exist in crocodiles. Frogs are but little

higher, and in them sexual congress begins with their newborn "clasper."

The bird has an advanced development of sexual organs and is the first animal to protect its young outside the body—*e. g.*, sitting, hatching, and feeding. As the scale of animal life ascends, the organs of copulation assume more definite form. The appendages remain double, the uterus coalesces and remains single. Ovulation and its discharge, manifested by what the breeders of animals call rut, become periodic, and sexual congress varies with it, depending upon the nature of the lives and the character of the seasons. Œstrus, or rut, governs ovulation; menstruation influences and hastens ovulation by congestion and by nutrition. Menstruation is not caused by ovulation, but menstruation is the method the uterus takes to prepare a nest for the egg.

Menstruation gets an egg into the nest by peristalsis of the tube; by waving cilia, causing fluid currents which float the egg; by contraction of the fimbriated muscles, causing a tubal mouth to circumscribe an area on the ovary over a ripening Graafian follicle—a mechanism analogous to the batrachian conjugation clasper. The glandular nest in the uterus is built to fertilize the coming ovum. Ovulation is continuous before birth, and lasts after birth until the ovarian tissue is worn out. I have found ovulation in animals and man before birth, and in the lamb's double corpora lutea who never bore young.

The structure and function of the genitals must yield to the necessities of animal life. Reproductive organs must accommodate their functions to circumstances. They must conform to seasons and must vary with food supply. Environments of life dictate methods of existence and bend functions to its mandates. In the higher animals the functions become more definite. The uterus gestates and expels periodically a foetus; the Fallopian tubes transmit the ova.

Menstruation is confined practically in women to the uterus and tubes. Ovulation is apt to occur at the menstrual period, simply because of congestion. In œstrus, or rut, the vulvar, mammary, and the other glandular structures participate in the function. In women this occurs in menstruation, but not in ovulation. Man's upright attitude has no doubt changed the structure and function of the reproductive organs. The change of structure is in the thickened walls of the uterus, and also in the stiff, short, centralized uterus with horizontal tubes.

The cause of the divorcement of menstruation and ovulation may also be looked for in the nervous system, for the higher in develop-

ment the nervous system is, the more complex and definite are the genitals. The greater in development an animal's brain is, the more thought is directed to the genitals, as illustrated in the monkey and in man. The peripheral nervous system of the genitals is more highly developed in man than in any other animal. Excessive thought applied to the genitals is capable of changing their structures and functions. Excessive thought, manipulation, and cohabitation has no doubt modified the relation of the reproductive functions. The lower animals cohabit in definite seasons and periods, at the time of œstrus or rut, and thus tend to perpetuate the relations of the reproductive functions; the higher animals cohabit in season and out of season, and hence tend to disturb these relations.

Menstruation is a function of the uterus and tubes, and is periodic, cyclical, and rhythmical. It begins at puberty and ends at the menopause. It is a blood wave originated by the nervous system. It is governed by what I originally termed the automatic menstrual ganglia, situated in the walls of the tubes and uterus, and is analogous to Auerbach's and Meissner's automatic ganglia of the digestive tract or to the automatic cardiac ganglia of Lee and Pettigrew.

Ovulation is a continuous, progressive process, beginning before birth and ending with worn-out ovarian tissue.

Some of the Arguments which Demonstrate that Menstruation and Ovulation are Independent Functions:

1. Ovulation occurs before birth in man and in other animals.
2. Women menstruate who possess ovaries totally incapable of ovulating from disease.
3. Menstruation frequently continues after removal of the ovaries.
4. Menstruation is not required for the ripening and discharge of ovules.
5. So far as I can observe, the pig ovulates continually, progressively, but the chief bulk of the ovules ripen at rut, or œstrus.
6. Sufficient evidence exists, I think, to show that no follicle ruptures at many of the menstrual rhythms.
7. Women can become pregnant who do not menstruate.
8. If ovulation and menstruation occurred coincidentally, copulation by healthy parties immediately after menstruation would inevitably be more frequently followed by pregnancy.
9. Ovulation in a modified form proceeds during pregnancy.

I have never been able to observe how often an ovule ripens and ruptures or how much time an ovule requires to grow. The nervous

system and nutrition no doubt must be perfect to have ovulation, for tubercular girls and fat girls do not ovulate. I have carefully looked for Johnson's nerve, which my honored teacher, Mr. Tait, announces in his book as the governor of menstruation, and have never been able to find it, although I have looked for it fifty or sixty times. I have found scores of times a chain of ganglia with nerves extending from the cervical plexus to the uterine canal. I do not think that one single nerve governs menstruation. I am inclined to believe that the automatic menstrual ganglia govern the tubes and uterus.

I am very glad to have met Dr. Johnstone, whose work I have been interested in since 1887, and I am very much pleased with his paper.

Dr. E. C. DUDLEY : I have very little to add to what has already been said by the previous speakers. In 1886 I happened to be in Birmingham at the time Dr. Johnstone was making his investigations on this subject, and at that time I did not fail to note the great earnestness of the doctor in his work, and I am not surprised that this seriousness has resulted in a great deal of information. I have had some doubt, but not so much now, as to the relation between the lymphoid cells and the epithelium of the endometrium. I had supposed until lately that the lymph cells belonged to the mesoblast and the epithelial cells to the epiblast. That being the case, for reasons perfectly apparent, the epithelial cells could not develop from the lymphoid cells. This process would not be consistent with previous notions of embryology. I am inclined to think the doctor's explanation of the subject is clear and accurate. If the epiblast and hypoblast are concerned in the development of the mesoblast, then it is easy to see that the columnar epithelium cells may develop from the lymph cells. The old idea that each menstruation results in the shedding of the entire endometrium is very easily and satisfactorily disproved by Dr. Johnstone's investigations. He himself makes an epigrammatic statement somewhere that if the human female first destroys her nest and then lays in it she must be a grand exception to all other females of the entire animal kingdom. That one epigrammatic expression, it seems to me, almost settles the question as to the entire shedding of the endometrium, and leads us to believe that only the superficial layers are shed.

I think there is a practical lesson to be learned from the researches of Dr. Johnstone. The epithelial cells may transmit infection from the uterus to the peritoneal cavity. In the vast majority, certainly, if not in all cases of inflammation, the infection is transmitted through

the epithelial cells, the infection reaches the lymph elements beneath, which are in anatomical and physiological relation with the lymph spaces, the lymphoids of the endometrium, and the muscles and peritonæum of the uterus. The route by the lymph spaces and lymphatics from the endometrium to the peritonæum is short and direct, and one can readily see how infection, once having occurred in the uterus, can swiftly destroy the life of the patient. I think the doctor's investigations throw some light on the phenomena of rapidly fatal puerperal infection, which is undoubtedly almost always due to the streptococcus. The fact that lymph tissue does not exist in the cervix explains why pregnancy does not occur in there, as lymph elements are required to nourish an ovum. Dr. Johnstone has brought out a very interesting and practical point in a previous paper relative to the lymph structure in the tube and tubal pregnancy. Pregnancy usually occurs in the uterus; the ovum grows upon these lymphoid elements, and generally when the epithelial elements have been cast off and perhaps partially restored; at any rate, it is evident that this nest is best adapted to receive and nourish the impregnated ovum when it consists of freshly developed lymph cells. These lymph cells are present in some degree in the Fallopian tubes, and one might perhaps think that tubal pregnancy would occur as often as uterine pregnancy; but Dr. Johnstone has called attention to the fact that tubal pregnancy does not occur as frequently as uterine pregnancy, because the epithelial elements of the tubes, which are anatomically much like the epithelial cells in the uterus, are not shed in menstruation. When tubal pregnancy does occur it is evidence that there has been destruction to a greater or less extent of the epithelial elements in the tube—that is, the lymph elements have been laid bare by disease. I have been very much interested in Dr. Johnstone's paper and have no word of criticism to offer. It is apparently all right, and will probably, as a whole, stand the test of the future.

Dr. J. T. BINKLEY: I would like to ask Dr. Johnstone if he has observed any changes in the rut season in the deer when domesticated and when well fed.

As I understand, Dr. Johnstone endeavors especially to demonstrate that lymph cells reproduce the epithelial cells of the endometrium, and also that no associated action exists between ovulation and menstruation. I am unable to see what connection the remarks of the last speaker relative to the method of germ transmission through the lymph spaces have to the paper.

Dr. A. W. JOHNSTONE, in closing the discussion, said: I must

thank you for letting me off so easy. I realize this paper is revolutionary, and I have purpose.y held it in abeyance, for I did not think our country ready to accept it. I tried it on the British Medical Association three or four years ago, but it was either beyond their comprehension or beneath their notice. I have been working on this subject for a long, long time. The laboratory teaches us that the body has a dual existence, but we know that it has not. The body, however, is not like cast iron; the tissues are not intended to last forever, for they have to be repaired. The old idea that the body is renewed every seven years has some value, because a constant waste occurs. From whence comes the tissue for repair? What supplies the waste of cells? I believe it comes from the hyaline layer which I have described. I do not know whether the hyaline layer is made from the epiblast or elsewhere, but I am certain of its existence. Embryologists teach that it comes from the mesoblast. It is the yellow line shown in the drawings, and is given the name hyaline because sometimes it is translucent.

The best article I know of on the rhythm of menstruation and ovulation was written by Dr. Annie Clark, who gives very careful statistics and percentages gathered from a study of a large number of specimens. She estimates that the average woman ovulates four to five times each year. Mr. Walter Hope examined forty monkeys that menstruated, and found only two ova that had just ruptured. This experience coincides with the experience of nearly all operators. I believe the reason why conception is more apt to occur at the time of menstruation is that, if an egg is nearly ripe at this time, a rich field of protoplasm exists after menstruation which readily nourishes the ovum. For the first three months of gestation all that is necessary is to have lymph for the ovum to float in, and, as Dr. Dudley has said in reference to the pathological condition of a tube in extra-uterine pregnancy, the tube must be one that will produce lymph. You will remember that wonderful case reported by some German surgeon, who did a complete hysterectomy, removed both Fallopian tubes, but left a little piece of ovary. To his horror, in a couple of years the woman developed pregnancy in the abdomen and died. Pregnancy can occur wherever a properly fecundated ovum has lymph for nutriment.

I thank you for the courteous way in which you have received this paper, and I hope some of the younger men of this Society may be stimulated to help me in the study of this subject, for you know art is long and the lifetime of one man is not long enough to work out the entire subject.

Dr. DUDLEY: I would ask if these lymph cells are always developed by gradation and never by segregation.

Dr. JOHNSTONE: Yes, that is my idea. One of my charts shows the gradation of these little granulations in the ovary. A separation of the nucleus occurs, which develops into little triangular bodies and becomes mature cells. The lymph cells are phagocytes, and if they once get infected and pass through the lymphatic channels into the peritoneal cavity trouble results.

STATUS OF GYNÆCOLOGY ABROAD.

BY HIRAM N. VINEBERG, M. D.

FRANCE.

Abdominal Hysterectomy Secondary to Ablation of the Annexa.

Dr. ED. SCHWARTZ (*Arch. de toc. et de gyn.*, February, 1895) prefaces the report of his case with some general remarks as to the advantages of removing the uterus *per abdomenem* rather than *per vaginam*, as is practiced by Péan, Ségond, Jacobs, and most French operators.

At the first operation both annexa were found adherent and slightly diseased, and were consequently removed. The patient, a hysterical woman, was somewhat better, but still complained of pain in the right groin and of a number of other symptoms which refused to be benefited by various methods of treatment. The author decided then to remove the uterus, which he did *per abdomenem*. The patient after this was free from pelvic symptoms, though she developed some other symptoms of an hysterical character. The uterus was very much atrophied and showed a small ulceration at the former site of a small fibroid.

[We venture to state that the removal of an atrophied uterus by a secondary operation for the cure of a persistent obscure pain in the pelvis and lower part of the abdomen after bilateral salpingo-oöphorectomy will meet with the same disastrous failure that overcame in former days the removal of tubes and ovaries for the cure of obscure pelvic pain. We can not help thinking that when the uterus undergoes atrophy after the removal of both annexa it no longer is the cause of

pain or other symptoms, and when these persist after the primary operation the cause must be sought elsewhere. In our experience, when the uterus was the cause of pelvic symptoms following bilateral salpingo-oöphorectomy it was always found enlarged and in a condition of chronic endometritis and metritis or contained a malignant or benign growth. We must adhere to surgical principles in our work, and the most imperative of these is *not* to remove an organ that shows no disease because the patient is suffering from obscure symptoms. If we lose sight of this principle, no matter on what authority, we can not fail falling into a chaotic condition as to our indications for surgical interference.—H. N. V.]

Partial Hypertrophy of the Vulva.

JAWORSKI (*ibid.*) reports the following case: An Italian woman, thirty-four years of age, married, consulted him for a burning sensation in the external genitals, the pain growing worse just before the menstrual period. Latterly she had difficulty in urinating and in having sexual intercourse. At the age of fifteen the patient had had her right leg amputated. On examination, he found an immense hypertrophy of the labia minora. In addition he found signs of folliculitis of the vulva. After allaying the inflammatory manifestations the author ablated the hypertrophied labia. He looked upon the hypertrophy as of congenital origin, though the amputation of the leg may have contributed to it by friction in walking. The patient denied ever having indulged in masturbation. The inflammatory lesions were caused by retention of the urine and vaginal secretion. A characteristic symptom in this case was great exaggeration of the voluptuous sensation in sexual intercourse.

ENGLAND.

Tuberculous Disease of the Portio-vaginalis.

Dr. J. D. WILLIAMS (*Brit. Med. Journ.*, May 4, 1895) reports two interesting cases of this affection. In Case I the patient was sixty-three years of age and the subject of phthisis, from which she died a few weeks after being brought to the hospital. The genital organs, removed at the autopsy, showed a tuberculous affection of the cervix involving a portion of the adjacent vagina. There was no tubercular disease of the body of the uterus, nor of the appendages.

In Case II the patient was thirty-six years of age. She showed some disease of both apices. On the cervix an irregular ulcer was to

be seen, which, on microscopic examination, proved to be of a tuberculous nature. The cases are of interest from the location of the lesion. The cases bear out the observation made by others, that in cervical tuberculosis the body of the uterus and the appendages usually remain free of the disease.

GERMANY.

Extirpation of the Vagina.

R. OLSHAUSEN (*Centbl. für Gyn.*, 1895, No. 1) states that usually primary carcinoma of the vagina begins in the posterior walls. In eighteen cases coming under his observation during the past eight years this held good in thirteen cases. From this location the disease usually extends to the cervix. In cases of vaginal carcinoma not involving the cervix, he begins the operation by splitting the perineum transversely, and then dissects the vaginal wall bluntly from the rectum. In this manner an opening into the peritonæum can easily be avoided. When the uterus is involved, the operation is begun in the same manner, and, after the vaginal wall is dissected from the cervix, Douglas' cavity is entered, the uterus is retroverted through the opening, the broad ligaments tied off, and finally the bladder dissected from the anterior wall of the uterus. It is too early as yet to speak of the permanent result. Vaginal carcinoma thus far does not offer a favorable prognosis, the recurrences occurring early. In sixteen of the author's cases relapses occurred in fifteen; in the sixteenth case the disease had not recurred after two years.

Hæmatemesis and its Connection with Menstruation.

L. KUTNER (*Berl. klin. Woch.*, 1895, No. 9) draws attention to the connection often observed between hæmorrhages from the stomach and the menstrual flow. In menstrual hæmatemesis one should always suspect a latent gastric ulcer, and subject the patient to a thorough course of Leube's cure. In the event of failure of this method the existence of a gastric ulcer might be excluded.

[§]*Total Extirpation for Irreducible Prolapsus Uteri.*

M. GRAEFFE (*Münch. med. Woch.*, 1895, No. 11) reports a case of total prolapsus in which he was compelled to perform an extirpation owing to his inability to replace the uterus within the pelvis. But already on her discharge from the hospital four weeks after the operation there was considerable prolapsus of the anterior vaginal

wall. In the discussion that followed Fehling remarked that in similar cases a total extirpation was not sufficient, but should be supplemented by an anterior and posterior colporrhaphy. He had obtained fair results by combining a plastic operation in the vaginal walls either with a ventro- or vagino-fixation.

Massage (Thure Brandt's Method).

HERTZSCH (*Monat. für Geb. und Gyn.*, Heft iii) relates his further experience with this method of treatment. Within proper limits it proves of great service and renders many an operation unnecessary. In the treatment of mobile retroflexion the employment of a pessary is advisable, particularly in those cases in which the pessary retains the uterus in good position, but the wearing of which gives pain unless preceded by massage. The cases of fixed retroflexion form the special field for Thure Brandt's method. In this class of cases it is of much greater value than Schultze's method, which is not free from danger, as the author was in a position to observe on doing a cœliotomy of a case thus treated. The pains often arising from inflamed ovaries can frequently be allayed by massage. The same may be said of the pains due to pyosalpinx. It is true it does diminish the tumor, but under a prolonged course of treatment the pus *inspissates* and the patients are freed from their symptoms (*sic!*). The author has obtained good results in parametric exudates, and also in two cases of coccygodynia.

The Pedicle Question in Myomo-Hysterectomy.

H. TREUB (*Monat. für Geb. und Gyn.*, Heft iii) performed one hundred myoma-hysterectomies in which the pedicle was embraced by an elastic ligature and buried. First the ligaments on both sides were ligated down to the cervix, and then the bladder separated from the uterus. After cutting away the tumor the cervical canal was mopped with sublimate by means of absorbent cotton and forceps. He had seven deaths, most of which could not be attributed to the method.

The Treatment of Retrodeviation of the Uterus.

R. OLSHAUSEN (*Zeit. für Geb. und Gyn.*, 1895, Bd. xxxii, Heft i) states that the treatment of retroflexion must depend upon the ætiology, or rather upon the complications. Thus for the cases of retroflexions after the puerperium without any special complications two methods are available—pessaries and vagino-fixation. A definite opinion can

not as yet be given in reference to the latter. In suitable cases the treatment with pessaries is attended with good results. He prefers the Thomas pessary to that of Hodge or Schultze. The fixed retroflexions can be treated by massage, Schultze's method, or ventro-fixation. Schultze's method is suitable in peritoneal adhesions, massage in cases of parametric fixation, but only when there is no further inflammatory irritation and when the exudate is of at least a year's duration. Ventro-fixation, which finds its field particularly in fixed retroflexions, may also be justified in many cases of mobile backward displacements. Regarding the technique of ventro-fixation, the author still holds to the suturing of the uterus at the insertion of the round ligaments. The suturing of the anterior wall, which is so warmly advocated in many quarters, has the objection that it forms a too rigid and dense adhesive band, which is liable to give trouble in the event of pregnancy from overstretching of the posterior wall of the uterus. The author uses silkworm gut for the sutures and cuts the ends very close. The author is very well pleased with the results in his thirty-two cases. In all the cases, with only a single exception, later observation showed the uterus to be in anteversion. The symptoms were rapidly and permanently relieved.

OBSTETRICS.

BY J. D. BISSELL, M. D.

A Case of Extra-uterine Pregnancy; Fetus living to Seventh Month, carried Fourteen Months and Spontaneously discharged Per Rectum.

Dr. C. V. CORUS (*St. Louis Clinic*, April, 1895) gives an interesting account of the following unique case which occurred in his practice: When the patient was first seen she was apparently about six and a half or seven months pregnant. The exact date of conception could not be determined; the child was found to be alive. She soon began to suffer frequently from irregular pains and her health became gradually worse, her face pinched and shriveled and her complexion a brownish red. At about fourteen months after conception she was found to be greatly emaciated, with a temperature of 102° . Her bowels were very loose; the substance passed resembled

corn-meal gruel and was very offensive. In the course of a few days, after diarrhœa set in, "the putrid leg of a seven-months' fœtus was found protruding from its mother's anus, and stinking so badly as to drive everybody out of the house." An anæsthetic was administered and the child removed *per rectum*; the cord had sloughed away and there was no trace of the placenta. For several days the patient did well. Temperature fell from 104° to 101° ; pulse from 140 to 110. Unfortunately, an abscess formed one inch below the umbilicus; it ruptured spontaneously, discharging daily a quantity of bloody pus. Patient died from exhaustion on the ninth day after the operation.

Preservation of the Perinæum during Labor.

Dr. C. S. STODDARD (*Southern California Practitioner*, February, 1895) considers the methods of supporting the perinæum by pressure with the palm of the hand, folded towels, etc., valueless. He thinks that by preventing the rapid descent of the head and maintaining a good degree of flexure until the vertex shall have escaped, the parts are less apt to suffer injury. [We think that the position of the limbs have at times much to do with the preservation of the perinæum. If the limbs are flexed upon the body when the head is resting upon the perinæum, or about to pass it, there will necessarily be offered more resistance, because such a position puts the muscles on the stretch, and the liability of laceration is consequently increased. Less resistance is afforded when the limbs are extended and the risk is thereby diminished.]

The History of Placenta Prævia and Ante-partum Hæmorrhage and their Treatment.

In an article by Dr. P. D. TURNER, entitled "A Fragment of the History of Obstetrics" (*Quarterly Medical Journal*, vol. iii, part iii), he states that in none of the writings of the early Greek, Roman, or Arabian authors is any allusion made to ante-partum hæmorrhage. The omission is due, he says, to the fact that the services of the male practitioners was rarely if ever called for excepting when dystocia was extreme and an operation was necessary to extract the child. The only allusion to the subject in the works of Hippocrates are the following brief remarks: "If a great flow of blood, without pain, occur to the parturient woman before the birth of the child, there is danger that the child may be born dead or of low vitality," and "if the placenta is delivered before the child, the latter is in danger,

as it can not receive the nutriment which comes to it through the placenta." He nowhere makes reference to the malposition of the placenta.

Guillimeau, writing in 1596, gives Ambrose Paré and Hubert credit for the practice of podalic version in cases of ante-partum flooding. He says that "the most sure and ready way to help the woman is to deliver her speedily, because most commonly there follows a continual flux of blood." He did not recognize, any more than those who preceded and succeeded him, that the placenta was implanted on the lower segment of the uterus; he thought, as did the others, that it had become detached from some cause and had fallen down over the os; nor does he allude to the advisability of interference before labor had commenced.

Louise Bourgeois, or Boursier (1609), midwife to Marie de Medicis, is the first author who specifically advises delivery whether the woman be in labor or not.

"Paul Portal (1685) is the first author who in his writings has thoroughly grasped the subject of placenta prævia. He recites, in some detail, seven cases, and alludes more slightly to half a dozen more. In these he recognized clearly that the placenta was attached over the lower segment and describes how he peeled it off. Moreover, he explains how the hæmorrhage occurs through separation of part of the placenta owing to dilatation of the os."

Gottfried Scharker, of Leipsic, who wrote in 1709, was the first to demonstrate the fact of the implantation of the placenta on the lower segment of the uterus by post-mortem examination of a case of placenta prævia.

William Giffard (1734); being unable to reach the edge of the placenta in one of a number of cases of placenta prævia he attended, perforated it, and delivered the child through the hole made with his finger.

Among modern obstetricians Robert Barnes and Braxton Hicks stand pre-eminent—the former for his enunciation of his theory of the three zones of the uterus and his advice to separate the placenta from the dangerous zone, the latter for his contribution to the treatment of placenta prævia by the application of his method of bipolar version.

Report of the West End Maternity Hospital.

Dr. ROBERT JARDINE read before the Obstetrical and Gynæcological Society of Glasgow (*Edinburgh Med. Jour.*, April, 1895) a re-

port of the work done at the West End Maternity Hospital. Out of 2,161 cases attended during four years, only three were met with which could not be delivered at full term without sacrificing the child.

The fatal cases were ten. There were five cases of placenta prævia—all successful except one which died before assistance could be reached. Of the nine accidental hæmorrhages, eight were successfully treated. Nine post-partum hæmorrhages—all successful. Two eclampsia—both successful. In puerperal fever, he followed the practice of douching with perchloride of mercury (1 to 2,000). To avoid the possibility of mercurial poisoning, he washed out the albuminate of mercury which had deposited in the uterus with pure boiled water.

Prophylactic Measures where Eclampsia is Threatened.

Dr. W. H. HAUGHEY (*The Phys. and Surg.*, February, 1895), in a paper on eclampsia, points out the value of eliminating the poison from the blood as quickly as possible through the three natural routes: the skin, bowels and kidneys. If these are kept active he thinks we need have no fear of this occurring. When albumin is found in readily appreciable quantities the time for active treatment has arrived.

The Maternal Influence Supreme in the Transmission of Syphilis.

Dr. DENSLOW LEWIS, of Chicago (*The Chicago Clin. Rev.*, March, 1895), in a clinical lecture on the relationship of syphilis to pregnancy, the puerperal state and the newborn infant, reiterates the opinion of Mercur, who believes that semen can not transmit syphilis. In his opinion, "hereditary syphilis is unquestionably due to syphilis of the mother and never to any other cause, the infection occurring through the placental circulation. It is questionable if it can ever pass directly from the ovary to the ovule." While all syphilitic infants are infected *in utero* from the mother alone, yet it does not follow that all infants born of syphilitic mothers are necessarily syphilitic; they may escape infection even though the mother be apparently permeated with the disease. The question of susceptibility may apply here as elsewhere.

Rectal Dilatation a Means of resuscitating the Newborn.

Dr. A. B. COOKE (*Am. Surg. Bull.*, February, 1895) has reported two cases of asphyxia neonatorum promptly resuscitated by the following procedure: "The cord is left intact and the child placed

in a position admitting uninterrupted inspection. The finger, preferably the index, is then lubricated and quickly introduced into the rectum. Coincident with the passage of the finger into the sphincter respiration will be instituted." He defines asphyxia neonatorum as being "that condition of the newborn infant in which respiration fails to be inaugurated immediately upon the completion of delivery." [We are too prone to attribute recovery to the method or methods employed, and overlook the quiet and unseen efforts of Nature to restore herself. We are all, perhaps, acquainted with cases which would illustrate this point—cases where the children were born without any apparent signs of life and were put aside as dead, but who recovered unaided excepting by Nature. We do not accept his definition of asphyxia neonatorum.]

AMERICAN PÆDIATRICS.

What is Croup?

Dr. Dessau (*Archives of Pædiatrics*, June, 1895) defines croup as a pathological stenosis or narrowing of the caliber of the larynx from the deposit and growth of an exudation or false membrane upon its mucous surface. Much difficulty seems to exist in recognizing the different diseases of the larynx characterized by the unnatural ringing, resonant, metallic tone of the cough.

A stenosis of the larynx may be due to other causes, such as acute swelling of the mucous membrane, covering the vocal cords or glottis either from catarrhal congestion, the inhalation of steam or mechanical injury. Stenosis from these causes, however, is not accompanied by the formation of an exudate.

The affections of the larynx that are most likely to be confounded by the young physician with croup are *laryngismus stridulus* or thymic asthma, as it is sometimes called, and catarrhal laryngitis.

Laryngismus stridulus is practically a manifestation of rickets and should never be confused with true croup, which is always either primary diphtheria or pseudo-diphtheria of the larynx. It is the "holding-breath" spell of rickety infants, and is incidental to infancy only. After a more or less prolonged pause of respiration there is a loud crowing *inspiration* of a rough grating tone.

The ready recognition of catarrhal laryngitis or false croup is not always easy. It is manifested in two forms: the *spasmodic* and the *simple*. The spasmodic comes on suddenly at night, waking the child out of its sleep, rarely occurs under one year of age, and there is usually a history of a disposition to former attacks or to enlarged tonsils, post-nasal catarrh or adenoid growths of the pharyngeal vault.

Its most prominent features are a loud metallic ringing quality of cough, with attacks of alarming dyspnœa. These subside to a marked extent through the following day, when only a slight hoarseness of voice will be noticed. The attacks of *dyspnœa* do not last longer than ten or fifteen minutes and in their interval respiration is not difficult.

In the *simple* form of catarrhal laryngitis the attack comes on more gradually, with hoarseness of cry or voice and ringing tone of cough. It may begin in the day but is more marked in the night. It may occur at all ages up to seven years. There is at the outset a marked rise of temperature, but patients show no special signs of discomfort that can be referred to the larynx. There may be attacks of difficult breathing that occur toward or during the night. The hoarseness of voice and ringing cough may persist in the daytime, but the difficulty in respiration will always be noticed on *inspiration*; expiration being quiet and easy.

The voice is never muffled nor completely lost. Hoarseness and cough may last a week or more, but unless the case is unusually severe or complicated with diphtheria there is no progressive development of the disease. To distinguish this disease from the true or membranous croup, the following points are essential:

Catarrhal laryngitis or false croup begins suddenly either with an attack of dyspnœa and croupy cough or with croupy cough alone. Membranous croup, which is either primary laryngeal diphtheria or pseudo-diphtheria, is most insidious and slow in its onset. False croup is always worse at night and better in the daytime, membranous croup while it is worse at night does not improve in the daytime. The loud ringing cough in false croup does not change its quality and is more noticeable than the hoarse or smothered voice; in membranous croup the ringing cough is soon lost, becoming smothered, and is far less noticeable than the hoarse, husky voice which finally becomes almost suppressed. In false croup the attacks of dyspnœa occur only at long intervals and at night or toward night; in membranous croup the intervals between the attacks grow steadily shorter until difficult or harsh labored breathing is continuous. In the interval of attacks of dyspnœa in false croup respiration is difficult or harsh only on in-

spiration ; in membranous croup it is so both in inspiration and expiration.

Whenever a complication occurs, such as measles or scarlatina, the primary disease may safely be regarded as diphtheria or pseudo-diphtheria of the larynx.

THE TREATMENT OF CROUP BY CALOMEL SUBLIMATION.

Dr. FRUITNIGHT (*Archives of Pædiatrics*, June, 1895), reports brilliant results in the treatment of laryngeal stenosis or obstruction, in cases of croup, by the sublimation of calomel.

The indications for its employment are : When there is a recession of the suprasternal notch, a retraction of the infrathoracic walls, stridulous breathing, hoarseness of the voice or aphonia at times, and lividity of the surface resulting from the deficient oxygenation of the blood. The presence of all or a major part of those symptoms should prompt us to employ this treatment. The medicine may be administered in doses ranging from five to twenty grains, repeated at intervals varying from one half to two or three hours, according to the urgency of the symptoms. The average dose is fifteen grains repeated hourly. The author is accustomed to keep the patient in the vapor-saturated atmosphere for a period varying from ten minutes to half an hour. This is usually continued from one to ten days. The evil consequences to be guarded against are salivation, diarrhœa and especially depression and prostration accompanied by anæmia. By watching the symptoms and by the administration of stimulants and nutrients, these dangers may be avoided.

It is important to practice calomel sublimation after intubation, for the intubation is merely a palliative remedy while the disease is still active and progressive.

In the method of application of this remedy, the chief principle is that the vapor must not be dissipated throughout a large extent of atmosphere. An enclosure may be constructed of a sheet, placed about the patient to resemble a tent. Apparatus for the sublimation of calomel can be obtained at the apothecary or instrument shops, or the physician can devise one for himself.

HYSTERECTOMY FOR PUERPERAL INFECTION.*

BY REUBEN PETERSON, M. D., GRAND RAPIDS, MICH.,

Fellow of the American Association of Obstetricians and Gynæcologists and Fellow of the Chicago Gynæcological Society.

(Author's Abstract.)

In spite of the diminished mortality from puerperal sepsis brought about by the introduction of antiseptic and aseptic measures, many thousands of women die annually from puerperal septicæmia. Outside of the large maternities, where favorable results have been obtained on account of the perfect technique, there still exists a large amount of septic infection following abortion or labor at full term. If to this be added the sepsis arising from accidental and induced abortions, it will be seen that no effort should be spared to perfect all methods of treatment for the relief of this condition. A clear conception of the pathology and bacteriology in the birth canal is highly essential. Bumm describes two forms of endometritis: septic and putrid. The septic process may be localized and the germs shut off from the underlying tissues by a granulating zone, or this zone may be absent and the pyogenic cocci be found in the lymphatics leading to the peritonæum. In septic endometritis foetid lochial discharges may be absent. In putrid endometritis decomposed material and necrosis of the epithelial layer is present in the uterine cavity. The granulation zone is also present and acts as a barrier to the penetration of germs and their products. The putrefactive focus within the uterus favors a development of toxines whose absorption into the blood causes sapræmia. Cases of puerperal sepsis may be divided into two classes: (1) where general infection predominates, and (2) when localized inflammatory deposits are present. The second class offers the best results from operative interference because the products of inflammation are shut off from the general peritoneal cavity, and the surgical treatment of localized abscesses is followed as a rule by good results. When the broad ligaments are involved in septic absorption, true pelvic cellulitis and abscesses result. When there is a general purulent peritonitis resulting from absorption of germs, it usually proves rapidly fatal. All collections of pus in the adnexa or

* The original was read before the American Medical Association, May 8, 1895.

cellular tissue should be evacuated with the least possible delay, either by way of the vagina or by abdominal incision. Can surgery prove of any avail in the other class of cases where absorption is taking place from the interior of the uterus, by way of the lymphatics with a resulting general infection?

The cases of general infection are of two kinds: (1) when the veins and lymphatics at the placental site are loaded with germs, and (2) when the presence of the granulating zone impedes the further penetration of the cocci. In both the symptoms are those of general septic absorption. A dull curette should be used in intra-uterine treatment, to preserve the granulating zone. The treatment of these septic cases must be rigorous and thorough; the source of infection must be removed at once. Since differentiation of these two classes is almost impossible, the use of the dull curette and packing should be employed in all cases. The main diagnostic symptoms are high fever, rapid pulse, possibly chills and the history of the case. If curetting and packing with gauze afford no relief within twelve or eighteen hours, the only resort is removal of the uterus. If this be done early enough the patient may live. This radical procedure is not more radical than the disease is fatal, if allowed to proceed unchecked. The removal of the source of the infection, if taken at an early stage, will be the means of diminishing the mortality of the cases. The more skilled the surgeon becomes in diagnosis and the more expeditious the treatment, the better will be the results obtained.

ITEM.

Two letters, just received, anent the Preston Retreat controversy, have come too late for publication in this issue. They will both appear in the September number.

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HYSTERECTOMY FOR SUPPURATIVE DISEASE OF
THE PELVIC ORGANS.*

BY J. M. BALDY, M. D., PHILADELPHIA, PA.

When on the evening of October 5, 1893, I read before the Obstetrical Society of Philadelphia a paper entitled Removal of the Uterus and its Appendages for Pelvic Inflammatory Disease, and for the first time proposed this procedure as a matter of election, my remarks met with a strong protest and almost universal disapproval. At almost the same time Polk made a similar proposition in a paper read before the New York Obstetrical Society, which was received by an equal amount of condemnation.

During May, 1894, I read a paper on the same subject before the American Gynæcological Society at its Washington meeting, and it proved to be a matter of considerable surprise that in the short interim so large a number of the members had already practiced and approved the new procedure, as was developed by the discussion. Since that time I have had many opportunities of demonstrating the feasibility and advisability of this operation to many physicians visiting Philadelphia from all sections of the United States, and find that many of them on returning home have adopted the method. To-day the operation is established on a sure and firm basis, and many women who were before doomed to a partial recovery are now blessed with a

* Read before the Section of Obstetrics and Diseases of Women of the American Medical Association, Baltimore, May 8, 1895.

complete return to health. My object of again encroaching upon the time of the profession with this subject is not that I believe anything is needed to establish its feasibility, but rather to again freshen the minds of those who may feel that hysterectomy is either a more difficult or more dangerous operation in these cases than salpingo-oöphorectomy. For this purpose it may not be out of place to once more review certain general considerations arising in this connection which were formulated in my paper before the American Gynæcological Society one year ago. I there propounded the question, "Is the uterus essential or useful after the ovaries have been removed?" At that time I assumed and still assume that this query can only be answered in the negative. If it is granted that the uterus deprived of its appendages is a useless organ in the human economy, as far as its relation to this matter is concerned, four questions are pertinent :

1. Are all patients cured after an operation, requiring double salpingo-oöphorectomy?
2. Are patients cured after hysterectomy when double salpingo-oöphorectomy has failed?
3. Does the operation of hysterectomy increase the mortality over that of double salpingo-oöphorectomy?
4. Is the retention of the uterus of any disadvantage or danger to the patient?

As to the first and fourth questions nothing can be added in answer other than was advanced in the paper to which reference has already been made. There is no one who has practiced gynæcological surgery, to even a limited extent, but knows that patients suffering from chronic pelvic inflammatory disease are not always cured of their symptoms by the removal of the tubes and the ovaries alone. The matter is so notorious that it is hardly necessary to more than call attention to the fact to quiet any criticism from this direction. As to whether or not patients are cured after hysterectomy, when double salpingo-oöphorectomy has failed, as stated in my former paper, experience must decide. I there said: "In my paper read before the Philadelphia Obstetrical Society, October 5, 1893, two cases are reported in which the uterus had been removed subsequent to a simple extirpation of the appendages. After the primary operation these patients had continued to suffer from leucorrhœal discharges, bleeding, and pain. The secondary operation for removal of the uteri proved that the appendages had been thoroughly and completely extirpated at the first operation, and that no such cause as incomplete removal existed to account for the continued suffering. The removal of the uterus in

both cases cured the patients, and at the present writing they both remain in good health. Two other similar operations have been performed since that time with like results."

It may be stated that these four patients, now a year and a half later, remain in good health without any return of their old symptoms. I am at this time able to add two cases to this list with like results, making a total of six patients who have been rescued from chronic invalidism by a hysterectomy subsequent to a double salpingo-oöphorectomy. During this period from fifteen to twenty patients have passed through my hands on whom the salpingo-oöphorectomy had failed to relieve the symptoms, but whom I was unable to persuade to try the hysterectomy on account of their sufferings at their former operation and a sentiment against losing the womb, which many women, by reason of false professional teaching, appear to consider a vital organ. These facts seem to answer my second question most emphatically and in the affirmative.

The whole subject must, after all, hinge upon the answer to the third question, "Does the operation of hysterectomy increase the mortality above that of double salpingo-oöphorectomy?" If the mortality be increased and the relief be not commensurate, the proposed procedure must fall and we must return to the old one of double salpingo-oöphorectomy or seek for a substitute in some other direction. That much greater and surer relief of symptoms are obtained has already been demonstrated. In my paper of last May there are reported twenty-two patients who were suffering from chronic pelvic inflammatory disease upon whom I had performed hysterectomy. In that report I said: "Of this number, all recovered from the operation and the great majority have been cured. My highest mortality in the past has always followed removal of the appendages in this same class of patients. At no time have I been able to pick out anything like twenty-two successive successful double ovariectomies in cases of the same character as those upon whom I have found it advisable to perform hysterectomy. Not only has hysterectomy in my hands lessened the mortality very markedly, but it has rendered the convalescence infinitely smoother, easier, and more satisfactory." At the present writing I have twelve more to add to the list, making in all thirty-four cases without a death.

In addition to my own cases I may submit in evidence the work in this same direction by other operators to date:

	Cases.	Deaths.
Baldy.....	34	0
Kelly (hospital cases).....	70	0
Polk.....	20	1
Krug.....	65	4
Pryor.....	9	0
Penrose.....	25	1
	223	6

Making a grand total of 223 cases with 6 deaths, a mortality in the hands of six operators of 2.68 per cent.

What better argument can one possibly offer in favor of any new procedure? A greatly lessened mortality, a surer and more thorough relief of symptoms, an easier and shorter convalescence, a freedom from any possible future disease of the womb! Can there be any who are yet skeptical? •

Hysterectomy being determined to be the proper procedure in certain chronic pelvic inflammations, it remains to determine in what cases to choose this operation. In this connection I can not do better than quote verbatim from my last paper on the subject :

“It is well known in pelvic inflammation that the disease first affects the mucous membrane lining the womb, and secondarily invades the Fallopian tubes and pelvic peritonæum. In many cases not only is the endometrium affected, but the inflammatory products invade the deeper structures which go to make up the uterine walls. These infiltrates undergo the same changes as do the same elements in the walls of the Fallopian tubes; whether it be suppuration or partial organization, in either case the process is apt to become a permanent one.

“With Fallopian tubes and uterus, both of which are diseased by the same factor and to the same extent, is it reasonable to suppose that a cure is always to be obtained by the removal of the tubes alone? Theory and practice both combine in this matter to force the conclusion.

“It must not be understood that the removal of the uterus together with the Fallopian tubes and ovaries is recommended in all cases of pelvic inflammatory disease. I am forced to dissent at this point from the views of some other surgeons with whose opinions in other respects I am thoroughly in accord. In many cases the uterus, possibly on account of its anatomical relations which are so favorable to good drainage, has succeeded in throwing off the original infection and is comparatively healthy, if not entirely so. Under such circumstances hysterectomy is not indicated. But where an abdominal

section has been performed for the removal of the uterine appendages, and the womb is found enlarged and diseased, especially if it has been surrounded by extensive adhesions, the destruction of which leaves large areas of denuded peritonæum, hysterectomy should be the operation of choice. Even when the uterus is not greatly diseased, if during the course of the operation it be largely denuded of its peritoneal covering, it is best to complete the operation by its removal. The sole objection which could be urged against this procedure is an increased mortality; but since this has been proved fallacious, opposition from any standpoint must necessarily be withdrawn. It is freely granted that in accepting this practice, uteri will often be removed which might safely have been left behind. Even in the face of this possibility the procedure is fully justified, in view of the possibility of future harm on the one hand and the certainty of no extra risks on the other.

“The decision *pro* or *con* is at times a difficult one at the time of the operation, in which case the patient should be given the benefit of the doubt and the uterus should be removed. In all cases it is, of course, assumed that both ovaries must of necessity be sacrificed. Except in the presence of malignant or tubercular disease the womb should never be disturbed if even a portion of one ovary and a Fallopian tube can be preserved. Nor is an operation to be extended to the performance of hysterectomy where the double salpingo-oöphorectomy will even temporarily answer the purpose, should the patient be in such condition that the prolonged manipulation might render the result of a given case doubtful. Common sense must be used in the application of this principle, as in all surgical procedures.”

THE TREATMENT OF GONORRHŒA IN WOMEN.*

BY WILLIAM R. PRYOR, M. D., NEW YORK.

Throughout the entire treatment of gonorrhœa in a woman, no matter where the infection is located, one principle must govern the physician: the disease must be locally checked and extension prevented. Gonorrhœa, as it primarily affects the external genitals, pro-

* Read before the New York County Medical Society, May 27, 1895.

duces few destructive lesions, and those are chiefly limited to the vulvo-vaginal glands. But when once the infection has extended to the pelvic viscera, the grossest possible tissue changes are wrought and the integrity of the affected organs often destroyed, as well as chronic invalidism induced.

Gonorrhæal Urethritis.—During the acute stage, and from the very first, we are to actively treat the infection. Internally, I administer citrate of potash to alkalinize the urine for the first three days or so. Locally I apply every day a solution of nitrate of silver, ten grains to one fluidounce. This is best made through a very slender urethral speculum, and preliminary cocaine anæsthesia may be necessary. After the urethritis has somewhat subsided the local application may be reduced in strength to five grains to one fluidounce and made less frequently. Great care should be used lest the application reach above the sphincter vesicæ. The patient should frequently bathe the vulva with lysol one half per cent., but no douching is admissible.

Gonorrhæal Cystitis.—Large doses of benzoate of sodium, 75 grains to one drachm a day, are to be given internally. The bladder is to be washed out with a supersaturated solution of boric acid at least twice a day, large quantities being used, and the bladder filled and emptied many times at each sitting. The bladder should be distended to the point of tolerance and left full of the solution. The accompanying urethritis is to be treated by the daily application of nitrate of silver, five grains to one fluidounce. In washing out the bladder a single catheter is to be employed; in this way, and not with the double catheter, can dilatation with unfolding of the corrugated mucous membrane be secured. I do not think mere irrigation of the bladder sufficient.

Gonorrhæal Ureteritis is to be treated by benzoate of sodium internally and bladder washing only if the bladder be at the same time acutely affected. If the bladder be not very sensitive, nor acutely inflamed, the ureter may be washed out with a solution of boric acid.

When the infection attacks the urinary system we can not guard against extension by the use of antiseptic dressings, but must render the urine antiseptic, and at the same time increase the quantity by the use of Buffalo lithia water, given in large quantities on an empty stomach.

Gonorrhæal Vulvitis.—Apply nitrate of silver to every fold of the vulva, meatus urinarius, clitoris, and nymphæ. Paint every part with a twenty-grain to one fluidounce solution and allow it to dry on the surface. This should be done every day in women with tough mu-

cosæ ; in the young and very blonde women, once every other day is as often as the application can be made. Pack the vagina with twenty-per-cent. iodoform gauze which has been wrung out in 1-to-5,000 bichloride of mercury. Renew once in three days. This is a preventive against extension and positively efficient. The woman herself should bathe the vulva every four hours with a one-half-per-cent. lysol solution. This is especially necessary in fat or hairy women and in those who have long nymphæ. Treated in this way, one can cure gonorrhœal vulvitis in a short time and prevent its extension to the pelvis.

If the vulvo-vaginal glands become inflamed they will surely suppurate. I believe in an early excision of the entire gland, because it is utterly impossible to attack the infection when once it has reached this compound racemose gland with its multitude of ramifications and single duct. If you let it alone, or simply incise it, the infection remains permanent, a menace to the woman and a source of communication to others.

Gonorrhœal Vaginitis.—The patient is put in the lithotomy posture, and the vagina opened by an anterior and posterior retractor. With a swab of cotton every part of the vaginal mucous membrane is painted with nitrate of silver, twenty or thirty grains to one fluid-ounce. The vagina is then packed with iodoform gauze as before. Application and dressing are removed in two days, and again in two days. After three treatments the gauze alone may be used.

Gonorrhœal Endocervicitis.—This is about five times as frequent as vaginitis and too much neglected. With an applicator wrapped with cotton touch the cervical mucous membrane with a strong tincture of iodine. Be careful not to pass the internal os. This is repeated every day. The vagina is also to be packed with iodoform gauze. The cervix is lined with a true mucous membrane supplied with racemose glands, and you will have to persist for many weeks in your treatment before you cure your cases. You can not use any agent which will cause the mucosa to exfoliate, because the cervix is a sphincter, and may have to dilate to allow the passage of a fœtus.

If your application extends above the internal os, you will probably cause an extension to the endometrium. In very chronic cases you may be compelled to amputate the cervical mucous membrane by Shroeder's method.

If gonorrhœal endocervicitis is properly treated there is little likelihood of its extending farther up. But when, in the presence of such an infection, caustic applications are employed, or unnecessary instru-

mental examination made of the endometrium, gonorrhœal endometritis is probably the result. We can not here place a protecting dam between the infected locality and the more important region above; neither can we modify the secretions by internal medication so that they may prevent extension. Our only hope is to successfully treat the local affection by such means as will prove most efficiently germicidal and still do the least amount of injury to the tissue cells, upon whose resistance to pathogenic influences we must depend for protection against complications.

Gonorrhœal Endometritis.—The moment the diagnosis is made the woman is to be operated upon. If the cervix be open, well and good. If there be inability to dilate up to at least a half inch, incise the cervix. We wish to get at the endometrium, and the presence of the cervix is a hindrance to our work. Determine the direction of the uterine canal by means of the sound. Dilate as fully as possible—never less than half an inch. Wash out the uterus with boric-acid solution, using as large a Fritsch-Bozeman catheter as can be passed. The cervix is then swabbed with five-per-cent. carbolic, after which it must be again dilated. The uterus is now thoroughly curetted. The attempt is made to remove every particle of the endometrium, upon the fundus, in the lateral recesses, and elsewhere. Leave none of it, but make the procedure as thorough as possible. The next step is to wash out all *débris* by means of the irrigating catheter, using no bichloride, no carbolic, or other strong antiseptic. It is just here that the mistake is made by most operators. I know my curettage does not remove every gonococcus, and that some must be left behind. Shall I produce superficial slough and dead tissue by the use of antiseptics to act as a culture medium for what I must leave? Furthermore, having completed the irrigation, I do not paint the endometrium with iodine or carbolic acid. We must not forget, while removing the infected endometrium, that provision must be made for the reproduction of a new one, and this production of a new endometrium is positively prevented when suppuration follows the operation, and suppuration results from the use of strong antiseptics. As a last step the uterus is packed with an almost dry special form of iodoform gauze. The packing is done with a heavy applicator. A nulliparous uterus will hold from three to five feet of gauze one inch wide. An enlarged uterus, of course, will receive much more. The end of the gauze is left hanging from the cervix, and the vagina is packed with gauze also. The first dressing is made in five days. If the uterus be small, there is no renewal of the uterine packing, and only the vagina

is again packed. No applications are made to the endometrium, the vaginal packing being kept up for a month merely to preserve the field of interference a surgical one. There are no temperature, no pain, and no tubal involvement after the operation. The gauze is introduced into the uterus not to act as a drain in the sense that a tube is a drain, but as an antiseptic dressing absorbing fluids, and under whose protection repair of tissue may go on.

I have studied the method of curettage employed by nearly every man in New York who occupies a hospital appointment, and seldom have I failed to find some departure from what I consider essential details of the procedure. Some irrigate with antiseptics, some swab out the uterine cavity with caustics, as carbolic acid, some pack the uterus with non-sterile commercial gauze, others use gauze prepared with glycerin; another will put his gauze into the uterus soaking wet with bichloride 1 to 1,000. In but few instances have I found a technique based upon the belief that the endometrium is not a mucous membrane, but is a lymphoid structure lining an embryonic organ, and that any agent sufficiently strong to prove germicidal is destructive to the living body cells. Unless you will agree with me in what I accept as my two most important assumptions, you can not adopt my technique. If you do agree with me, you can employ no method other than the one I have roughly outlined.

To treat these cases of gonorrhœal endometritis by poultices and opium, or ice bag and purgatives, is to allow the infection to run riot in the woman's pelvis. She will not die perhaps, and *possibly* no complication may arise. But this you can not tell. If curettage is indicated for sepsis after confinement, after abortion, and in other conditions presenting purulent inflammation of the endometrium, what argument can be advanced against it when the gonococcus causes the pus? Surely not that of an unfortunate experience.

It is but natural that I devote the major part of my paper to a consideration of this most important complication of gonorrhœa. And although I believe that the influence of gonorrhœa as a cause for pelvic lesions is much exaggerated, and that the disease is used as a cloak for the accidents following dirty obstetrics and unclean gynecological work, yet must we treat gonorrhœa not as a local affection only, but as one which is capable of destroying not alone the pelvic organs but the general health as well?

In concluding, I may tell you that no case of gonorrhœa is to be considered cured so long as the gonococcus can be found, for in a very large percentage of cases presenting the gonococcus there are

absolutely no clinical symptoms whatever. This is especially true of endocervicitis.

Palliative and procrastinating measures will not suffice with gonorrhœa, but our utmost endeavour must be used to check the infection.

Too often are women given douches of antiseptic solutions and nothing more done for them. The usual method of douching but tends to a spread of the infection. When once gonorrhœa is detected, it is the physician's duty to impress the patient with the great importance of persistent treatment at his hands, and the possible results of disobedience to his instructions.

The hints I have furnished you I commend to you for acceptance, believing, as I do, that in no way other than by the efforts of the physician himself can a radical cure ever be effected, and complications be, with certainty, prevented. Certainly my belief is that the prevalence of gonorrhœa is due more to the uncured form in women than the gleet of men. Women are indifferent to minor degrees of discharge, and are rebellious against routine treatment. We must teach them the true significance and importance of gonorrhœal infection.

Gonorrhœal Salpingitis (Acute).—This is to be treated just as is gonorrhœal endometritis, for the tubes are but slightly altered branches of the uterine body. The presence of the tubal complication is no bar to the method, but is the strongest indication for its application. I unhesitatingly say that the operation I have mentioned to you, if applied before the tubes become occluded at the uterine ends, before pyosalpinx ensues, and while purulent salpingitis is present, will save the tubes to eighty per cent. of women in this way infected, and will render future operative procedure unnecessary. It would seem as though faith in the reparative powers of highly vitalized tissues was not held by gynæcologists; but I have it, and know that such recovery from infection does occur when the causative process is cut short.

Of course gonorrhœic women will become reinfected, and it might have been better in the first instance to have removed uterus, ovaries, and tubes. With the social side of the question we have nothing to do. Our duty is to the case before us as presented, and we are not to operate to *prevent* possible reinfection. Very many have seen the result of this conservative work—conservative in a double sense, in that it saves to the woman organs which are diseased, and at the same time protects the general economy against the effects of an infectious process; and I trust some are here to bear witness to these statements.

Gonorrhœal Salpingitis (Chronic).—If this be in the form of a pyosalpinx, nothing but vaginal extirpation of the tube will effect a cure. So rarely does a pus tube drain into the uterus after curettage that we are not to expect it. But in lesser degrees of tubal inflammation due to gonorrhœa, curettage, supplemented by derivative treatment by ichthyol-soaked tampons in the vagina, affords a great deal of relief.

We have in these cases reversed the old routine. Formerly local treatment was persisted in for months until failure resulted, and the patient came to the operating table worn out and utterly discouraged. Now we do the conservative curettage, and enhance the benefits which follow this operation by the judicious local treatment.

THE EARLY RECOGNITION OF CARCINOMA OF THE CERVIX.*

BY HUNTER ROBB, M. D.,

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In the paper which I shall read to-day I can not boast of any great amount of originality. All the work that has been done of late years upon carcinoma, although it has given us a great deal of additional knowledge as to the pathological changes which occur in the course of this disease, has not as yet taught us the ultimate cause for its existence.

All the vaunted remedies which have been tried, some without harm but many more with the most pernicious results, from the Canadian pine (which seemed when first tried in the hands of good men to give almost miraculous results) down to the various caustics with which innocent patients are still tortured by charlatans who profess to know everything, or by ignorant practitioners who ought to know at least something—all have been laid aside by the best authorities, and it is generally allowed that the only chance of complete cure lies in the extermination by means of the knife of all the new growth. But we know to our cost that although in many cases we are able to take away the greater portion of the growth, and thereby afford the

* Read before the Ohio State Medical Society, Columbus, Ohio, May 16, 1895.

patient comparative comfort and give her a respite for weeks, months, or years, yet if the smallest portion of the tumor or of a metastasis be left, a return of the disease is absolutely certain.

In what way, then, have we made any advance? Or are we in the same position as we were twenty years ago? It would indeed be disheartening if all the work which has been done is to go for nothing; and although the number of cases of carcinoma is still considerable in our mortality statistics, the death-rate has undoubtedly been much diminished of late years.

To what, then, can we attribute this progress? First to our better technique, which has rendered capital operations less dangerous in themselves; but, secondly (and this is the point which I wish to illustrate to-day), we are beginning to save lives because we have learned to recognize the disease in its earlier stages, while it is still possible to remove all the new growth.

The cases which I intend to speak of to-day are those of epithelioma of the cervix uteri.

Cancer of the cervix is one of the commonest of the severe diseases met with in gynæcology, and, according to our present statistics, occurs more than fifty times as often as cancer of the corpus uteri. While as to the ætiology of corporeal cancer we can say nothing, since it comes alike to the married and unmarried woman, of cancer of the cervix we can absolutely affirm that it is intimately connected with the bearing of children or with miscarriages. Taking the statistics of a large number of cases, it was found that the average number of children borne by each patient was four.

If the cancer be recognized before it has obliterated all the ordinary landmarks, we shall frequently notice more or less laceration of the cervix. Is it not more than probable then that in the lacerated cervix with infiltration and eversion of the lips we have a direct prolific cause of cancer? Dr. Howard A. Kelly a year or so ago said that he had seen only three cases of cancer of the cervix in virgins, and that in one of these there had been laceration of the cervix from forcible dilatation.

Schröder distinguishes three forms of cancer of the cervix—(1) the superficial cancrioid of the vaginal portion; (2) carcinoma of the mucous membrane of the cervix; (3) cancerous nodule of the cervix.

The first of these may develop from apparently benign papillary growths, and may exist for a long time under the form of polypoid structures or superficial ulcerations. In the second form the pathological process begins under the cylindrical epithelium and grows into

the submucous tissues. The third form begins as a nodule of the cervix which has developed as a circumscribed tumor underneath the mucous membrane, the latter showing at first no signs of malignant disease. As the tumor grows, however, it disintegrates internally, and finally perforates the previously intact mucous membrane; then, but not till then, we have loss of continuity of the surface, and an ulcer which would lead even the most unskillful to suspect the existence of a carcinoma.

Extension takes place in all forms in one of two ways: (1) by contiguity—that is, by gradual infiltration of the surrounding tissues; or (2) the virus can be carried to any portion of the body through the lymphatics and give rise to metastasis.

I think it will generally be conceded that the diagnosis of carcinoma of the cervix is generally easy after the disease has reached a certain point. In the first place, the symptoms, although not always definite, are generally sufficient to arouse our suspicion. The three most important ones are (1) protracted hæmorrhage, (2) excessive secretion, and (3) pain.

But as a matter of fact carcinoma of the cervix can exist for a long time without giving rise to any particular symptom, and before all I would insist that pain does not generally appear until the process has invaded the tissues surrounding the uterus.

Now, it is well known that the taking away of these tissues so that every metastasis can be removed is an exceedingly difficult and uncertain procedure, and it is exactly this point which I wish to emphasize and, if possible, illustrate to-day—namely, that if we want to do the best for our patient and insure her recovery, we must find some method of making the diagnosis in many cases even before she suspects anything herself. This is not always in our power, because, unfortunately, the patient does not present herself for examination in time. When this occurs the physician must of course be held guiltless; but it is just in such cases that the family physician, who has been in attendance upon the patient in her labors and who has gained her confidence, can institute such procedures as will lead finally, I hope, to a regularly established prophylactic treatment of carcinoma of the genital tract.

For the prophylaxis of the carcinoma the following measures have been suggested by Dr. Kelly. They may be arranged under four headings:

(1) Within two or three months after each confinement every woman should submit to a careful examination and the exact condi-

tion of the pelvic outlet and of the cervix should be noted. The examiner should particularly observe whether the cervix is lacerated, infiltrated, or whether the lips are everted, and should get a clear idea of the size and position of the uterus.

When laceration or infiltration is found, the condition should be treated either by puncture and depletory packs or else the lips should be freshened up and the laceration should be united by means of sutures; (2) every woman with a deeply lacerated and enlarged cervix should be operated upon; (3) every woman with a family history of cancer who presents a laceration of the cervix, no matter of how slight a grade, should present herself to a competent physician about every six months in order that the cervix may be carefully inspected; (4) every woman over thirty-three years of age who has borne a child at any time during her life should be advised to submit to an examination, and she should be guided by the physician's statements about the condition of the cervix as to whether it is advisable for her, even in the absence of symptoms, to present herself at stated intervals in the future for further examinations.

If these rules were followed, the physician would at least have the opportunity of diagnosing the disease in its incipient stage and while it is still curable.

Now, as to the making of this diagnosis certain in the incipient stage, it is very hard in many cases where the growth is confined strictly to the cervix and the mobility of the uterus is not interfered with to distinguish this form of malignant disease from a harmless eversion of the lips or ectropion. When we see an elevated area differing a little in color from the sound mucous membrane and tending to bleed freely upon the slightest touch, we should look upon it with grave suspicion, and if it feels hard and nodular, and upon a second or third examination at short intervals shows a tendency to extend, it should be removed without delay. Yet in our anxiety to guard against all possible danger we should not be too anxious to submit our patient to a serious operation, and, fortunately, we now have within our reach the means of clinching our diagnosis.

The microscopical examination of scrapings from the uterine and cervical canal is by no means so satisfactory as was at first hoped. One might think that this would be an easy way of deciding whether malignant disease existed or not. We now know that it is possible to have an increase in the number and size of the glands, and even the presence of more than one layer of epithelium, without any coexisting malignant disease. And it is only when we have certain proof

that the subjacent tissues have been invaded by the epithelial elements that we can be sure of our diagnosis.

In the same way, when the suspicious condition is limited to the vaginal portion of the cervix, it is of but little value to merely scrape off a portion of the superficial tissue. But we need not confine ourselves to this procedure, for with the help of cocaine we are now able, without giving the patient any pain worth mentioning, to excise a portion of the deep-lying tissues; from this sections can be made and examined under the microscope, and, if any signs of malignancy are seen, we can not only advise an operation with a good conscience, but also may confidently hope that we have eradicated the disease.

In order to illustrate my point I will quote one or two cases :

CASE I.—Mrs. C. G., aged forty-six, was admitted to Dr. Kelly's ward in the Johns Hopkins Hospital on the 18th of June, 1894, complaining of constant pain in the left ovarian region and of what she termed "a sense of fullness in the womb." The family and personal history were excellent, except that seventeen years and a half before she had suffered from some disease, which was probably gonorrhœa, since which time she had always felt weak in the left ovarian region. The present sickness dated from about five months ago, when she had some discharge of blood from the vagina which was continuous, but not profuse; the feeling of fullness in the womb began at about the same time. On entrance the patient showed no signs of cachexia. The vaginal examination showed a somewhat relaxed outlet, the cervix rather low; scar tissue was found running from the posterior lip down upon the posterior vaginal wall. Cervix very irregular, nodular, and greatly indurated; the os could not be made out. Uterus enlarged, filled up posterior part of pelvis, fixed. After examination under anæsthesia a diagnosis of double pyosalpinx, with retroflexion of uterus and dense adhesions, was made.

This was therefore all that could be absolutely made out even at this time, and I must go back to what had been discovered as early as April in this case. On April 20, 1894, as a preliminary procedure, the cervix had been dilated and the uterus curetted. At this time the scrapings were examined, and portions of the tissue of the cervix removed at the same time were also examined microscopically with the following results: "The specimen contained a moderate number of glands with high cylindrical epithelium; the lamina are empty; in a few places, springing from the margin of the glands, are large alveoli filled with epithelial cells having large nuclei; these alveoli also occur independently of the glands; in none of them has any de-

generation taken place. The stroma is made up of cells having round or oval nuclei, and appears to be of connective-tissue origin. Along one margin is seen non-stripped muscular tissue. A diagnosis of probable epithelioma of the cervix uteri was made. On June 24, 1894, the major operation was performed, and the uterus, tubes, and ovaries were removed, the diagnosis of endocervical carcinoma being confirmed. In this case, therefore, it was of the utmost importance to the woman that the uterus as well as the tubes and ovaries should be removed in time. Even up to the month of June the clinical symptoms were not clear enough to warrant so radical an operation, whereas the indications from the microscopical examination were almost positive.

It must be insisted again, however, that in these cases it is not enough to examine the scrapings. In every suspicious case a portion of the cervical tissue must be cut out and submitted to microscopical examination. I have in my mind a case (of which I have not the exact data) in which the uterine scrapings were examined and a diagnosis of "apparently normal mucosa" was made. A section from a portion of the cervix was cut out and showed signs of carcinoma. The uterus was accordingly removed and the diagnosis was verified, an epithelioma of the cervix being present, whereas the uterine mucosa of the fundus appeared perfectly normal.

THE TECHNIQUE OF ABDOMINAL AND PELVIC SURGERY.*

BY J. W. LONG, M. D., RICHMOND, VA.,
Professor of Gynæcology at the Medical College of Virginia.

By *technique* is meant the essential details for, during, and subsequent to, an operation. It is a well-recognized fact that the essence of modern surgery is *asepsis*; therefore in our technique we should strive to attain as nearly as possible this ideal condition. This may be done by a combination of the following methods, each of which is distinct, but all having the same object in view—viz., the removal of dirt and bacteria :

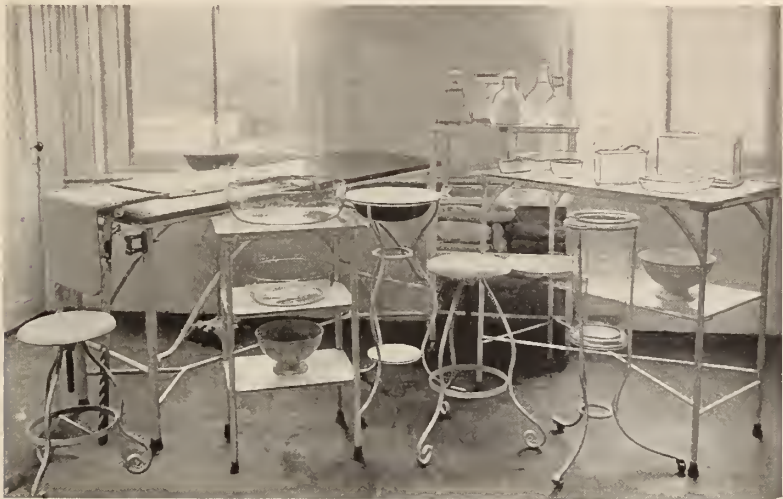
* Read before the North Carolina Medical Society at its forty-second annual meeting, held in Goldsboro, May 14-16, 1895.

1. *Mechanical*.—Scrubbing with hot water, green potash soap, and a stiff nailbrush.

2. *Thermic*.—Boiling, steaming, or dry heat.

3. *Chemical*.—By antiseptic drugs, as bichloride of mercury, permanganate of potash, etc.

There is often confusion just on this point. Some men who claim not to believe in “bugs,” as they superciliously call bacteria, are scrupulously careful about washing their hands, boiling their instruments, and other like methods, disclaiming all the time their belief in “antiseptics,” while the truth is they are employing some of the most valuable antiseptics known. In other words, “antiseptics” is a *ge-*



The operating-room furniture.

neric term with a specific meaning, embracing many other measures besides the use of *antiseptic drugs*, which in modern surgery really stand at the bottom of the list of antiseptic methods.

But we should not be lured away from first principles, and take it for granted that, because bichloride of mercury and carbolic acid are “reduced to ranks,” there is nothing in antiseptics, for I would be false to the teachings of science if I did not affirm and *underscore* the fact that the rapid strides of latter-day surgery are due to antiseptic methods. Without antiseptics we can not have asepsis.

A man is best qualified to speak from his own experience; therefore I shall confine my remarks to a description of the technique that

I employ in abdominal and pelvic surgery, the most important features of which may be briefly stated as follows :

I. *The Surgeon.*—He should under all circumstances avoid infecting himself, for an infected surgeon means an infected patient. As an illustration of this may be cited the observation of many present who have seen puerperal fever follow in the track of some particular doctor or midwife. For the operation, the surgeon should remove his outer clothing and wear a white duck-suit and white shoes with rubber-soles ; certainly, at least, he ought to wear an apron that will cover his clothing. An operating suit is essential for two reasons : (1) that the patient may not be infected, and (2) that the operator's clothing may not become soiled.

II. *The Room and Furniture.*—The operating room is one of the chief features of a hospital. It is located with a view to good light, and the floor and walls made of material that will stand frequent washing.



The patient on operating table. Toilet completed.

The furniture also is of an especial kind, usually a combination of glass and metal, so that everything may be scrubbed and rendered aseptic. In private practice this principle may be carried out to a large degree by selecting the best-lighted room in the house, a plain, stout table covered with a clean blanket and sheet, a smaller table covered by clean towels for instruments, and plenty of basins with water arranged

conveniently. Just here I wish to call attention to the value of the Trendelenburg position; the glass table can be readily changed into this position, while in a private house a Krug frame is easily adjusted



The Trendelenburg posture on Krug's frame.

to any stout table. In an emergency I have obtained the same end by turning a chair down on the table.

III. *The Water.*—Whenever it is possible use water that has been boiled. It is well to have cold water that was boiled the day before, and hot water boiled on the day of the operation. While boiling water once does not kill the spores, yet for practical purposes it may be considered sterile.

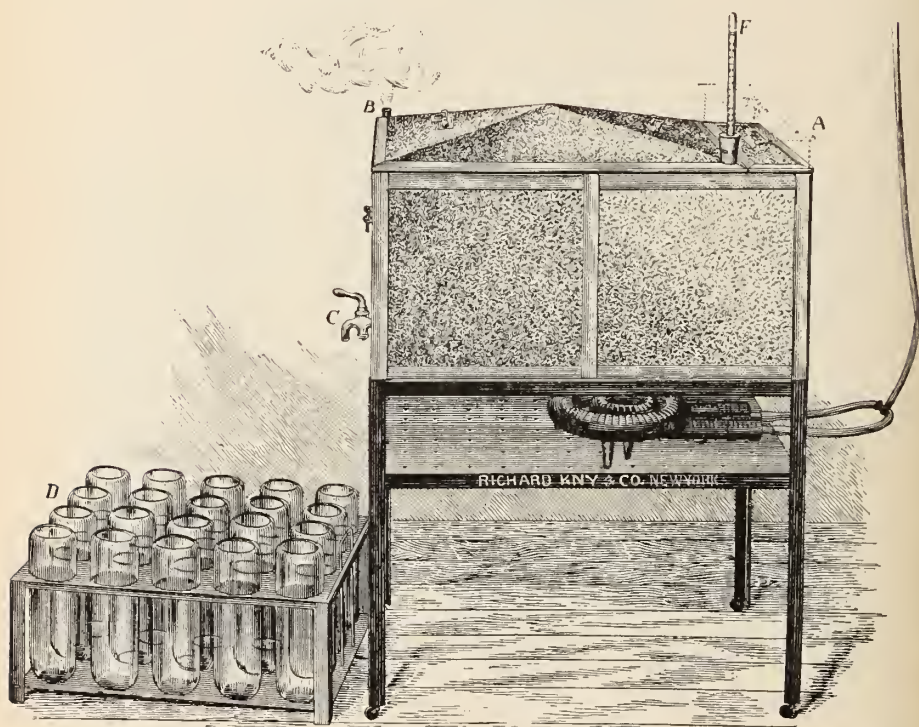
IV. *The Sterilizer.*—In antiseptic surgery the sterilizer is an important item. The best sterilizer is the Arnold, or one acting on that principle. It is simple, cheap, and effective. It consists essentially of a vessel holding a shallow layer of water above which is the steam chamber containing the articles to be sterilized, and where the steam is recondensed into water. The Lawson sterilizer is used at the Old Dominion Hospital. In private practice I use the Arnold sterilizer with great satisfaction.

V. *Suits, Towels, and Dressings.*—Surgeon's suits, towels, gauze and cotton dressings, and sponges are made into suitable-sized packages and steamed. The dressings and sponges should be sterilized an hour the first day and half an hour the two succeeding days.

Iodoform gauze is usually much better made by the surgeon or nurse than when purchased ready made. The following is a good formula: With surgically clean hands, make an emulsion composed

of ten drachms of iodoform and six ounces of soapsuds made with normal salt solution and Castile soap. Place into a clean glass bowl and thoroughly rub the emulsion into plain absorbent gauze three yards. Cut your iodoform gauze into pieces, fold, place in glass jars, and sterilize by the fractional method. Each time the jar is opened it must be resterilized.

VI. *Sutures*.—Silk, which is usually used for sutures and ligatures, should be cut into proper lengths, and wound on glass spools. These are placed in glass tubes, the ends plugged lightly with cotton, and the whole sterilized by the fractional method. Silkworm gut is cut



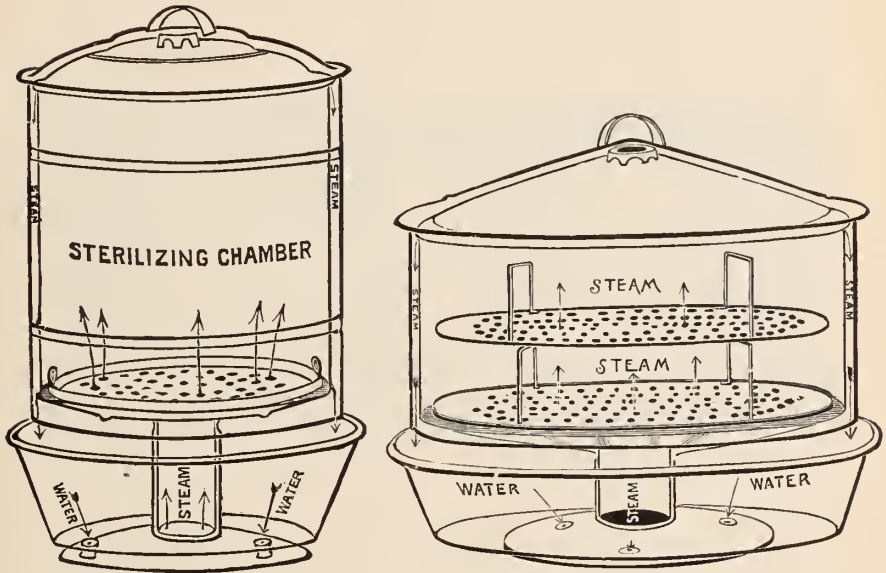
The Lawson sterilizer.

into lengths, slipped into glass tubes, and steamed like the silk. Silver wire is boiled with the instruments.

VII. *Instruments*.—Instruments, irrigator nozzles, and draining tubes are effectually sterilized by boiling from one to ten minutes in

a one-per-cent. solution of carbonate of soda. During the operation they should be kept submerged in plain sterilized water.

VIII. *Sponges*.—*a*. Sea sponges. These are prepared by the following method: (1) Beat in a wooden bowl to loosen the grit; (2)



The Arnold sterilizer.

wash in warm water until the water remains clear; (3) place in dilute muriatic acid, 3 ij to Oj; (4) place in permanganate-of-potash solution, five per cent., or 3 vj to Oj; (5) transfer to a saturated solution of oxalic acid; (6) place in sterilized limewater; (7) place in bichloride-of-mercury solution (1 to 1,000) for twelve hours; (8) rinse twice in sterilized water; (9) preserve in carbolic-acid solution, three per cent., or 3 ijss to Oj.

b. Cotton sponges, made of absorbent cotton deftly rolled into pledgets.

c. Gauze sponges consist of absorbent cotton wrapped in plain gauze.

d. Abdominal sponges, larger flat pieces of cotton loosely covered with gauze.

e. Gauze sheets, plain pieces of gauze twelve by twenty-four inches, hemmed.

All of these are sterilized by the fractional method. Sea sponges

are hard to prepare, and so unreliable; while the cotton and gauze sponges are easy to make and so very reliable that the latter should be usually preferred.

IX. *Hands and Forearms*.—It is conceded that the hands are harder to sterilize than anything else. There are a number of methods. The one which I prefer is: (1) pare the nails closely; (2) scrub



Jars of sterilized gauze and cotton sponges, and sterilized dressings.

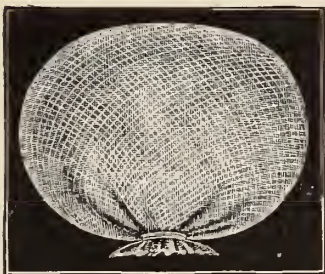
the hands and forearms for ten minutes with hot water, green potash soap, and a stiff nailbrush, changing the water often; (3) soak in a hot saturated solution of permanganate of potash for one minute; (4) rinse off in a hot saturated oxalic-acid solution; (5) neutralize the acid in sterilized limewater. Many surgeons rinse their hands in alcohol.

X. *The Patient*.—A careful examination is made of the heart, lungs, and kidneys. For two days preceding the operation only liquid diet is given. The bowels are thoroughly emptied by laxatives and enemas. The evening before the operation a general bath is given, the abdomen and vulva washed with green soap, and the abdomen stained with a solution of permanganate of potash, which is rinsed off by oxalic-acid solution, followed by plain water. A soap poultice is applied to the abdomen, and the vagina douched with a bichloride solution (1 to 1,000) and packed with gauze wet in the same solution. The next morning the poultice and gauze are removed, a vaginal douche of bichloride solution is given, the abdomen and vulva shaved, the parts washed again with hot water and green soap, a few drops of tincture of iodine placed in the umbilicus, equal parts of ether and alcohol applied, the whole rinsed off with bichloride solu-

tion, a fresh vaginal pack introduced, and a large pad wet with the solution fastened on with a bandage.

The patient, when taken to the anæsthesia room, is given a hypodermic of morphine, one eighth of a grain, and atropine, one one hundred-and-fiftieth of a grain, and the anæsthetic cautiously administered. As soon as narcosis is induced, the carriage is wheeled into the operating-room, the patient lifted upon the operating table, a Kelly pad placed under the hips and back, the dressings removed, and the parts vigorously scrubbed, this time with a *stiff nailbrush*, hot water, and green soap; the vagina is briskly mopped out with gauze sponges held in the bite of dressing forceps, alcohol and ether again applied to the abdomen, the parts rinsed off with sterilized water, and dried with a sterilized towel. The field of operation is now covered with a large piece of sterilized gauze slit in the middle and surrounded by sterilized towels.

XI. *The Operation.*—In an abdominal case the operator stands to the right of the patient; to his right is the instrument table and to his left a basin of sterilized water; to the patient's left is the first assistant, by his side are the sponges. While antiseptic drugs have been used to a limited extent in the preparations for an operation, absolutely none are used during the operation. Plain sterilized water is used to keep the instruments and sponges in and to dip the surgeon's hand in, while for irrigating the abdominal cavity a normal salt solution of forty-five grains to the pint is employed.



Gauze sponge.

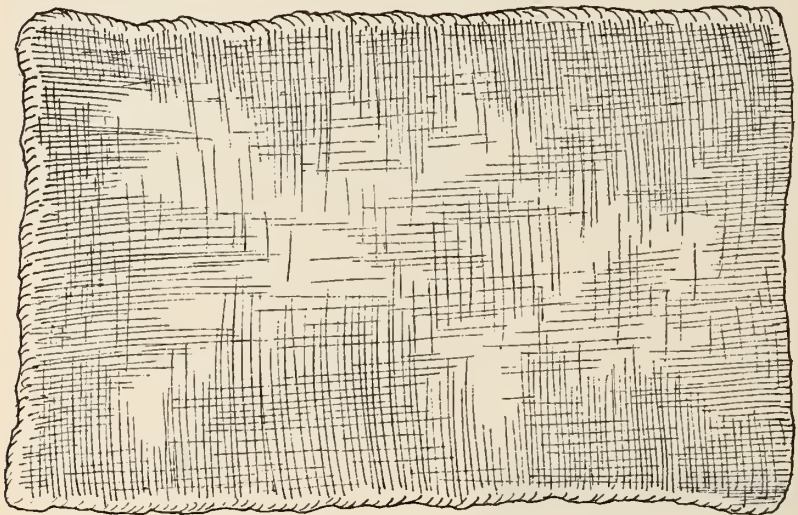


Cotton sponge.

In operations about the vagina plain water is used for constant irrigation. The leading idea throughout all operations is asepsis rather than antiseptics. In pelvic operations a leg holder is indispensable; the simplest and cheapest is the Robb leg holder, which is

a plain cloth strap with snaps on the ends and rings fastened about a foot from each end.

XII. *The Anæsthetic.*—Anæsthesia should always be considered dangerous. Ether is to be preferred unless specially contra-indicated. Great care should be taken to guard against anæsthesia accidents, and while no undue haste should be made, every unnecessary moment the patient is under anæsthesia must be considered lost. Everything, no matter how trivial, that can possibly be done before the anæsthesia is begun, should be attended to, so as to lose no time during the operation. This is a point too often neglected.



Gauze sheet.

XIII. *After-treatment.*—As soon as the operation is over and the dressings applied, the patient should be quickly placed in bed, surrounded by hot-water bags or bottles, and every effort made to guard against shock. All food and drink is withheld until anæsthesia-nausea is over, when teaspoonful doses of hot water may be allowed, followed by barley water, toast water, broths, and chicken soup. Buttermilk may be given, but never sweet milk at first. If the stomach retains food well these may be followed by semi-liquid and later by full diet. As soon as the stomach is quiet, one grain of calomel is given every hour until six or eight doses are taken. This should be followed by drachm doses of sulphate of magnesia and soapsuds

enemas. If there is flatulency, a turpentine enema is often effectual. *It is absolutely essential that the bowels should move.* The patient should be encouraged to empty the bladder every six or eight hours, and if unable to do so, the catheter must be used under strict asepsis.

The thing to be dreaded in all operations involving the peritonæum is septic peritonitis; therefore one must guard against and watch for any indications of sepsis.

A PLEA FOR MODERN CÆSAREAN SECTION.*

BY C. P. HARRIGAN, A. M., M. D., CHICAGO.

The spirit of surgery to-day is conservative. The duty of the surgeon is to serve and to save, not to destroy. The master minds of the present generation of surgeons are earnest in their efforts to lead the body of the profession to a correct appreciation of the fact that craniotomy upon the living fœtus is in direct violation of all accepted principles of modern surgery, that it is an irrational procedure, unjustified from any standpoint whatever. Given a case where the mother's pelvis will not permit the child being born into the world in a natural manner. The craniotomist defends his position by this argument: If craniotomy is not resorted to, the mother and child must die, while if this operation upon the living subject be performed the mother's life may be saved. From these assertions he draws this moral deduction, that fœticide is not murder, is not morally wrong, being done for the purpose and with the high probability of saving the mother. The risk of all surgical operations affecting the life of the patient are determined by the following factors:

First, by the physical state of the patient; second, the nature of the conditions requiring surgical aid; third, the condition and position of the field of operation; fourth, the completeness with which the operative technique can be carried out; fifth, the ability of the operator to avoid such accidental injuries to important structures adjacent to the field of operation as might suddenly terminate life; sixth, the ability of the surgeon to protect the operative or accidental wounds from septic infection after the operation is completed.

A short consideration of the conditions, operative technique, and

* Read before the Forty-fifth Annual Meeting of the Illinois State Medical Society, at Springfield, Ill., May 21, 22, and 23, 1895.

sequelæ of the mutilating procedure will show that it is the greatest error which has ever disgraced our profession. Without dilating upon the unnecessary destruction of human life, a subject to which I will later on refer, the following disadvantages present themselves: First, the position and condition of the field of operation can not be rendered aseptic; second, the operative technique must be carried on unaided by the surgeon's eye; third, inability to apply the proper dressings to prevent wound infection to the incidental injuries inflicted upon the tissues of the mother; fourth, if the mother survives the veterinary manipulations of the implements employed in the mutilating procedure, she finds hovering over her the dark-winged messengers of death, septicæmia and pyæmia, with their attendants, metritis, salpingitis, pyosalpinx, ovaritis, and peritonitis, not knowing whether her fate is to be determined by one or all of them together. Here, then, is a procedure to save the life of the mother by the destruction of the child, entailing dangers far greater than either Cæsarean section or symphysiotomy, the life-saving procedures for both mother and child, in direct variance with all modern conservative principles of surgery: it stands condemned as a surgical crime. Hence it must follow that the performance of craniotomy upon the living child is absolute, positive, unjustifiable murder. The grand and beneficent achievements of modern surgery have mastered, with but few exceptions, all of the abnormal natural conditions most potent in destructive effects upon our race.

Sir Joseph Lister, by an exhaustive study of the biological process of the decomposition of organic substances, followed by a correct observation of the methods for the preservation of organic animal tissues, drew this conclusion: that all pathological disturbances in the repair of operative and accidental wounds were due to fermentative influences. Lister then practically adopted the methods for preservation of animal tissues to the healing of surgical and accidental wounds, and it has been by the practical application of the Listerian principle that modern surgery has been able to avoid septicæmia, pyæmia, hospital gangrene, and erysipelas, the great causative factors in the production of the high mortality of operative surgery in the past. The elimination of the possibility of wound infection has reduced the percentage of mortality to almost its minimum, besides removing to a great extent the dread of undertaking and submitting to surgical procedures. Timely surgical interference is becoming more and more frequent, to the great advantage of patient and physician; it then follows that an early diagnosis becomes of paramount impor-

tance, and a thorough and practical study of the pathological condition requiring surgical aid is imperative. The application of aseptic principles of surgery, together with improvement of technique in operation, aided by a comprehensive knowledge of the pathological conditions which prevent the living fœtus from being born into the world in a natural manner, are the factors which have permanently established modern Cæsarean section as the rational and scientific procedure. It is the rational procedure, because by its successful performance two lives are saved. It is eminently the scientific procedure, first, because the maternal mortality, even in cases where the conditions and circumstances are unfavorable for any surgical procedure, is as low as that of craniotomy under similar conditions; second, in elective cases, where the expectant mother has had timely recourse to the obstetrician, maternal mortality has been reduced below that of the mutilating procedures. The factors productive of these brilliant results in modern Cæsarean section are: First, the possibility of putting the field of operation in a perfect aseptic condition, and the preservation of this condition during the time of operation; second, the advantage of the eye guiding the surgeon's hand to mathematical exactness in operative technique; third, the advantage of obtaining immunity from wound infection after the operation has been completed by a properly applied aseptic and antiseptic dressing.

In a letter which I recently received from Prof. Lusk—eminently one of the foremost obstetricians of the world—he states his experience as follows: I had five cases of Cæsarean section—three successful and two died; the latter were both kyphotic dwarfs. The operations were not especially difficult. Death occurred at the end of one week, apparently from feeble vitality due to undeveloped lungs and heart. In one case the former weighed eleven ounces, the latter five ounces. The mortality in kyphotic dwarfs has been generally unduly heavy. In a letter from Dr. Joseph Price, one of America's greatest abdominal surgeons, he states that craniotomy should never be resorted to upon the living, healthy child. He urges Porro's operation for prophylactic reasons.

The world-renowned Prof. Senn, in a paper on laparo-hysterotomy, read before the Illinois State Medical Society at its annual meeting in 1893, summarized the statistical results of Continental Europe as follows: "Out of one hundred and forty-nine Cæsarean sections, one hundred and eight mothers and one hundred and thirty-six children were saved; out of eighty cases performed in Germany, death resulted to the mother in twelve. The best results have been obtained by Schauta, fifteen cases without a death; Leopold, seventeen

cases with three deaths; and Zweifel, twenty-nine cases and one death." Senn states "that laparo-hysterotomy will always hold a permanent place in obstetric practice as a legitimate procedure; that at no distant day it will limit laparo-hystero-oöphorectomy, or Porro's operation, to cases in which the uterus in itself constitutes a source of immediate or remote danger." This eminent surgeon is of the opinion "that a second and successive operations are fraught with less danger to life than the first." And he further states "that, fortunately, the opinion is gaining ground that the removal of the living child by craniotomy is a relic of the barbarous age, and is being regarded from a legal as well as a moral standpoint as a crime.

"The defenseless babe in its mother's womb has legal rights which, let us hope, will be respected more in the future than has been the case in the past. That the willful and premeditated destruction of the life of the child on its way into the world has ceased to be a justifiable procedure, and should no longer receive the sanction of the teachers of obstetrics and the profession. These strong and positive statements of Prof. Senn also reflect the opinions of the other master minds in scientific surgery. I will briefly report a case; the condition of the patient and the surroundings of the case necessarily class it among the unfavorable class of cases: On December 17, 1894, I was called to attend a Mrs. T., Irish, aged thirty-five years, married four years, first pregnancy, in labor at full term. Her living rooms were but two, in a damp basement, poorly heated, with still poorer ventilation of the rooms. The patient was greatly exhausted by the prolonged pain of labor, and was in a high state of mental excitement. Upon examination, I found the head of the child at the brim of the pelvis. Measurements revealed a conjugate diameter of two inches and a quarter. I informed the patient and relatives that it was quite impossible for the child to be born alive in the natural manner. I urged Cæsarean section as the rational procedure in dealing with the conditions present in the case, and advised that the patient be sent to a hospital. The patient and relatives insisted upon the performance of craniotomy; this I refused to do. Drs. Thomas A. Lilly and Theo. Rahlfs were called in consultation. I submitted the following proposition: Taking into consideration the existing conditions, with the head of the child at the brim of a flattened, contracted pelvis, with an anterior posterior diameter of two inches and a quarter, that the performance of Cæsarean section offered the best chance for the life of the mother, and the only chance for the preservation of the life of the child. Both

gentlemen agreed to the proposition, but the relatives still insisted upon the performance of craniotomy. My argument, which finally convinced the patient and relatives of the correctness of my position, was this : That I was there interested in assisting in the preservation of the life of mother and child, to which both were equally entitled, from a moral and a legal standpoint ; that the life of the child did not belong to the mother any more than the mother's life belonged to the child ; that the child, under the laws of God and man, had not forfeited the right to its own life, and that the mother could not stand against it in legitimate self-defense ; that the unborn child was in the condition of a purely passive agent under the action of Nature, not acting against its mother's life any more than it was acting against its own life ; that the child was acted as the mother was herself acted on—by abnormal natural causes and conditions, for which the child was certainly not morally responsible, although both were subject to them ; that, though the unborn child was a distinct personal being, it did not and could not exercise any free power, its movements being directed by the laws of intra-uterine existence. Consequently, in view of the fact that craniotomy was regarded as a crime in the scientific world, it necessarily would be a willful, premeditated murder from the moral standpoint.

After an additional delay of two hours, the husband gave his consent to abdominal section. The patient, in the twenty-fourth hour of her labor, was subjected to the usual operation, which resulted in the delivery of a living child. The condition of the mother progressed favorably. Twenty hours after operation, in violation of my explicit directions, a meddling neighbor yielded to the patient's request to assume a sitting posture. The attendant results were immediately fatal. An examination of the field of operation revealed the edges of the uterine wound in perfect apposition. Death had evidently resulted from syncope. The babe is now six months old, well developed and in perfect health. This unfortunate termination to the mother, obviously the result of neglecting precautions by an intermeddler, in no wise invalidated the propriety of the operation or expediency in similar contingencies. It demonstrates, too, that when the morality of the proceeding is properly represented to the parties most interested, their consent can readily be secured. It is, in my opinion, now incumbent upon the profession to raise modern Cæsarean section from the plane of an optional measure to rank as the universally accredited procedure, from both the scientific and moral standpoint.

MALARIAL FEVER IN INFANCY AND CHILDHOOD;
ITS ÆTIOLGY, SYMPTOMATOLOGY, AND
TREATMENT.*

BY CHARLES I. PROBEN, M. D., NEW YORK.

Malaria in infancy and childhood is a subject upon which the necessary attention has only been bestowed of late. Our older textbooks devote but short essays to this important subject, and these give the reader the impression that we have but a vague conception of this somewhat obscure disease. During the last decade, however, progress has notably been made in the right direction, especially in reference to the ætiological factor and its practical relation to this disease. My only excuse in presenting this interesting subject to you to-night is not to offer anything novel, but rather to incorporate my experience with a short *résumé* of the established facts as they exist to-day. Our knowledge of this disease in infancy which is frequently overlooked, the means for diagnosing and discriminating, its importance from a diagnostic point of view, its various manifestations, with its great diversity of symptoms, its relation to other diseases, and its amenability to treatment, will be considered. On the one side we have physicians who never give malaria in children any consideration, while on the other hand there are a number who pronounce almost everything malarial. The number of diseases which have been mistaken for malaria are legion, and to the latter it offers a cloak to shield their ignorance, as the patient usually seems perfectly satisfied with the diagnosis of a "touch of malaria."

Ætiology.—Many theories have from time to time been advanced as to the causation of the malarial poison. It was well known that swamps and certain meteorological conditions favored its development. Malarial districts may be constantly shifting; regions that have been looked upon as safe may suddenly become malarial—as the Valley of Connecticut. It is impossible to ascertain from the nature of the soil and climate whether it is malarial or not. The only way of deciding is by noticing the effects of residence on the human subject, especially the Caucasian race. Race has but little effect on the susceptibility. The negro is not exempt, but he is acclimatized;

* Read at the Forty-second Meeting of the Alumni Society of City Hospital.

otherwise he would contract it equally as well. Heat and moisture, soft, wet, marshy ground, or swampy regions which often have a "swampy" odor, abounding with many flies and insects, and where quick putrefaction of albuminoid material occurs, are prolific causes of the development of malaria. The southern and southwestern States of the Union furnish us with the most violent cases, while the States in the temperate zones produce a large number, but not so intense in character; even those lying far north are not entirely exempt. The center of Italy and the Pontine Marshes have been familiar malarial habitats for centuries. The natural habitus is in the soil, an upheaval of which is favorable to development of the fever. In New York city, where fresh soil was upturned, diggings and foundations made for various surface roads, the emanations arising from the decomposition caused by the heat of the sun rendered the adjacent regions highly malarial. The effluvium is especially injurious to the laborers and those who suffer from chronic malaria. Whether this is capable of producing genuine malaria in a healthy person, or only producing an eruption of a latent form, there is still no unanimity of opinion. It does produce symptoms resembling paludal poison and yields to the therapeutic test usually very readily. Some contend that owing to the absence of the parasite in the blood we can not call it malaria. Time will not permit me to enter into the discussion of this most interesting subject. The effects of drainage and population upon the banishment of malarial districts are too well known to need description.

In the tropics malaria is most prevalent during the autumn months; in the temperate zones the spring and fall furnish us with the maximum number of cases; a large number of them are seen by us during September and October. Practically we may say it is in abeyance in winter. Certain meteorological conditions favor the development of the miasm.

A temperature of 60° F. is favorable for the growth of the parasite in the presence of moisture and decomposing vegetable matter. Practically there is no danger in a malarial district if the temperature is below 60° F. A freezing point destroys the miasm, and is inimical to its distribution. The warmer the climate and the quieter the air, the more favorable becomes the spot for its location. Winds seem to distribute and dilute the poison, and consequently less noxious material comes to be inhaled. The air is supposed to be the carrier of the miasm. It is known that it may sweep along, causing epidemics to non-malarial regions. In order to keep off the infection it

is also known that soldiers will build large fires when they are in malarial regions. High walls have erroneously been built for the same purpose. There are well-authenticated cases where the poison has been carried by the wind for a distance of five miles and for a height of one thousand feet. Cases are recorded where the crew of a ship became attacked with well-marked malaria six days after inhaling the air, which blew from the shore toward the ship. Previous infection was excluded. There is still a great deal of division of opinion regarding how the noxious element is introduced into the animal economy; it is safe to say by means of the respiratory tract. And again, of late, advocates of the water-borne theory of the disease have come forward with the statement that the malarial poison is only introduced by means of the alimentary canal. They say that the parasite is never found in the atmosphere, or the fogs or mist emanating from malarial swamps, but that it has been found in drinking water from the surface and soil. The theories they offer appear rational, it having been shown that infected water produced malaria in animals. Milk from admixture with this water may prove a source, also celery and water cresses which have grown in swampy places. Boudin reported one hundred and three men sick with severe malaria out of a crew of one hundred and twenty on a steamer plying between Bona and Marseilles. The one hundred and three had partaken of water shipped at Bona, while the seven of the crew who did not drink it remained free from any symptoms of malaria. No investigations, so far as I am aware, have been made to determine how the parasite enters the blood, and we are still in doubt how it enters and leaves the body. When paroxysms take place infection has already occurred for some time, and these attacks are the sequence of that infection. The susceptibility to malarial poisoning varies with the age; children are more so than women, and the latter more so than men; even the fœtus is not exempt. Infancy is less susceptible than childhood; this is evident from the comparatively few cases we see in infancy. As infection is most liable between the hours of sunset and sunrise, this probably explains the comparative immunity infants enjoy, as they are not liable to be exposed to the miasm at the above-mentioned time, and again from the absence of paroxysms these cases are apt to be overlooked. Holt observed one hundred and eighty-four cases of malaria in children; of these, six patients were under one year of age, and of this number only one was under six months of age. Smith records thirty-six cases under *three* years of age, one case being in a baby one week old. Swift observed one

hundred and four cases, and of these, *seven* were under one year of age. From a number of cases which I have cursorily examined, I have been able to determine that about of all the general cases seen in the dispensary in *infancy*, one half to one per cent. are afflicted with malarial fever—a percentage which seems very low. The period of infancy seems to be comparatively exempt; but in childhood far more cases occur than are supposed, and for certain reasons they are easily overlooked. All authors are agreed that in children the period between two and seven years furnishes the greatest number of cases, and that in the beginning of an epidemic children are the first to suffer. After the eighth year the chances are about the same as in adults. Barker has shown, and it is an established fact, that the *puerperium* offers a favorable condition for the recurrence of chills and fever during the first and second week in those who have previously suffered from paludism. These cases were frequently mistaken for septicæmia, and the only means of discriminating was by resorting to the therapeutic test. That malaria can be communicated to the fœtus has been proved by the characteristic pathological appearances induced by the malarial poison in the spleen and by the discovery of malarial pigment granules in the blood and skin of infants dying before or immediately after birth (Bohn, Runge). The woman may abort from the toxic effect of malaria, circulating in the blood, upon the pregnant womb, and it is difficult to say whether death of the fœtus is due to intoxication or infection. How or when the transmission takes place we do not know. Cases are recorded where infants were born with distinct paroxysms, which have corresponded to similar paroxysms described by the mother. Intra-uterine chills have been described, with distinct fluttering of the contained fœtus coming on periodically. Dr. Felkin (*Edinburgh Medical Journal*) reports an interesting case where intra-uterine paroxysms occurred diurnally; at the fourth night during a chill the infant was born with an enlarged spleen, and seven paroxysms, with the cold, hot, and the dry stages, occurred. Bohn's classical article on fœtal malaria is the most complete known, and the reader is referred to it for further statements. Another way of infecting infants, which seems rational, is through the agency of the lacteal fluid from a mother or nurse affected with malarial fever. Can the disease be conveyed to the infant? is a question which has received but little attention. Examinations of the breast milk have been frequently made to determine the presence or absence of the parasite. Our evidence regarding this condition is not at all conclusive. The ma-

majority of observers have been unable to find any plasmodia in the milk, and regard infection from this source as not possible. I think but one observer has found the plasmodium present in this secretion, and holds the opposite view. Because the general secretions do not contain the parasite, man-to-man infection is not considered possible, although such cases are on record. In some pathological conditions, as in the hæmaturia of intermittent fever, plasmodia and the crescent-shaped bodies have been found and may form a source of infection.

Owing to our temperate climate and a latitude not as favorable for the development of the miasm as the tropics, severe forms, as the pernicious, come very rarely under our observation. The mild forms of malarial poison and chronic paludism are more frequently seen. They are, as a rule, if paroxysms be slight or absent, more difficult of recognition, though more amenable to therapeutics. The severe forms which we seldom see are those which have contracted the disease outside of New York city and have imported it into this locality. On Manhattan Island at least genuine malaria of a moderate type is but seldom contracted and is rare. The State of New Jersey, parts of Long Island, and the territory north of our island, though belonging to the city, offer a better soil for the development of the miasm than our narrow strip of land devoid of marshes. Marshes have been banished owing to drainage and population, and salubrity is increased as far as malaria is concerned. There are some parts of the city, notably along the river fronts, where formerly marshy ground existed—but the ground has been filled in with earth and frequently vegetable matter, where a high tide tends to keep the soil moist—which are considered malarial. Sporadic cases are observed in the middle third of Manhattan Island on the west side and the upper third on the east side, but their number is steadily decreasing from year to year. The physicians in the rural uptown districts meet with a larger number and severer cases, where the infection can not be traced to the water supply, but to telluric and atmospheric conditions.

The Specific Germ.—It was well known to the ancients that bad air was the cause of fever and other disturbances, and hence this disease was called malaria. The Pontine Marshes have been considered a pestiferous place for centuries, and attempts at cultivation have resulted unsuccessfully. Owing to the prevalence of severe malaria in Italy, our earliest investigators were from that locality. As early as 1717 Lancisi stated his belief that malaria was due to a parasite which entered the blood. It is only since the era of bacteriology that an

impetus was given to scientists to investigate the air, soil, and water of the Pontine Marshes. In 1879 Klebs and Crudeli announced that these marshes contained some low forms of animal and vegetable life and bacilli, which they thought to be the cause of malaria. Later Crudeli proved that the bacilli developed in the blood, and would, when reinoculated and injected into the veins of rabbits, produce fever. However, their statements were never verified. It was in 1880 that Laveran, from his investigation in Algiers, announced the discovery of the parasite causing malarial fever. The Italian observers Marchiafava, Celli, and Golgi corroborated his statements in 1883—three years later. They published their researches, which eventually led them to adopt the plasmodium as the cause of malarial fever. In our country James, Councilman, Osler, Shattuck, Dock, and numerous others have published monographs on this subject, so that at the present time we accept the hæmatozoa as peculiar and diagnostic of malarial fever. Marchiafava and Celli have also found in addition non-pathogenic micrococci in the blood capable of cultivation. They hint that the bacillus or the micrococcus may be found as a forerunner of the plasmodium. Crudeli in 1887 states positively that the plasmodium is the result of the Klebs and Crudeli bacillus. Micro-organisms resembling those occurring in malaria have been found by Rosenstein in the blood of typhoid fever patients, by Dujardin-Beaumetz in healthy blood changes occurring outside the body, by Hoffman in pernicious anæmia, by Pfeiffer in scarlet fever, mumps, and vaccination. James states that in seventy-six blood examinations he found micro-organisms which might be mistaken by the tyro for those present in malaria, but that any one acquainted with the latter would at once recognize the difference. The blood changes occurring in certain fevers and other diseases is still an unworked field, and would require careful investigation in order to clear up many dubious points. The pathognomonic value of the hæmatozoa is well established by excellent observers, although we can not state positively that they are the sole cause of the fever, owing to its impossibility of cultivation outside of the body. Osler says: "The testimony is now unanimous that these bodies are always present in the malarial fevers. There is no evidence to show that they are ever present in any other disease." Others, again, would have us believe that they are only present in the severe cases. They have been demonstrated in mild cases of neuralgias and intestinal diseases. The consensus of opinion of experienced observers is that they are always present in the blood of paludism, and hence are of decided pathog-

nomonic value. The parasite described by Laveran belongs to the protozoa and to a group of organisms known as the hæmatozoa. Parasites similar to these have been described to exist in the blood of healthy animals inhabiting marshes, especially in reptiles, frogs, lizards, and tortoises. In the human economy their habitat is in the blood, where they attack and rapidly disintegrate the red blood-corpuscles, producing a condition of anæmia. From their destructive action on the hæmoglobin, masses of pigment result, which float about freely in the plasma or can be seen in the leucocytes, and when in excessive quantities constitute melanæmia. The great destruction of the hæmoglobin interferes with the oxygen-carrying function of the blood, and is a cause of the malnutrition. Whether any leucomaines result from their actions we are still in ignorance. According to Stieda, the pigment is found in the blood, in the liver, and principally in the spleen. In the latter it is found in greatest quantities in the veins, then the arteries, capillaries, and parenchyma, excepting the Malpighian bodies. He describes two varieties—the amorphous and the crystalline—both holding iron in chemical combination. Besides the effect of the parasite on the blood, we have the irritative effect on the liver and spleen, producing hyperplasia, and the general effects manifested by chills, fever, etc. Marchiafava, Ceili, Gerhardt, and others injected blood from malarial patients into the veins of healthy persons, with the result of infecting them and producing distinct paroxysms. Examinations of the blood showed the presence of the plasmodia. The hæmatozoa is described in its simplest form as resembling the amœba, possessing active movements, and distinctly discernible under the microscope, being a mass of protoplasm which is colorless and thought to contain a nucleus and nucleolus. Various forms and sizes have been described from the minute spore to the largest variety, bulkier than the red corpuscle. It has the power to penetrate the corpuscle, absorb its endoglobular substance at the expense of the hæmoglobin, and enlarge in size from a diminutive mass until the corpuscle is overshadowed and disappears. Various stages of this process show us various sizes and shapes. Pigment is more frequently found incorporated in its substance than not. Celli has given the name of plasmodium to these amœboid forms, though now we call the various shapes so as a group. When the red corpuscle is entirely destroyed, a colorless discoidal pigmented body takes its place. It appears that there is a distinct cycle of development from the small spore to these larger bodies. When the plasmodium has reached its full development radiating lines may appear from a

central mass of pigment, giving rise to the segmenting or rosette-shaped bodies. At the time of sporulation the nucleus divides either directly or by caryocinesis. The radiating lines form the division of the cell in numerous oval, irregular-shaped, transparent bodies, which free themselves, become isolated, and form the so-called spores, leaving the pigment to float about freely in the plasma. Golgi declares that when the radiating lines appear, with a concentration of the pigment, segmentation will take place and the spores become disrupted, which is an indication that a paroxysm will occur.

The quite characteristic crescent-shaped body containing a central mass of pigment is simply a metamorphosis of the simpler form of the plasmodium. It is usually found in the chronic cases and in the remittent fevers (Celli). *Flagellate bodies* are round masses, smaller than the red corpuscle, with one or more flagellæ possessing active motion. Whether these various bodies are all developmental forms from the same organism or not has not yet been fully established. The relation of them to the different varieties of fevers is better known, though we still need elucidation on this subject. The period of incubation described by Laveran is said to be from six to ten days. It is known that the minimum has been twenty-four hours, and the maximum extends over many weeks or even months before outbreaks have taken place. The value and significance of these discoveries can scarcely be overestimated, especially for those who deal with malaria frequently. Further investigation of the various tropical fevers is necessary; not alone is it of diagnostic value, but also to exclude paludism in some obscure continuous fever, and in order that the bugbear malaria should not be held accountable for almost everything. Frequent blood examination of fever patients would then be advisable. For instance, the conflicting statements in our text-books as to the existence of typho-malarial fever might find solution. It is interesting to note that A. H. Smith, of this city, had cases of typho-malarial fever under observation at the Presbyterian Hospital. After the typhoid fever had run its course, examinations of the blood showed the presence of the characteristic parasites of malaria, thus corroborating his diagnosis, and showing that a relation exists with this disease and typhoid fever. Routine blood examinations are not very tedious, require little time, but a great deal of skill, until one becomes experienced in this line of work. Good illumination and a good microscope with a one-twelfth oil immersion lens, a No. 2 and No. 4 ocular, are necessary. For the recognition of the crescents a lower power will do. A drop or two of blood, taken from the finger tips or

the lobule of the ear, pricked with a pointed trocar or Hagedorn needle, should be evenly spread on a clean slide, covered with a thin cover-glass, and immediately examined. The parts from which the blood is taken should be thoroughly cleansed. Fresh specimens are far more satisfactory than dried ones. Heat causes the disfiguration of the blood corpuscles, and leaves the specimen so that the amœboid motion can not be discerned. Where it is impossible to examine fresh blood, dried specimens may be used and examined at leisure. These should be stained in a concentrated solution of methylene blue or gentian violet for a few minutes. Some advise boiling the specimens in alcohol before staining. This may be followed by an alcoholic solution of eosin in order to doubly stain them. The coloring with aniline dyes brings out the contour of the parasite better, besides staining the blood plaques, the hæmatoblasts, and the nuclei of the leucocytes. The two former should not be mistaken for the plasmodium. Granting that but few plasmodia may be present, as we are apt to find it in the mild cases in New York, it may be necessary to examine several specimens. The presence of pigment and the numerical relation of the red to the white blood cells can be noted. This examination should not be first instituted after cinchona alkaloids have been given, the reason of which is obvious. In obscure cases of fever, in chronic conditions, where paludal poisoning is suspected, and especially in infants, where the absence of paroxysms makes our diagnosis questionable, an examination of the blood is imperatively demanded before instituting any form of treatment upon a rational basis. If the plea of the author for more frequent blood examinations will incite those who entirely neglect them to action, the object of this paper will have been accomplished.

Symptomatology.—Prior to the practical application of Laveran's discovery numerous monographs have been written on the symptomatology of paludal poisoning by Holt, Fruitnight, Vineberg, and Swift, who observed their cases in New York; but none of them contain references to blood examinations except Vineberg's cases, who examined fifteen, and in not a single instance was he able to find the parasite in the blood. Not being a methodical man, no record of the cases examined has been kept by me, only a few exceptional ones; but I must admit that I have met with the same fate in some unmistakable cases of malaria in my earlier experience. However, with increased experience and improved technique, it is more easy for me *now* to find the plasmodium in the blood. The numerical relation malaria, in infancy and childhood, bears to other diseases is seen from some statis-

tics, as follows: Swift, out of 1,141 general cases treated at the Demilt Dispensary, all under ten years of age, collated 104 cases of malaria, being about eleven per cent. Swift admits this as a high average, and everybody else, as the district from which the material was drawn is a very malarial one. Holt reports 184 cases and Vineberg 80, but no relation these bear to other general cases is mentioned. Statistics can only be of value at the present time where microscopical examinations are recorded. It is surprising to find record of cases where observers have depended upon *one* symptom or sign and called them malaria, as, for instance, an enlarged spleen, a coated tongue, a certain local pain, etc. Distinct paroxysms as we see them in adults are frequently observed in childhood. The assumption of your familiarity with these will lead me to give them no consideration, but rather to devote the time to those manifestations, replacing them in infants who are not capable of describing their symptoms, where we are alone guided by our observation or by the symptoms related to us by the parents. The two clinical forms observed in New York in infants are the intermittent and the remittent, the former greatly predominating and the latter often mistaken for typhoid fever. The invasion is rather gradual; it simulates more the continued type of fever. The quotidian type is most frequently observed. Holt gives eighty per cent. and Bohn fifty per cent. The distinct onset, as in adults with chills, is never observed in infants under two years of age. Physicians practicing in malarial districts frequently see chills in infants, which is contrary to our experience. Foetal cases usually have distinct chills. The tertian type predominates, according to J. Lewis Smith, after the eighteenth month. There may be a prodromal stage of a few days' duration; it is seen that the little one is not well; it will lie around and does not play as usual, and suffers from loss of appetite. This inactive condition may be dormant for some time without any apparent cause, when a sudden reaction may occur and a convulsion takes the place of the chill, which it does also in other diseases in infants. The convulsion may mark the onset and be repeated during the day several times, or it may be followed by fever. If repeated for several days, with a distinct periodicity, a clew to our diagnosis may be thrown out. A high febrile movement may solely be the cause of these eclamptic seizures, which may be easily mistaken for those occurring from rickets, gastro-intestinal irritations, and other causes. There is nothing characteristic about these convulsions, usually of short duration, to direct our attention to malarial poisoning. The symptoms and phe-

nomena which take the place of a chill would more likely be a well-marked malaise, coming on in the afternoon or possibly the evening, accompanied by yawning, drowsiness, and apathy, or a general irritable condition. The infant looks tired; there is a changed expression of the face; it may be drawn, and its color is changed. The nose may be pinched, with dark circles beneath the eyes. The skin is pale, often livid. The nails and finger tips appear blue, or the lips are cyanotic, while the surface temperature is reduced, especially more so in the extremities, which appear cooler. Twitching of the muscles or other cerebral symptoms may be noticed. If the attack occurs after feeding, nausea and vomiting may occur. The pulse is rapid, and if the rectal temperature be taken a moderate or high elevation is recorded, according to the severity of the case. *Cutis anserina* may be evident. The symptoms may be so slight that they go unnoticed; a few or a number of them may persist for some time, when it gradually and imperceptibly merges into a febrile condition which takes its place. Reaction slowly occurs and the surface temperature becomes elevated. This febrile stage is usually noticed by the mother and is the first constant and reliable condition to guide us. A slight increase of temperature is the rule, but an increase of six or eight degrees is the exception. It is usually in the intermittent form that the comparatively rapid onset, though not perceptible, and the rapid reduction would suggest malaria. It is not unusual to have cases brought to us with no other symptom than fever in the afternoon or evening, fugacious in character, without our being able to ascertain any particular cause for it. There is nothing which would direct us to assume that it emanated from any lesion in any particular organ of the body. The fugaciousness and inability to locate the ætiological factor is suggestive of paludal poisoning.

The phenomena observed during the febrile period are great irritability, restlessness, peevishness, even capriciousness, the cheeks are flushed, the skin feels hot and dry, and the lips are dry. The child is fretful, cries much, and thirst is complained of. There may be symptoms specially emanating from the gastro-intestinal canal or respiratory tract. The attack of fever gradually subsides and the patient assumes his normal aspect again, and appears in good health though somewhat debilitated. I would not have you understand that we may find a distinct set of symptoms in every case; far from it; rather their vagueness, without any apparent anatomical basis, is more conspicuous. Mere allusion to the absence of the sweating stage is here made as replaced by a so-called dry stage. Those continuous forms of fever,

but relatively seldom met with in infancy, which continue day after day and which so much resemble typhoid fever, are just the kind of cases where a microscopical examination of the blood is most necessarily indicated. Instead of analyzing these cases, it will be more advisable to analyze those manifestations of the two great systems which are more often affected in the infant than any other—namely, the respiratory and the gastro-intestinal.

The gastro-intestinal tract is especially susceptible to the poison of malarial fever. Very few cases are met with without some of their symptoms emanating from one of its organs. Part or the whole of the tract may be affected, giving rise to various symptoms. The tongue may be coated with a yellow-brownish tinted fur, which by some is considered pathognomonic. When this typical characteristic appearance is met with in infants we should always consider malaria as a factor in its causation. The tongue may be slightly enlarged, flabby, with reddened edges, enlarged papillæ, heavily furred in the center and increasing gradually toward the base. I can corroborate the experience of some that this is a most valuable guide for the success of the method of treatment, for so soon as the patient improves, the yellowish coating begins to diminish and fade away, and the patient continues to feel ill until the tongue is totally cleared (Fruit-night). Vomiting, occurring independent of food irritation, is a common accompaniment. It may be constant, but is usually intermittent, subsiding rapidly without treatment. Repetition of this symptom may occur, but offers nothing distinctive.

Diarrhœa with small slimy stools or large serous stools may occur. The latter, coming on without any premonition and subsiding rapidly, leaving the patient weak, is often observed. Ordinary cases of recurrent diarrhœa, for which no apparent cause can be ascertained, and which do not yield to the ordinary treatment, should be subjected to the therapeutic test in order to ascertain if they are malarial in origin. Severe forms accompanied with a flux of blood have been observed.

Constipation is more often associated with malaria than diarrhœa; this is the rule; it is frequently interrupted by an attack of diarrhœa. Epigastric pain is by some authors considered quite diagnostic. Holt, out of one hundred and twenty-eight patients whom he carefully examined for this symptom, found it present in one hundred and one cases; but these were older children, who had sense enough to complain of this condition. Far more satisfactory than to place too much reliance on this form of pain is it not to overlook an examination of the abdomen.

In every case of suspected malaria we should not neglect a physical examination for enlargements of the spleen and liver, which may form one of our most valuable guides. Our own experience will tell us whether the liver is enlarged or not, keeping in mind the comparatively large size of this viscus in the infant. A slight enlargement and tenderness is rather to be expected after a few attacks. Enlargement of the spleen, which is considered by some as a pathognomonic sign, should always be looked for. The evidence derived from skillful percussion and the various features which modify the outlining of this viscus in infants make it of but little value. It is true we must not expect an enlargement after one attack, but after several, and the only true estimate of its enlargement can be ascertained when we feel the enlarged viscus below the free border of the ribs. The position of the spleen beneath the ribs and diaphragm, the contiguous organs, at one time distended and at another collapsed, make percussion in infancy but an unreliable procedure.

A minority of physicians consider themselves experienced and capable of thus outlining it, but the majority consider palpation as furnishing the only true means of pronouncing definitely the existence of a splenic tumor. Owing to the costo-colic ligament, which is tense and to a degree unyielding in childhood, the tumor first pushes its way upward, and only when the enlargement is able to overcome this force does it encroach upon the middle axillary line and gradually descends below the border of the ribs. A small tumor, as we usually see it, is situated between the anterior and the posterior axillary line, and the farther it comes down the more apt it is to encroach upon the median line. It is but seldom that we feel tumors protruding more than two or three fingers' breadth below the ribs. Splenic enlargement is quite common in infancy. A minority of cases are due to malaria; more frequently they can be attributed to rickets, syphilis, and other causes. Where in doubt as to its ætiology, no method of exclusion will take the place of a careful examination of the blood.

Affections of the respiratory apparatus of the milder forms are quite common in malaria. The nose may be affected, manifested by sneezing and an attack of coryza. The larynx, though seldom, may be attacked by spasmodic or inflammatory conditions. Far more frequently the tonsils may be the seat of a congested condition, with small white spots resembling follicular tonsillitis, but with few constitutional symptoms, and yielding rapidly to the exhibition of quinine. At the present time I have a little patient who suffers from chronic

malarial poisoning and is subject to repeated attacks of this sort which yield within twenty-four hours to a rapid impression with quinine. Briaud has described attacks resembling croup, with high fever at irregular intervals, redness of the pharynx, hoarseness, stridor, and dyspnoea. The paroxysms may last for hours, with a periodicity of the attacks and intervals of perfect health. *Bronchitis* of a mild type is perhaps the most frequent of all lung complications. The cough is not severe, most frequent during the winter months, and may exist without the presence of any physical signs. These cases frequently become subacute, and resist treatment until it strikes the observer that it may be due to malaria, when it yields readily to the proper treatment. Pulmonary congestions in infancy, which bear a causative relation to malaria, have been observed in the severe forms, which are fortunately rare with us. Pneumonia of an intermittent type, with rapid dissolution of the pathological process and exacerbation following, have been described. Holt has seen such cases in New York, and graphically depicts the symptoms. The invasion is acute, accompanied by a high temperature and very rapid respiration, exceeding in several instances 100 per minute, the pulse rapid, with circulatory disturbances. The rapid respirations are attributed to the condition of the lung, the fever, and the pressure of an enlarged liver and spleen. The physical signs of consolidation are present, with rapid recovery and little prostration. Sometimes they appear well the following day. This condition has been observed in adults with the pernicious form, but it must be exceedingly rare in our locality. In fact, its existence is disputed by the majority of pædiatrists. In the infant, where the nervous system is especially susceptible to disturbances of various kinds from minor causes, we find certain manifestations may also be due to malaria. The irritability, twitching of the muscles of the face and extremities, may be the forerunners of a convulsive seizure. Intermittent forms of torticollis, with or without brain complications, have been described. These cases may last a few hours and run a favorable course, or other symptoms appear and the cases resemble cerebro-spinal meningitis. Sensory and motor disturbances may be noticed. In older children we may see spasmodic cramps, neuralgias, nervous palpitation, etc. Vasomotor disturbances are of more frequent occurrence, and may be as follows: local flushings during the febrile period, sympathetic erythema. A bright red rash may cover the entire body, very much resembling scarlet fever, but its rapid disappearance, with a normal temperature, throws doubt on our diagnosis. When the condition is complicated with a tonsillitis it is

still more deceptive. Urticaria, which is usually due to gastro-intestinal disturbance, is sometimes due to malaria and yields to the exhibition of quinine. Hebra has seen five hundred cases in twenty-five years and not one of them was malarial. Zeissl has seen two hundred cases, and one was intermittent urticaria. Vienna being a non-malarial place, Hebra's statement offers no criterion, but it tends to show the rarity of malaria as a cause. Those practicing in malarial districts observe this neurosis far more frequently than we. *Herpes facialis*, especially occurring about the lips, at the angle of the mouth, or the alæ of the nostrils, may occur just as frequently as in any other febrile condition.

The urinary organs do not escape the toxic effect of malaria, and in severe cases, which are the exception with us, intermittent hæmaturia is a complication. It is interesting to note that the plasmodium and crescent-shaped bodies have been found in the urine (Forcheimer). Various pathological products, as urates, pigment, bile, albumin, and glucose, have been detected by careful observers. Bardel found in one hundred and thirty-four cases of the quotidian type in adults, twenty-nine whose urine contained glucose. There are numberless complications due to paludism on the part of the eye, ear, circulatory organs, etc.

Where the patient suffers constant exposure to the miasm, and owing to the liability of recurrence and relapses, more marked in children than adults, the health materially suffers and the condition becomes chronic. Where the toxic effects manifest are slight, the ailment is looked upon as trivial, the real cause persists, and anæmia and cachexia may develop. The patient is irritable and cross, does not thrive properly, becomes emaciated and anæmic, the skin may be pallid or assume a dark brown, muddy, or icteroid hue. The infant is dull, listless, and suffers from repeated gastro-intestinal disturbances. The spring and autumn may depress these patients and they feel worse. They are constantly ill, their health is undermined, and they become more susceptible to other diseases, notably tuberculosis. When they reach this condition the diagnostic acumen of the physician is truly put to a test. If he is keen enough to recognize the true cause, a brilliant result will follow his successful treatment. Besides, any subsequent malady arising which may be influenced by the established dyscrasia will quickly give us a foresight as to the employment of the proper therapeutics. The performance of a careful microscopical blood examination is so simple and of such practical value that alone where this fails, owing either to inexperience or otherwise, the exhibition of

the cinchona alkaloids as a therapeutic test will form the only other alternative we possess.

Treatment.—In considering the treatment of malaria we have to take into account the hygienic and medicinal indications. Where the patient inhabits a malarial district removal to a healthier and better-drained locality is desired. Night exposure and a sleeping apartment near the ground is to be avoided. If they persist in living in such a district, they have very little chance of getting entirely well; they may become acclimated, but the system becomes weakened, and any intercurrent disease is apt to be more severe. The drinking water, if not from a good source, likewise milk, should be sterilized. Good fresh air away from the city to the seaside or mountains may bring about wonderful results. Localities where fresh soil has been up-turned should be avoided. Salt-water ablutions and bathing are to be recommended for infants. The diet should be regulated, overfeeding and excesses not allowed.

Of all the remedies that have been lauded for two centuries, none has a greater claim as a specific for malaria than that sovereign remedy—quinine. Cinchona bark furnishes us with a number of other alkaloids, but none is more certain and reliable than the one we are considering. Given in large doses, and often heroic ones, when requisite, scarcely ever a failure can be attributed to its judicious use. As we can not observe those constitutional effects in infants which we do in adults, we must rely for its action and be guided by its effects on the pyrexia, tongue condition, and other symptoms. For an infant one year old two or even three grains of the sulphate three times a day may be administered for a week or two without any but salutary effects. As many as fifteen grains a day have been given without any ill effects. There is but one drawback to its administration—that is, its bitter, nauseous taste and its proving rebellious and irritating to the stomach. After the main symptoms and pyrexia have been checked, smaller doses should be continued for some time. In order to overcome its bitter taste it is preferably given in powder form suspended in the aromatic sirup of yerba santa. The various preparations of licorice, the elixir glycyrrhizæ ammoniatæ, and the elixir adjuvans disguise the taste fairly well, but not as effectively as the above-mentioned sirup. It is advisable to add to these mixtures small quantities of alkaline carbonates in order to neutralize any slight acidity which may happen to be present in the sirup or solvent action on the quinine in the mouth. The solvent action in the stomach may be facilitated by administering immediately after its exhibition a few drops of dilute

hydrochloric acid or a little lemon juice. Older children may be given fresh pills or capsules if they are able to swallow them. The tasteless chocolate quinine lozenges which are lauded by some are entirely inefficient as an antiperiodic; the neutral tannate which they contain in small quantities equals relatively one third the same quantity of the sulphate; they are very insoluble, and are only of use where small tonic doses are desired. Where there is no tolerance to quinine on the part of the stomach, rectal medication should be resorted to. The powdered alkaloid can be given suspended in milk, cream, or other bland fluids. The suppository containing five grains of the sulphate is more satisfactory to use; it is apt to prove irritating to the rectal mucous membrane and may produce tenesmus; especially is it so with the bisulphate and the hydrochlorate. In order to prevent this for some time, small quantities of opium or belladonna may be added, and it should be introduced high up into the rectum. The hypodermic use of quinine is but seldom called for; the salts used for this purpose are the muriate, bimuriate, carbamide, and the muriate and urea. If these means fail, Bacilla uses intravenous injections with excellent results. The oleate, containing twenty-five per cent., may be used as an adjunct, but is not suitable for producing constitutional effects. It has never come into general use owing to its rapid deterioration, which makes it an unreliable preparation.

We must remember that relapses are especially prone to take place in children, and a continuance of the treatment in smaller doses is advisable. Small doses of calomel given at times are very valuable adjuncts to the treatment. Next to quinine, clinical observation has established the fact that arsenic is the most useful drug in chronic malarial dyscrasia. After a paroxysm has been broken up arsenic is of decided value. It should not be given in acute intermittent, but where for some reason quinine can not be given it may be exhibited in bold doses. How much it acts as a prophylactic I am not prepared to say.

The toxic influence of quinine over the plasmodium has been investigated by Binz and others. If a drop of quinine solution be added to a drop of blood, the characteristic motion of the plasmodia soon ceases and they assume a cadaveric appearance. Shortly after the exhibition of quinine, especially by intravenous injection, the parasites develop at first intense activity (Golgi), then some assume a shriveled appearance, the large ones may become distended, and the pigment exhibits oscillatory movements. Solutions of sufficient strength inhibit

their growth and cause them quickly to disappear, especially the amœboid forms. It has been found that although the paroxysms are controlled, still minute numbers of plasmodia may be found in the blood. It is not at all frequent to find the crescentic forms persisting for a long time after the patient feels relieved. These no doubt are the most resistant of all varieties. It seems that quinine in sufficient quantity in the blood has an influence over the protoplasm of the parasites, probably toxic, which renders these organisms inert so as to fall a prey to their main enemy, the phagocytes, giving the blood, which has become impaired, a chance to recruit new elements.

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EDITORIAL.

MANUAL DEXTERITY, THE MECHANICAL INSTINCT AND GYNÆCOLOGISTS.

Division of labor, which was so forcibly advanced by Adam Smith in his *Wealth of Nations*, as one of the most important elements in the accomplishment of the greatest result from a given amount of work and which, looking backward, we find was resorted to by man in the earliest periods of which we have any definite knowledge, has probably never reached such perfection as at the present day. This division or specialization, which extends throughout the various branches of science and industry, has gradually unfolded such a wonderful maze of knowledge, that any human mind attempting to grasp it must fall into confusion and end in sciolism.

The word sciolism is in itself an argument for the truth of this assertion for, being derived from the Latin verb *scio*—"to know"—(in the broadest sense of the word), it now means, to know nothing well, to be a smatterer.

Considering that branch of science with which we are most familiar, it requires but a cursory glance to show what great results are being obtained by efforts continued in certain definite directions.

While the bacteriologist is devoting his life and energies to the study of the nature and habits of micro-organisms, the physician and surgeon are striving to make practical application of the facts obtained for the prevention and the relief of disease.

While the chemist and physiologist are slowly unraveling the

mysteries of digestion and nutrition, the physician is going hand in hand with them applying the knowledge they have acquired.

When we pause to think of the results which have been reached by specially directed work in medicine and surgery, we need no better reason for calling attention to the further application of this principle.

There are many gynæcological operations, where the ingenuity, the peculiarity or the desire for notoriety of the originators has led to several different methods of procedure for the accomplishment of the same end, each may have some apparent advantage which may appeal to one, while to another, that which appeared to be an advantage may seem the opposite. Thus, naturally, on account of certain personal qualities of the operator, in looking over the field of operations to be performed for the relief of a certain condition, the gynæcologist will choose that operation which most appeals to his own judgment, weighing his own ability to perform the mechanical work involved and bearing in mind the result to be obtained. Having settled in his own mind which line of procedure he will adopt, after a calm and unprejudiced view of the field, he should adhere as absolutely as possible to his plan of work. By constant practice in this direction he can so train his hands to the use of certain instruments and to the performance of certain acts that he may do almost automatically, with precision and rapidity, that which to the possessor of an untrained hand would seem impossible.

The objection may be raised that adherence to such a course would bar progress, but this is not true. It is the best possible means toward advance.

It is the hand which plays a bar of music over and over which will play the next one with the greatest certainty and precision; not that which passes on, having dropped a note or made a slur.

What must be the inevitable result of an attempt to practice each new operation which is presented? The answer is too evident. He who attempts this will reach the same condition in surgery which is reached by him who attempts to grasp all knowledge: sciolism, confusion.

Having once acquired facility in one line of procedure this should not be given up or changed, because some meteor among the stars of surgery has acquired wonderful facility with other technique, but only when deliberation and reason make it evident that a better method has been offered.

In no art is the necessity of trained and deft fingers of such im-

portance as in surgery. When a turner fails in dexterity a piece of steel is lost, when a molder is not deft a piece of clay, but when an abdominal surgeon bungles a human life with all its possibilities pays the penalty.

We have recently had an opportunity of observing the demonstration of our theory in the work of a foreign expert in hysterectomy. It was not many months since, when at a meeting at the Academy of Medicine of New York the general consensus of expressed opinion was in favor of the abolition of the use of clamps in this operation; yet in two cases operated upon by our Belgian visitor and observed by ourselves, which were hysterectomies for large fibroids, neither ligature nor suture was used. The clamps were applied in such a way that hæmorrhage was practically impossible. There was no shock and no pain in either case nor did the temperature rise above 100° F. There was no apparent haste, yet the operations were completed in a remarkably short time. Each incision was made and each clamp applied with the certainty and precision of a practiced hand.

Yet, a long series of such cases is no argument that one who has gained facility in hysterectomy with ligatures should give up that method; it but shows what may be accomplished, with practice and dexterity, by another method, even when that one has been tried and practically condemned by others.

While the above is true in abdominal work, the application of the principle is even more important in plastic operations. When, for instance, a surgeon is equally willing to do any one of a number of operations for the repair of a posterior vaginal wall, one may rest assured that he obtains no uniformly good results by any one method; for, if he did, he would certainly desire to adhere to that by which he had obtained those good results and the principles of which he had convinced himself were those properly applicable to the morbid condition in question. But we should not forget that another element, altogether apart from manual dexterity, enters into success in plastic work. Here, it is not enough that a surgeon perfect himself in the technique of one operation or even one class of plastic operations.

As we have already pointed out, if one perfect himself in a certain line of abdominal operations, the more of these he does the more expert he becomes, with a correspondingly good result in his list of successes. For the object of abdominal surgery, in the main, is to remove—to destroy—so that, with the effacement of the offending part,

the patient may either be saved from an approaching condition worse than that in which she now is or, in other cases, an organ or portion of an organ diseased beyond recovery or an attached growth is removed which, by its presence, bars the patient's return to health. There are evident exceptions of course but, speaking generally, the object of a laparotomist is attained if he remove a diseased part or organ and the patient recovers. This result, in his case, is success. The question as to the justifiability of a radical operation in any given case seldom affects the successful issue of the case, after the operation has been performed. For, the laparotomist has cut the Gordian knot. Take, for example, an uterus in which septic endometritis is supposed to lurk but without serious extension to the appendages. In eight cases out of ten such an uterus can be restored to a normal condition by local treatment alone; yet it is frequently removed with its merely functionally diseased appendages, and the patient not only recovers from the operation but from all her symptoms as well. It is true she has lost her uterus and appendages which, in spite of "advanced" medical opinion, we still believe to be the most important part of a woman's anatomy; but, being convinced that the procedure was necessary to her restoration to health, she gratefully accepts what she receives and with it the supposed inevitable loss. Or, take another instance: A uterus is removed for simple proclivitas—in our opinion, the most unjustifiable of all radical operations. It is true, that such an uncomplicated case can always be cured by the proper plastic operations properly performed; but if she be convinced, by the surgeon who has her confidence, that only by a radical operation can she be relieved from symptoms which have made her life a burden, why should she not consider that operation a success by which her symptoms are relieved?

We have taken these two instances because, being free from side issues, they express clearly the main point to be remembered, namely, that the laparotomist, again speaking generally, does not succeed by restoring a diseased organ to health but by the destruction of that organ. As the lesser must be included in the greater, so in the removal of an organ are all things likewise removed which pertain to it, whether of good or of evil.

But in plastic work, we neither destroy nor remove; we must take the material which is before us and so mold and fashion it that it is restored, so far as may be, to the shape, size and condition in which Nature first designed it and at which point alone the exercise of its normal functions is untrammelled. We do not succeed when we

have obtained primary union or even when we have turned in the eversion of a lacerated cervix or made to disappear a prolapse of the anterior or posterior vaginal wall. However effective our work may appear when finished, we have not only not succeeded but we have done damage unless we have, in our operation, embodied both a thorough knowledge of the physiological function of the part concerned and an appreciation as well of the mechanical laws by which it is governed. Add to these the mechanical instinct and the technique which is acquired by practice, and we succeed in plastic work. Not manual dexterity and knowledge of the technique alone, therefore, makes the successful plastic surgeon, as they do the successful laparotomist. It is because of the far greater difficulties of good plastic surgery over abdominal and the much greater special training required, that eminent and successful plastic surgeons are so rare and the temptation to radical operations, where an efficient knowledge of the capability of plastic work is wanting, is so great. It takes a very big man, who will acknowledge to himself that, while eminent as a laparotomist, he is wanting in the special training which would enable him properly to perform plastic work in the vagina. When the plastic work of a laparotomist fails, he generally ascribes the failure to the operation and not to the ignorant clumsiness of the operator and, impatient that he has wasted time over such, to him, insignificant gynæcology, he turns with assurance to the radical operation.

We have taken occasion before to point out the fact that the training of a plastic surgeon is not advantageous to the laparotomist, and still more true is the reverse of this statement. It might even be the better for womankind, if abdominal work went altogether into the hands of the general surgeon, which is the present tendency, and to the gynæcological specialist was left only plastic work below the brim of the pelvis and the medical treatment of pelvic inflammations. Thus would the acquirement of the necessary knowledge and of technique in both branches of operative gynæcology, especially in the now much neglected, little appreciated and poorly understood plastic work, receive advantageous encouragement.

CORRESPONDENCE.

PRESTON RETREAT, PHILADELPHIA, July 25, 1895.

To the Editor of the American Gynecological and Obstetrical Journal :

SIR : Ignoring the personalities and homilies of Dr. Joseph Price in his letter in your issue of July, 1895, I desire again briefly to point out some errors in his statements and to add a few more facts, after which I am done with the controversy, feeling satisfied that my own statistics at the Retreat and those of similar institutions will not in the future suffer by contrast with what was formerly thought to be Dr. Price's unbroken record. This result accomplished, I leave the matter confidently to the unbiased judgment of the profession.

In regard to the death from appendicitis and purulent peritonitis Dr. Price says : "Women commonly leave the Retreat with their husbands on the thirteenth or fourteenth day, when convalescence has been thorough, favorable and aseptic. Such was the condition of the woman referred to above." Referring to this case, I find only the following in the record of the Retreat : "A premature labor. Delivered September 11, 1889, twenty minutes after admission. Discharged September 28, 1889. Died at Pennsylvania Hospital, October 20, 1889. Suppurating appendicitis and general purulent peritonitis recognized at autopsy." Had the records of the Retreat furnished me with evidence that this patient was discharged enjoying "thorough, favorable, and aseptic" convalescence, the case would never have been referred to; but, unfortunately, the records of the Retreat do not include the pulse and temperature charts of the patients of Dr. Price, all the charts having disappeared a few days before I assumed charge of the Institution.

Again Dr. Price says : "As to having sent patients to the Pennsylvania Hospital, the statement is altogether and absolutely false, and no minute of such an act appears upon the records of the Preston Retreat." Volume III of the record of the Preston Retreat states that "Annie McM. was transferred August 19, 1887, to the Pennsylvania Hospital ill with intermittent or typhoid fever." The record of the Pennsylvania Hospital states that "Annie McM. was brought from the Preston Retreat and was admitted August 19, 1887, suffering with phlegmasia alba dolens; her temperature when admitted was 104° F." Further comment is unnecessary!

Dr. Price also says : "With Dr. Goodell's consent, I always in-

cluded his statistics with my own." This statement, unfortunately, can now neither be corroborated nor denied. I am glad, however, that even at so late a day Dr. Goodell's last 275 cases without a death have been credited where they belong.

In reply to Dr. Price's assertion that his published statistics "were the statistics of the institution and not of an individual, nor were they ever so claimed," I need only quote again the statement that first called forth my criticism—namely, "In over fourteen hundred cases at the Preston Retreat, not to speak of the thousands of cases in my individual practice, *I* (Italics mine) have not resorted to the curette nor lost a case."

As to the fatal Cæsarean case, admitting that the woman's ineligibility for admission to the Retreat was first learned after her fifth delivery in the Retreat and only prior to a contemplated Cæsarean operation, the statement that not a case had been lost in the thousands of his individual practice, Dr. Price now admits is false. The death of this patient he attributes to double pneumonia; those who made the autopsy declare the death due to purulent peritonitis.

Dr. Price further says in his letter: "He [Dr. Norris] parades his conscientiousness as to the integrity of the statistics of the Retreat; he seeks the statements of some itinerant gossip, that most despicable species of the human family, to impeach them." My reply is that my facts, with the exception of those pertaining to the death of the Cæsarean case, are taken from the records of the Pennsylvania Hospital and from the records of the Retreat, which latter records, I presume, are in his own handwriting.

Finally Dr. Price says: "We appreciate the fact that his [Dr. Norris'] mortality in his own short incumbency must be very mortifying to him." What this mortality is he does not state, but he insinuates that it exceeds two per cent., and he boldly asks for my statistics, to divert attention from the question at issue, namely, the deaths in the Retreat during *his* incumbency and the mortality of *his* individual practice. Within a short time an honest and critical study of all my cases will be given to the profession. It is enough at this time to state that during my term of office (nineteen months)—throughout which period no case, however grave, has been refused admission, and no case, however alarming, has been sent elsewhere before or soon after delivery—there have been at the Retreat four hundred and seven deliveries with one death. This death occurred in a woman who, six months pregnant, comatose, and dying with chronic Bright's disease, was brought to the hospital in an ambulance. This patient was re-

ferred to the retreat by Dr. Charles E. Cadwalader. Her respirations were fifty and her pulse one hundred and forty per minute. Every cavity of her body was filled with fluid, and serum was exuding from spontaneous ruptures of the skin surfaces of her abdomen, her vulva, and her extremities. Six days after the immediate induction of labor she died from uræmia, without convulsions, her kidneys having secreted only a few drachms of bloody urine. During the blizzard of last winter an unknown intoxicated woman, unconscious, and dying with double pneumonia, was taken from the snow on the sidewalk and was given shelter overnight. Her death occurring within twelve hours, the case was reported to the coroner, whose records will substantiate the causes and the manner of her death. Three eclamptics, five other patients seriously threatened with eclampsia, one woman delivered by symphysiotomy—women whose labors were complicated by pelvic deformity, by malpresentations, by uterine fibroids, by placenta prævia, by post-partum hæmorrhage, by advanced phthisis, and by other serious diseases—have been delivered successfully, and have left the institution grateful for its services. I know of no case of imperfect convalescence and of but one death after discharge from the institution. The latter death occurred three months after leaving the Retreat and four months after delivery, the cause of death being pulmonary phthisis, from which disease the patient was practically dying when I received her.

Dr. Price admits and has explained that two deaths occurred in the Retreat during his incumbency, and he also admits the occurrence of a death in his "individual practice." In view of the fact that prior to the publication of my letter he claimed never to have lost a case, I am satisfied to leave the verdict of his veracity to the judgment of the profession.

RICHARD C. NORRIS.

THE PRESTON RETREAT.

929 S. MAIN STREET, LOS ANGELES, *July 27, 1895.*

To the Editor of the American Gynæcological and Obstetrical Journal :

SIR: In reference to Dr. Norris' statistics of deaths in the Preston Retreat, it seems unjust to include among deaths in the Retreat (1) the case of appendicitis dying on about the thirty-seventh day at the Pennsylvania Hospital, and (2) the case in which Cæsarean section was made with a fatal result, not in the Retreat, but in another

institution. Now, if we exclude these, we have remaining, in one thousand and ninety cases, but two deaths. In Dr. Price's original article, which I quote from memory, one of these cases was described as that of a woman who was picked up unconscious from uræmia in the street and was brought to the Retreat, where she shortly afterward died. This leaves one death, as to the cause of which Dr. Norris gives no information, to be accounted for.

Those who know that the Preston Retreat receives a large number of women who are sent there simply because their past histories have shown that a difficult confinement may be expected can not but feel gratified by Dr. Price's record, even as presented by Dr. Norris.

Let us hope that Dr. Norris' statistics, when in his turn he shall have retired from his responsible position, may prove as gratifying.

FRANCIS L. HAYNES.

TRANSACTIONS OF THE TRI-STATE MEDICAL SOCIETY
OF IOWA, ILLINOIS, AND MISSOURI.

Meeting of April 4, 1895 (*continued*).

Abstract of a paper entitled:

THE ECONOMICS AND ETHICS OF REPRODUCTION
AND PROSTITUTION.

BY WOODS HUTCHINSON, M. D., DES MOINES, IOWA.

"Reproduction is heaven's first law." The first commandment in Genesis is, "Be fruitful and multiply," and is of more importance than all the other ten put together. This is the author's motto. This law has always been pretty generally observed without much assistance from Church or State; indeed, in spite of a good deal of opposition from both at times. The attitude of so-called "morality" and religion toward this magnificent impulse is characteristic. The burden of their childish song is "Thou shalt not." They have much to say in reprobation, but very little in approval of a process whose dignity and beauty they are utterly incapable of appreciating, and whose magnificent perfection they haven't the brains to comprehend.

Because it is a hard thing to control, it is to be condemned en-

tirely, and scarcely a religion or a philosophy can be found which has not held up celibacy as the ideal state. Here, as elsewhere, morality is far too exclusively engaged in shrieking "Don't!"

Fortunately, however, its counsels, commands, and threats have but little effect upon the mighty sweep of this holy impulse. And failing to suppress it finally, they unite in stigmatizing it as a low, "animal" appetite, and that alone was enough to damn it for centuries. But the latter term carries no condemnation with it nowadays. On the contrary, the fact of an instinct being shared by the lower animals is good presumptive proof that it is of great benefit and value.

We have reason to thank God that the sexual instinct—one of the noblest, holiest, and most elevating that stirs our bosoms—is an "animal" one, and consequently far older and stronger than we are. It is backed by the life of all the ages and throbs with all the pulses of Nature.

Its worst, and I had almost said its only, perversions are *human* and the results of "reason" and convention.

But this is not the only ban under which this faculty of ours is laid. Not only is its exercise to be barely tolerated as a concession to weak, sinful human nature, but its very existence is to be ignored as completely as possible, and an imitation instinct known as "modesty" has been invented and developed for that special purpose. Its principal function is to deny the existence of the very sentiment which called it into being. That it is a virtue of the first water all sorts and conditions of men unite in testifying, but it has one peculiarity so singular as to provoke mention. It begins just where innocence ceases. The first thing that our first parents did in Eden *after they had fallen* was to discover that they were naked, and make unto themselves aprons of fig leaves. Between these two influences our grand sexual functions have gradually come to be regarded as positively disgraceful in themselves, and the parts concerned in them as something to be absolutely ashamed of. Even in scientific nomenclature they are styled the "pudenda," "things one ought to be ashamed of." As for the sexual appetite, the most important and overmastering impulse which moves the race, instead of its excesses alone being reprobated, it has become a sentiment the movings of which no moral man would dare to avow openly and which a modest woman would die rather than confess to her nearest friend. The impulse has been degraded so low that its mere possession is sinful. Is this a natural, healthy, rational attitude? No, nor a moral one either. This feeling alone produces the very excesses it was invented to check.

And what is the real rank and dignity of this despised and berated function? Drummond says that "sympathy, affection, fidelity, sacrifice—indeed, all those noble traits included under the term altruism—spring from the reproduction instinct." Instead of being subversive of all morality it is the very foundation stone of it. With its feeblest and blindest flutterings altruism, the regard for others, is born.—*Ascent of Man*.

From the simplest to the highest forms, reproduction is self-sacrifice. And from the results of the process, from the care and nurture of "these little ones" have grown every atom of our morality.

In the light of the fifth Gospel we are just beginning to see the eternal truth of the saying of the first Gospel, "Suffer little children to come unto me for of such is the Kingdom of Heaven." True manhood, true womanhood, reach their highest development only with reproduction, while as for love, sympathy, philanthropy, and sense of duty, "The stone which the builders rejected is indeed become the head of the corner." Even the much-lamented power of the sexual instinct is simply proof of the overwhelming importance and value of the function to the race, and the man or woman who can suppress it entirely is *less* than human rather than more, and will surely become *inhuman* sooner or later. The first duty of man is to perpetuate the species. The race has the first mortgage on him, and has had ever since he was a seaweed.

If marriage is a failure it is because the breed is, and "the Caucasian is played out." Our whole social, ecclesiastic, and political organization centers round this institution as nucleus. Civilization rises from the family, through the clan, the tribe, the State to the nation. Indeed, the family and the home are *the* great and only true civilizing, humanizing, and spiritualizing influences, and any nation which begins to weary of their control is marked for destruction.

Neglect of or escape from their obligations is ruinous to all concerned. We all lament the sad lack of home training so obvious in the children of to-day, but we forget that the lack of training suffered by the American parents of to-day on account of the scarcity of children is equally hurtful. This is the age of untrained parents, and they need training as much as children. The training of children works both ways, and no man's or woman's education is more than half finished without it. Infancy, as Emerson has said, is indeed "a perpetual Messiahship."

And yet we constantly hear sexual instinct berated as if fornication, adultery, prostitution, and rape were its chief and commonest

results. The instinct (like all other natural ones) is at least a hundred times as powerful for good as for evil.

Considering the attitude of etiquette and morals—too often interchangeable terms—toward the sexual function in the light of the importance of the latter, there is only one word to describe it, it is simply *idiotic*.

In the first place, they attempt and assume to absolutely taboo the whole subject. Not only the sexual organs themselves, but even the whole of the body which is covered by the clothing under which they are hidden is forbidden to be mentioned or even referred to in "polite society." According to its canons the entire body from the neck to the tips of the toes is a sexual organ. The origin of this lascivious refinement is obvious, for the mention of the regions which happen to be merely geographically adjacent to the forbidden parts and which no pure-minded or well-bred person would dream of associating with them, such as the chest, the abdomen, the legs, is as severely censured as that of the parts themselves. To such an insane pitch is this "nasty-niceness," as Aunt Tabitha calls it, carried that we have probably all heard reference to the "limb" of a piano, or the "limbs" of a pair of dividers.

While there is some doubt as to the true nature of much which passes for personal modesty, there is none whatever in regard to this society variety. Instead of being, as it mincingly affects to be, the very pink of refinement, it is the essence of vulgarity. "*Honi soit qui mal y pense*," as the chivalrous King Edward said when he picked up the garter dropped by one of the ladies at his court.

How many of our boys have the true meaning, uses, and dignity of the sexual organs delicately but plainly explained to them before the age of puberty by their fathers, or how many of our girls by their mothers? I fear scarcely ten per cent. The first knowledge most of them have of this wonderful subject is from the filthy lips of some vulgar servant or prurient older schoolmate. Is it any wonder that, driven by natural curiosity and the powerful impulses of awakening sexual consciousness, and ashamed to inquire of those who ought to be their natural instructors, they resort, in an ignorance as pitiable as it is deplorable, to experiments upon themselves, upon one another—nay, even upon the lower animals? Truly, ignorance is the very mother of vice.

But the most fatal result of this extraordinary attitude of both morals and etiquette is the extent to which the sacred obligations of exercising the reproductive function is destroyed. Our young men

and young women of the "better classes" calmly debate the question as "to marry or not to marry." To be capable of such hesitation is a sign of degeneracy. After the alliance has been duly arranged for and formed, then the question is to be discussed whether it shall be permitted to result in anything. And from these two sources spring the head waters of the reeking stream of *Prostitution*. Its current is swelled mainly by the men whose incomes or positions are not regarded as "suitable" to marry on, and those who having married "can't afford" to have children, or "don't want to be bothered" with them. The man or woman who, for any such reason, absolutely refuses to assist in continuing the species has committed the unpardonable sin and is henceforth fit for nothing but conversion into fertilizer. And Nature will attend to the conversion with unerring certainty and comparative promptness if not interfered with. Marriage under these circumstances is little better than legalized concubinage. Indeed, the arrival at this decision is but the forester's mark upon the trunk which is beginning to rot at its core, and all her axemen will understand and obey its significance. It is her seal to the death warrant of the race and also of the individual.

Even that modified form of interference with her orders which consists in markedly limiting the number of children is almost sure to result in serious injury to both individuals concerned and to the community as well. In the first place, it is a fruitful cause of prostitution. Many a man is practically driven to the brothel by his own wife, and many another deliberately resorts to it from a cowardly and criminally selfish desire to shirk the responsibilities of manhood. Such a man ought to be branded like any other eunuch. In the second place, it is easily the chief cause of abortionism, one of the most prevalent and deadly sins of the present day, whose evil results, both physical and moral, are rapidly coming to rival those of prostitution itself—a statement which needs no emphasizing in this audience. Thirdly, any and every means adopted, from onanism to tansy, result ultimately in serious injury to the nervous system of both parties concerned. Fourthly, it rears the children who are permitted to appear in an oligarchy or aristocracy instead of a democracy, and thus deprives them of one of the most valuable parts of their education in hardiness, self-reliance, and self-control. Children who are less than three in a family are nearly always "spoiled."

In short, limiting the size of families has ever been and still is the chief and most potent factor in the decay of nations and the fall of civilization.

It is literally a sin against the Holy Ghost, for it is the thwarting and denying of our deepest and holiest instinct by filthy huckster-like mammon worship, a veritable making of our "Father's house a house of merchandise." Every nation in which it has prevailed has lost its power. The grand old Roman breed was literally extinct from its ravages centuries before the Empire fell. The stagnation of China and India is largely due to it in the form of infanticide.

And to-day we can study the process in the yet living subject in our sister republic, renowned alike for the small size of her families, the brilliancy and healthfulness of her prostitutes, the commercialization of her women both in marriage and harlotry, the strict economy and thriftiness of her lower classes even in respect to manhood and feminine honor, the filthy pessimism of her literature, and the excess of her death-rate over her birth-rate.

The latest and most extraordinary development from the theory of the sinfulness of sex is that which comes from every "suffragist" platform—that childbearing, instead of a factor in woman's development, is absolutely a hindrance to her higher education, a clog upon her freedom, and a mortal enemy of "culchaw." In fact, as a "club-woman" tersely expressed it to a friend of mine a few months ago, "Only fools bear children." There is only one thing which need be said in regard to this delusion, and that is that it has its uses. It prevents the continuation of the breed. Neither the "emancipated" woman at one end of the scale nor the prostitute at the other propagate their kind, and society has reason to be thankful in both cases.

What, then, is the excuse for this attitude of hostility toward the sexual impulses? Their excesses only. Only one of these is now to be considered, prostitution. It is distinctly a product not of Nature, but of civilization. It is not "*animal*," but essentially *human*, like most of our vices.

No trace of it is to be found in any animal community, and a very little among savages. It is one of the "flowers of civilization" and at bottom commercial, "*bourgeois*." Instead of a sin of instinct, it is a sin against instinct, directly on the part of the female, indirectly on the part of the male.

To a woman it is a filthy trade, "the horizontal trade," as Heine terms it, with even more truth than sarcasm, while the man has about as much right to urge his "appetite" as an excuse as would one who turns from healthful food to glut himself upon garbage. That the exercise of the sexual function is necessary to the health of the male

at any age is a pure delusion, while before full maturity it is highly injurious.

Prostitution is a crime against Nature. The attitude of the anthropologist, the naturalist, toward it may be summed up in one sentence: "its needs must be that offenses come, but *woe* unto that man through whom they come." And yet it must perform some useful function, for it everywhere exists.

Ecclesiastical, civil, and military authority have ail in turn utterly proscribed it and repressed it with ferocious vigor, and at times all three have been united in one determined effort to root it out, as in the Papal dominions for nearly two centuries, but the utmost they could accomplish was to change its form and increase its extent. They simply learned, what we in Iowa have just been learning again in the costly school of experience, that "prohibition does not prohibit."

Nor does the attempt at "regulation" fare much better. From a careful study of all the authorities and observation of the actual condition of affairs in several of the European cities the author arrives at the following conclusions :

1. The decline of the brothel and the enormous multiplication of the grisette.

2. A marked increase in the number of men indulging in the vice, on account of diminution of fear of infection and, what is even more potent, removal of all risk of interference by the police.

In short, it puts the stamp of safety and respectability upon the whole business for both sexes.

3. It diminishes the marriage-rate of the community by rendering concubinage in some form safe, popular, and economical.

4. It increases the ratio of illegitimate births by obvious causes. Paris, the Mecca of this system, has the highest illegitimacy-rate in the world—twenty-six in the one hundred births, or one fourth of all. Finally, it does not even diminish venereal disease, first, because the most fruitful breeding-ground of syphilis and gonorrhœa is *not* among prostitutes but among "clandestines," so-called "sempstresses," waiter-girls, chambermaids, etc., and "amateurs" of all descriptions; and, secondly, because the most rigid and skillful inspection can find no trace of disease in a woman, who may develop well-marked primary or secondary symptoms before nightfall and infect a dozen men before morning. In short, from the theological, the legal, and the philanthropic standpoint the case appears not only ruinous but well-nigh hopeless.

When, however, we turn and approach it from a medico-economic point of view its aspect alters completely.

It may be roughly characterized as a safety valve for the institution of marriage. This, of course, does not imply "approval" or indorsement of the process, for though the escape of a certain amount of steam is beneficial to the engine, it is "a very cold day" for the steam that escapes. It is simply a huge sewer, a garbage dump, a crematory, into which are hurled the least desirable elements of both sexes, degenerate men and degraded women, for conversion into more useful and less odorous materials.

Reliable information and data of real scientific value are very scarce upon this subject.

This is unavoidably inherent in the nature of the case for obvious reasons. After a brief but bootless search through the authorities the author sent out a number of letters containing a list of questions to the leading physicians of New York, Philadelphia, Boston, New Orleans, St. Louis, Chicago, San Antonio, and San Francisco, also to a number of practitioners in smaller towns, thus including every section of the Union. Although the number of replies is small—about thirty, scarcely one sixth of the total number of letters sent out—yet there is such a substantial harmony through them all that they form at least a most suggestive "straw" to indicate the direction of the current of professional opinion on this question. And this straw assumes the dignity of an indicator when we further add that these thirty were those who felt themselves competent to speak definitely out of over one hundred who replied to my letters, and that the list included such names as Gihon, Parvin, Edson, Price, Hare, Bolton Bangs, Bernays, Dudley, and Chassaignac.

The first point to be considered in an economic study of this question is the motive which induces women to enter this profession. By this term is meant, of course, the dominant motive; it is freely recognized that no *one* cause alone impels any woman to this pursuit. The following is the average obtained from all answers upon this point:

Love of display, luxury, and idleness.....	42.1	per cent.
Bad family surroundings	23.8	"
Seduction in which they were innocent victims	11.3	"
Lack of employment.....	9.4	"
Heredity.....	7.8	"
Primary sexual appetite.....	5.6	"

100.0

This makes a showing strikingly similar to that of the criminal class among men who are recruited mainly from the idle and shiftless among all classes, and from the defective classes, these two causes, including heredity, accounting for nearly seventy-five per cent. in the above table. It may be regarded as emphatically a *trade*, chosen from love of idleness, of luxury, and absence of sense of honor or decency. Bitter as is the scorn and contumely heaped upon the prostitute, she deserves it all, for she has in the vast majority of cases deliberately sold her birthright not for pottage, but for champagne and tinsel.

In reply to the question, What is the chief and what is the second cause of prostitution? the results are, from twenty answers :

	I.	II.
Love of display, etc.....	10	10
Bad family surroundings.....	4	10
Heredity.....	3	
Seduction.....	2	
Lack of employment.....	1	

Here the results are singularly uniform and strongly emphasized—the conclusions from the former table.

The next question relates to the class of society from which the mass of our prostitutes come, and the author knows of no point upon which popular impressions are more generally erroneous. The prevalent view appears to be that its priestesses are all the victims of man's lust and base deceit and drawn alike from the mansion and the hovel. This conception lacks the support of facts.

Out of twenty-one answers to this question, eighteen reply "lower," "lowest," "poor and defective," "factory girls," or some equivalent term. One replies "lower middle" and two "middle."

Now as to the grade of education of these recruits, seventeen reply "very low," "uneducated," "analphabets," etc., and four reply "fair" or "average." This corresponds with the results of Du Chatelet, who found that the prostitutes of Paris practically all came from the laboring or artisan class, and especially from those whose lack of intelligence and persistence makes them mere day laborers. By an elaborate examination of their certificates, he also found that out of 4,470 prostitutes 2,332 could not sign their names (fifty-five per cent.), and 1,781 could sign "but badly," leaving only 110, or barely two and five tenths per cent., who could write at all, or legibly.

There are of course exceptions to the rule, but the prostitute pos-

sessed of a spark of refinement, education, or intelligence is extremely rare, and usually very soon either marries or becomes owner of an establishment, and in either case retires from active practice.

The author refers to a popular error as to the personality of a prostitute, and that is that she is usually beautiful. The advocates of the seduction theory even go so far as to declare that she must be, otherwise no one would be tempted to seduce her. From a somewhat extensive experience with women of this class in the general hospitals of London, Paris, and Vienna, and a systematic study of the physiognomies of thousands of them upon the streets of the above cities, and of New York, Philadelphia, and Chicago, the author has no hesitation in declaring that a handsome or even attractive-looking prostitute is rare, and that the average of beauty is lower among them than in any other class of women. The only important exception to this statement is the unchaste class among actresses and artists' models, who are no real exception, as they are almost forced into vice from the extreme exposure and pressure of their occupation. Whatever other evils the "fatal power of beauty" may be responsible for, it has nothing to do with prostitution. Men do not go upon the street or to the brothel to gratify their artistic sense for beauty any more than to seek intellectual companionship, but to get "the pound of flesh" that their lust demands, and the most "popular" prostitute is the one who is best capable of filling this demand to the utmost.

As everywhere else, so even here, beauty is a sign of purity and wholesomeness, a safe guide in nine cases out of ten.

The next question is, What class furnishes the largest proportion of its own members to the ranks of vice? The unanimity upon this point is practically complete. Of twenty-two answers, sixteen say "factory girls," "shop girls," "saleswomen," "waitresses," etc., four say "domestic servants," and two "those too idle to have any occupation." In short, it is the women who are engaged in public occupations who are most in danger.

Again, we have the commercialization of women as a powerful factor in the production of this vice. It is based upon a trade instinct, pure and simple. Space does not permit me to enter upon the subject here, but I wish to record my solemn and sorrowful conviction that the woman who works, outside of the home or the school, pays a fearful penalty, either physical, mental, or moral, and often all three. She commits a biologic crime against herself and against the community, and woman labor ought to be forbidden for the same reason

that child labor is. Any nation that works its women is damned, and belongs at heart to the Huron-Iroquois confederacy.

Now as to the much-mooted question of the life expectation of the prostitute after she is fairly embarked.

The average of twenty-two observers gives the life duration at nine and five tenths years—nearly double the popular one, but short enough. The same method gives the death-rate as seventy-five per cent. greater than that of normal women of the same station; but the causes of this increase are markedly different from those usually not only popularly but also professionally imputed. *Every* observer gives alcohol the first place as a factor, venereal disease comes second, morphine, cocaine, chloral, etc., third, suicide fourth, irregular hours and life fifth. Alcohol would thus appear to be doing as useful work among women as it is among men. It is one of our greatest "missionary" agencies, and, unlike all others, its "conversions" are usually permanent.

Last of all comes the question of the effect of this institution upon the propagation of the species. Do women of this stamp leave descendants? Very seldom.

Barely three and one tenth per cent. of prostitutes bear children at all during the ten years of their career. The birth-rate of healthy married women during such a term at this age would be nearly two hundred per cent. Like all other evils, prostitution is self-limiting. The reason for this sterility is obvious. Disease of the sexual organs, syphilis, "preventives" of every description, abortions, and infanticide easily account for it. Of the children born alive, very few survive, from ignorance, disease, or neglect.

As to the proportion who marry, the average is 13.2 per cent.; but upon the next point there is substantial agreement—viz., that those who do are practically sterile, the answers as to fertility ranging from "barren," "very sterile," "very low," to "unfavorable," "about 1.6 per cent.," except one man, who actually asserts that it is "the same."

The proportion who permanently reform is variously estimated; the average is low—viz., 6.8 per cent.

This is probably not far from correct, for even the managers of Bethels and reformatories for this class sorrowfully admit that the number who come under their care are but a very small proportion of the entire class, and even of these only a moiety are permanently improved. The secretary of a large society of this sort (Mr. Talbot) estimates that in the eighty years previous to 1845 only fourteen or

fifteen thousand women had been within the walls of all these institutions in London, or less than two hundred per year.

To sum up, then, from the female side of this institution, our conclusion would be that it is concerned principally with the most worthless varieties of women, the degenerates or criminals, and the idle, the mercenary, and shameless of the working classes—women, in short, whom the community can well afford to spare.

That these women, when fairly in its grasp, are practically, absolutely prevented from propagating their kind during their career, and rapidly destroyed if they remain in it. That very few marry, and those who do so are barren in a high degree; in short, it is an eliminative agency of high value and wonderful efficiency for first sterilizing and then rapidly destroying the worst specimens of the sex—women whose “reform” and childbearing would be a curse to the community.

What now is the effect of this vice upon the men who indulge in it, and through them upon the community? Practically the same—namely, the sterilization of the unfit. The more one studies the venereal diseases the more one becomes impressed with the opinion that their deadly virus is aimed, not at the life of their victim, but at his or her power of reproduction. In fact, both gonorrhœa and syphilis are very seldom fatal in women and only exceptionally so in men. But they are most effective sterilizers for a period varying from six weeks to six or seven years, and not unfrequently totally destroy the reproductive power. This is strikingly true of syphilis. Suppose a man becomes infected at a brothel. Once this disease has appeared, for a period of at least two years, not merely his semen and genitals, but his saliva, his lips, every sore upon his body, every drop of his blood, is actively contagious. He must refrain from sexual intercourse or, if he disregards this rule, he will not only infect his wife with the loathsome disease, but, what is more significant, any conception resulting, in the great majority of cases will terminate in a miscarriage, a stillbirth, or the production of a child which dies of syphilis within six months of its birth. And this history repeats itself until the taint gradually dies out of the blood—a period of at least two years under the promptest and most skillful treatment, but which, under neglect or with a later infection of the wife, may extend to five, six, or seven years. This may seem an overdrawn picture, but Turner declares that eighty-five per cent. of syphilitic children die before the sixth month. By and by the virulence of the poison dies down, a child is born that barely escapes with its life, another by a little wider

margin, and so on till healthy children can be produced. But what of those who escape? Stunted, blear-eyed, pitiable, with sunken noses, opalescent cornea, scarred mouths, and notched teeth, they are degeneration incarnate.

Like all other diseases, it is self-limiting in the individual or the species. It is, however, largely a question of intelligence and self-control on the part of the original victim, for simply by strict abstinence and a rigid adherence to the old saw, "A night with Venus, a moon with Mercury," for two years syphilis can be as certainly and almost as completely cured as scarlatina or typhoid. And this not only as regards the secondary or venereal stage, but also as to the dreaded tertiary, or individual Nemesis plague, with its Pandora's box of locomotor ataxia, cerebral gumma, "g. p. i.," meningitis, retinitis, laryngitis, etc. Thus not only as a sterilizer, but also as an encourager of intelligence, in popular language as a "fool-killer," it has few equals.

But what as to the other milder and far commoner venereal disease, gonorrhœa? This has usually been regarded not only popularly, but also professionally, as a mere trifle, entailing generally some temporary discomfort, but of little more real importance than an ordinary "cold in the head." It is purely local, and usually cured in six or eight weeks, and most men can easily restrain themselves for that length of time; indeed, the disease saves them all trouble on that score during the first half of the period. But what of the harvest?

There is a change in professional feeling which bids fair to amount to a revolution.

From the bacteriological laboratory on the left wing comes the startling declaration that the "cure" of gonorrhœa is merely the establishment of toleration of the presence of the gonococcus on the part of that individual's urethra, and that its discharges still remain virulently contagious to healthy genito-urinary passages. In fact, that the seminal fluid has been found swarming with gonococci a year or more after the "cure" of gonorrhœa. The author has had a painful case brought under his own observation. The laparotomists declare the gonococcus to be concerned in eighty-five per cent. of their salpingitis onslaughts. Here again venereal disease, *plus the laparotomist*, is a most efficient sterilizer.

But what says the great mass in the center, the clinicians? From every division comes reports of serious casualties, of lifelong and even fatal strictures, of cystitis, of young men crippled by gonorrhœal rheumatism, of thousands of little children with eyes sightless from

gonorrhœal ophthalmia, of endometritis, of cellulitis, and, more significant yet, of orchitis, of testicles which retain their form but not their function, and recently of semen which is swarming not with spermatozoa, but with other micro-organisms which have no tails and cluster in groups.

More than one of the leaders goes so far as to state that "it is doubtful whether gonorrhœa is *ever* cured!"

Here again "justice may move with a leaden foot, but she strikes with an iron hand."

To sum up, the whole mechanism of prostitution is an engine of deadliest efficacy in sterilizing and ultimately destroying the worst elements of both sexes. "A companion of fools shall be destroyed" is no vengeful threat, but a simple statement of a stern, necessary natural law. Pain, disease, and death are hard to bear and harder to look upon, but they are among the greatest benefactors of the race.

The only way to check its action is to reduce to its "anatomically necessary" limits the class upon which it is sure to act. Men should be taught the sacred duty and true dignity of reproduction; that any attempt to avoid this duty brings its own punishment. That their sexual powers belong not to themselves, but to the race, and every exercise of them must result ultimately in either a pregnancy or syphilis. That they can not hope to enjoy the privileges and pleasures of manhood and shirk its responsibilities.

Women should be taught to trust their instincts, for in them the maternal impulse is stronger than life itself. That, like every other natural instinct, it is of highest benefit not only to the race, but also to the individual. That any attempt to thwart it, or even failure to give it proper development, will result in either dwarfing or decay.

The freedom of intelligent, refined conversation upon sexual subjects ought to be broadened; it should no longer be considered indecent to speak plainly. Most of the flavor of obscenity which hangs about the discussion of sexual matters is due to this very restriction. No excuse or danger should be left for boys and girls on the grounds of ignorance of this important function. In other words, intelligence, altruism, true refinement, should be promoted by every possible means, and Nature will continue to assist us by emphatically discouraging their opposites.

Above and beyond all, we should foster, glorify, deify if necessary, the one instinct in man's bosom which can master the sexual, the highest, the holiest, the strongest of which he is capable—his love for the one woman who is or is to be all the world to him. Once

touch this spring and he is safe. Well may all of clearest and deepest vision among us, the poets, never weary of singing its praises. The age of chivalry should be brought back in nobler, truer form.

Lust laughs at opposition and exults in danger, but sinks ashamed at the whisper of love. Impress upon every man not his own danger, but that of his wife that is to be and of his children yet unborn.

DISCUSSION.

Dr. HENRY JACOBSON (of St. Louis): I think we are indebted to Dr. Hutchinson for his splendid paper. I believe we should indorse one very important point, and that is in regard to active masturbation in children. We all are ready to prevent infectious diseases, such as smallpox and scarlet fever, and even tell parents about consumption being infectious, but we very rarely hear of parents instructing their children about the bad effects of masturbation. I think the physician should prevent this pernicious habit as well as infectious diseases, and direct parents to explain the bad effects of masturbation. I have inquired of some of my patients who practiced this act, and they said they were never instructed by their parents as to the bad effects. It is really an infection, so to speak; they would say one boy masturbated and they followed suit. I think we should instruct parents about it as well as to tell them to isolate patients with scarlet fever, or smallpox, or consumption, to which we are coming.

Dr. F. P. NORBURY (of Jacksonville, Ill.): Mr. President: This is a subject that I am especially interested in, inasmuch as it embraces the question of degeneracy, a subject which is broad and one which involves the consideration of humanity from a pathological standpoint as well as from the standpoint of evolution. In the study of evolution by men interested in that subject, they will give you facts which will lead you to investigate the subject of degeneracy, which, as we all know, proceeds along the same lines as that of evolution; that is, with the evolution of the human race there is running along parallel with it a dissolution, the object of which is the ultimate restoration or building up of the human race by the laws of heredity. By heredity I do not mean the mere propagation of all traits of character or individualism. The great law of heredity has for its object the preservation of species, the preservation of the human race *per se*, and, in the consideration of degeneracy, this subject, which has been so intelligently and so scientifically presented, is the one which we have to consider as the real basis of degeneracy of the human race. When you take the subject of degeneracy and follow it down through the

various steps, you will find that the sexual element is the very foundation of degeneracy. Consider it from its highest standpoint, the sexual life of an individual—that is, the sexual element when considered in its normal condition—and it represents the very highest element of human evolution. I think that the subject as presented by Dr. Hutchinson is one we should all consider, as it is one that is broad and considers the preservation of the human race as the goal which we are striving to attain.

DR. BAYARD HOLMES (of Chicago): I feel that this paper of Dr. Hutchinson's is so important to us that I want to say just a word about it, not entirely to praise it, although I do wish to praise it, because I believe that the argument which he has advanced will lead us to a quicker conclusion. I look upon this as showing how near the study of medicine is to the subject of sociology, and I wish every medical man would make a study of sociology as a part of his medical and professional work, in order that he may better judge of some of the influences which surround him. I believe that the earth produces enough for all, and for all to live in what might be deemed considerable luxury. We are all of us able, by the use of machinery and our hands in labor, to have enough for all, so that every man could have a wife, and every man could have a family, and each member of that family could be brought up with such surroundings and such education that they would not float into the city into houses of prostitution and into other vices and crimes, as they do now. In the city of Chicago we have something like six thousand prostitutes, and those six thousand prostitutes, living in a certain area between Twelfth Street and Harrison Street and State Street and the river, were canvassed by the United States Government in the investigation of the slums, and it was shown distinctly that ninety per cent. of them were American-born and were born mostly in the States immediately surrounding Chicago, and they came for the most part from homes where there was very little to keep them at home or to educate them there. Now this is a part of our economic civilization, our civilization of to-day, our civilization which is based upon a dollar and not upon a man. We have thousands, probably eighty per cent., of people living under circumstances that make them say by going into prostitution and crime that life is not worth living. Any experiment with human beings which leads them to say that life is not worth living condemns the situation in which the man is placed. I believe that prostitution as it now exists, and crime as it now exists, has but one element in it to be considered,

namely: an indictment of our present civilization, our present economic civilization, our present civilization of the dollar, and which declares, in words too loud to be misunderstood, that our civilization is an absolute failure. I believe that there is a better civilization to come, in which there will be, in the sense used by the essayist, plenty of wine, plenty of milk, and plenty of bread for everybody.

Dr. I. N. LOVE (of St. Louis): Mr. President and Gentlemen: I feel under personal obligation, and I know we all do, to Dr. Woods Hutchinson for this very able presentment of an important subject. I was during the early part of my professional career connected for four or five years, and indirectly ever since, with eleemosynary institutions of this city, and I have been in a position where I could study the question to some extent, and I must admit that I am somewhat at sea. It is a very serious problem. The result of the investigation of Dr. Woods Hutchinson is entirely in harmony with my own observation. My observation confirms the statement that the prostitute is such from idleness, chiefly from improper training in the home. There is the solution of it all—training in the home. It is not the question of the free having of children in the home; it is, as Dr. Bayard Holmes has said, the present civilization. The stimulus is constantly thrown out in the direction of gold, the making of the almighty dollar the god, the thought that the aristocracy of money is the true aristocracy instead of the aristocracy of brains and usefulness. I believe that the solution of this problem is to commence in the home, and physicians should educate the parents of the land. Our duty is in the direction not of having more children, but having better children, having them well trained from the beginning in the direction of good, strong bodies, well-trained and well-developed minds; have fewer children and better ones, and then cultivate in the parents the ability to rule their own spirit. We would then be what we should be, teachers—preachers, it may be—and we can reach closer into the heart of the home than the average preacher, because we can touch them in a tender spot, we can touch them where they live. If we do our duty we shall educate parents in the direction of living, as I think it was Henry Ward Beecher said, not from the mouth downward, but upward, and that I believe is the solution of the problem. After all, it becomes an educational problem. This paper is as full of meat as an egg, through and through, and I know that every one of us enjoyed every part of it. I know that every one of us will read it after it has been published, and I hope that the profession at large will read it. I believe they will. The question of prostitution on the

part of the unmarried and prostitution on the part of the married is covered with the same argument—it is idleness that begets prostitution upon the part of unmarried women ; it is idleness that begets infidelity on the part of married women ; it is the boarding-house life, the hotel life ; it is the unemployed women ; it is the women who leave their children to mingle with moral lepers, such as nurses, in preference to taking care of them themselves. I take it that we want to preach the gospel of the godliness, you may say, of maternity, and I am impressed with that thought every day I live.

Dr. F. B. DORSEY (of Keokuk, Iowa) : While I consider this an educational matter, and while I indorse every word in the paper, and as stated by the gentlemen who have spoken upon the subject, I desire to go a little further. It is well enough to instruct our patients ; instruct the mothers, fathers, and the children to the extent we can ; but we do not have access to the children, and the parents do not mind our admonitions ; and since God created us thus with sexual organs as we have other organs, and in our public schools we teach certain parts of physiology and anatomy, I believe that we ought to go still further and deal with the brain, the organ of special sense ; that we ought to deal with that which is the very foundation of man, and deal with the sexual organs as we deal with the other organs and the other parts and parcels that make us up. I for one have for years advocated that not only a part of our physiology, but our physiology as a whole should be taught in our public schools, and all I have to say is that God may hasten the day when this shall be consummated, and we are the men—the medical profession are the men—who should put this on foot and push it until it is in every school in the land from the East to the West and the North to the South.

Dr. H. N. MOYER (of Chicago) : At a recent mothers' meeting, so called, there were present six childless married women and four old maids, therefore I feel some temerity in rising to discuss this question. Regarding the latter part of Dr. Hutchinson's paper I can only give my approval ; it accords perfectly, I think, with my views. Regarding the first half, I would absolutely disagree with him. It is at the most a statement of but a half truth, and half truths are generally utterly false. It is a well-known fact in the upbuilding of species (and Nature does everything for the species and nothing for the individual) that reproduction, as we understand it, becomes increasingly difficult, and there is no animal on the face of the earth—no, not excepting man—in whom the reproductive organs are not sufficient to populate the earth many times over, in the face of an ade-

quate food supply. It has been stated by an eminent authority that the food supply might be increased by a simple arithmetical ratio, but the increase in population was by a geometrical ratio. As I take it, the scope of this paper, the ideal would be one in which each man should be married, and in which each man should have about six children. The effect of that would be to double the population of the entire globe in about fifteen years and to quadruple it at the end of forty years. Even a doubling of the population in the face of the present food supply and food condition is only possible on a very limited portion of the earth, possibly in certain parts of the United States, in certain parts of Russia, and in Central Africa. In India, Belgium, Ireland, England, Germany, and France it is absolutely impossible, to say nothing about China and Japan. Therefore this subject is broad and deep generally as to its relations in the evolution of mankind. You may discuss this matter time out of mind, but things are as they are, and as they are they are right.

DR. I. N. LOVE : Mr. President : We have a layman here present who is well posted on this subject, and I move you, sir, that the Hon. Fred. Lehman be invited to address you on this question.

HON. FRED. LEHMAN (of St. Louis) : Mr. President and Gentlemen : I do not know that I can contribute anything to a medical discussion. I am disposed very much to believe with Dr. Hutchinson that prostitution is a natural limitation process, and I agree with him in the first part of his paper, that it is better that reproduction be not curtailed, because I am not in the least apprehensive of an increase in population to the degree indicated by Dr. Moyer. It is universal where population is fixed, where the pressure upon the means of subsistence is the most urgent ; there it is that you have your civilization and everything in life that is worth living for, and that is where you have long life, it is where you have the best in health, it is where you have the most in houses, it is where you have the most in food. It is where people live one in a hundred square miles that you have the most poverty and starvation. Malthus fell into the error that every man falls into when he undertakes to apply mathematical formulas to sociological problems, when he undertakes to reduce the grave question of the destiny of humanity to an algebraic formula ; it is very simple, and that is all you can say of it ; there is nothing else about it to commend it. We have a very queer state of affairs. We have man, whom you can not conceive of as perfect ; the moment you conceive of man that he is perfect he is nothing. Take from man his temptations and his misfortunes and what is there left ? He

is not perfect, but he is always improving; and this civilization of ours is not a failure, as I heard one gentleman here say. While we have not reached a great success, and never will, it is a better civilization than any that has gone before, and that is where the gentleman is right in saying that the civilization that is to come is to be better still.

Dr. B. MERRILL RICKETTS (of Cincinnati): I am led to believe that the Samoans and the Dahomians are the most perfect people physically on earth; they are the most perfectly developed, have the most perfect forms, and the most perfect muscles; I will not say the highest degree of intelligence. We must all admit that they do not have the insanity and idiocy or the forms of epilepsy that civilized countries have. In the State of Ohio there are five thousand epileptics; we have something like five thousand insane people. What does all this mean? It means a struggle for existence, and it means the propagation of the species under the most unfavorable circumstances. An unhealthy man or woman can not beget or give birth to healthy offspring. I do not believe that the people are better off to-day than they were a thousand years ago. I am speaking physically now. I believe that the whole thing rests upon the question of civilization. I do not believe that man is happier and better contented. I do not think we find the ideal physical man in civilization that we found in the uncivilized peoples, and I do not believe we can find any such men as we find now among the Samoans and the Dahomians.

Dr. JOHN PUNTON (of Kansas City): I was unfortunate enough not to hear all of this discussion. This, it strikes me, is a subject which the medical profession are slighting; it is one of very vast importance, because I believe that it not only has its anthropological aspect, but it also has its physiological as well as medical aspect, and it therefore becomes us as physicians to look it squarely in the face. A short time ago a very learned educator in our country made this statement: He said the time was when the learned professions—law, medicine, and theology—took the foremost place in the community in which they lived, but to-day they were gradually losing their grip on society, and especially is this true when it comes to the doctor; he says it has become a mere trade, and he said the reason for this is just simply that they do not come up as men and do their part as citizens. He said that they did not take part in national, State, and municipal legislation, as becomes them as physicians. Now, I believe he is correct. I do not advocate the idea that doctors should be politicians—not by any means—but I think this opens up a subject in which doctors should be interested, and Dr. Love made a state-

ment which I think should be emphasized in regard to this subject, and that is that we as doctors should become teachers in the communities in which we live. It is right along these lines that we should take up our stand and advocate means and measures by which we can prevent this very thing which the doctor has told us something about in his paper. I think it is simply a question of education, simply a question of training the masses as to how to live, and that is purely a medical question. Now the question comes up, How can we as physicians teach the masses? That is the question. Then comes up the question of ethics. It is purely a medical question. We should take up this matter in towns where we live and have it advocated in the city councils. We should have doctors in city councils as aldermen, and they should legislate and use their influence to bring about legislation to counteract the influences which are tending to break down the general masses.

Dr. HUTCHINSON (closing): I would simply like to say in closing this discussion that I am agreeably surprised at the result. I am very glad to see so many sociologists among us. I think it an extremely healthy sign of the times when men of our profession are beginning to turn their attention to ethical and sociological subjects. As to the statement that the savage is a better man, I have only to say that the civilized man to-day can clean out the best savage in existence with just his teeth and toe nails; he doesn't need any guns or ammunition or anything of that kind. We are not only the finest people in the world, but we are the best people physically that the world has ever seen and that exist at the present day.

TRANSACTIONS OF THE NEW YORK COUNTY
MEDICAL SOCIETY.

May 27, 1895.

The *President*, EGBERT H. GRANDIN, M. D., in the Chair.

The Treatment of Gonorrhœa in Women.

BY WILLIAM R. PRYOR, M. D. (See page 225.)

DISCUSSION.

Dr. VINEBERG: The reader of the paper went over the ground, and there is really nothing to add to his very able *résumé* of the treatment

of gonorrhœa in the female. There is one point which I would like to emphasize, and that is, when gonorrhœa attacks the female and is limited to the cervix, the disease should be let alone. I would think it proper treatment not even to make the application to the mucosa. These cases have been followed up, and it has been shown that the disease does not go of itself beyond the internal os. Now, the difference in my mind why some cases go on to the complications and others do not, is that in the former there is some disease beforehand—probably some endometritis. Some young girls marry and get endocervicitis and all the complications; others again get the same affection and in time they are cured. If you question the patients you will find that in the ones in which the disease extended there was some leucorrhœal disease beforehand—probably an endometritis.

The doctor did not mention the gonorrhœal infection in the puerperal period. That is a subject which has been investigated recently, and there does not seem to be any doubt at all that cases of infection occur due to the gonococcus—cases which occur late in the puerperium and which, as a rule, run a favorable course. I have had in my own experience in two years two such cases; and I think it is well to bear these cases in mind in order to be charitable and not attribute them to the doctor's lack of asepsis. Another point is the treatment when Bartholin's glands are affected. The treatment given is the proper treatment, but it is not quite as simple an operation as some might think it to be. I do not think any one ought to undertake it unless prepared and under anæsthesia.

Dr. COLLYER: I think the treatment of gonorrhœa depends entirely upon the stage of the disease, and the cases which come before the physician are not always in the same stage. To use the same treatment in the acute stage as for a chronic gonorrhœa would be entirely wrong. In the early stages, in the acute forms of gonorrhœa, if you get them soon enough, you can abort the disease in ten per cent. of the cases inside of two weeks by the proper treatment. In the first stages the inflammation is intense and associated with pain, heat, and redness. In those forms some cooling lotion, such as lead and opium wash or muriate of ammonia, should be used. In the subacute stage, the silver nitrate, in my mind, has met with very good success in solutions of thirty grains to the ounce or as strong as sixty grains to the ounce, coating the surface of the vagina thoroughly. On the outside I use ten grains to the ounce on account of the intense pain that twenty grains has given. These applications should be made sufficiently often—once every other day or once every day, if neces-

sary. Cleanliness of the parts is of great importance. Douching every four hours with the ammonia solution, or in the later stages some astringent injection, as sulpho-carbolate of zinc, a teaspoonful to the pint, is very advantageous and very necessary. The disease when it extends to the endometrium and tubes is considered by most authorities the result of neglect and carelessness. It then requires a great deal of active treatment. As Dr. Pryor states, hysterectomy is imperative—there is no other cure. The vaginal is the preferable method.

Dr. PRYOR (closing): As to gonorrhœa in the post-partum state, I avoided that subject. I might apply a drachm to the ounce of nitrate of silver to the vagina once if I did not know the strength of the solution. I certainly would not repeat it the next day. The rarity of gonorrhœal endometritis I believe in.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

May 24, 1895.

The *President*, FRANKLIN H. MARTIN, M. D., in the Chair.

EXHIBITION OF SPECIMENS.

Papillomatous Cystoma.

Dr. HENRY T. BYFORD: This pretty specimen I exhibit to describe the particular method by which it was removed.

The tumor, although it made an enlargement above the pubes, was removed through the vagina and without removal of the uterus. It was firmly adherent everywhere. I opened the *cul-de-sac* of Douglas and tried to enter the abdominal cavity, but I could not do so on account of extensive adhesions, so I thrust a pair of scissors into the cyst and evacuated over a pint of pus. I then succeeded with considerable difficulty in enucleating it. The bed bled quite freely before it could be tamponed firmly with iodoform gauze, when the hæmorrhage stopped. The recovery was uninterrupted.

Uterus and Tumor Removed through the Vagina.

The other case was more complicated. The specimen consists of the uterus, a portion of the tumor that was in the *cul-de-sac*, and a mass of trabeculated tumor which shows its papillomatous structure.

The microscope shows the structures of ovarian cystoma, fibromyoma, and malignant papilloma, or carcinoma. The fibromyomatous character of the mass in the *cul-de-sac* led me to consider the tumor a uterine fibroid or sarcoma. The uterus and this tumor seemed to form one mass—in fact, I was surprised, even after going far enough to remove the uterus, to find the tumor unattached. The mass in the *cul-de-sac* extended across the cervix backward, and a mass in the pelvis filled both broad ligaments and was infiltrated with papillomatous tissue. In cutting into the *cul-de-sac* I found I could not enucleate the tumor very easily, as it was adherent to the rectum, and I was afraid I would tear the rectum. I therefore removed the uterus and then found that I still had insufficient room, as the tumor extended high up, so I made a suprapubic incision. The broad ligaments were extensively infiltrated and trabecular tissue extended high up on the right side. I found it inadmissible to enucleate the universally adherent tumor, on account of profuse hæmorrhage that followed every attempt at removal. I therefore pushed my broad-ligament forceps up from below on either side of the pelvis, and on the left side managed to get one of them over the infiltrated infundibulo-pelvic ligament. On the right side I tore the tumor loose from its connections and then clamped the ligament. After taking out the cyst I also had to take out similar masses from the *cul-de-sac*. I packed the pelvis from above, and put the end of the gauze down to the vagina and pushed it all down into the pelvis so that it would not extend up among the intestines and yet would control the bleeding area from below. The patient got along well until at the end of five days she began to pass fæces through the vagina. That was three weeks ago. Four days ago that stopped until to-day, when I believe there was a slight passage of fæces through the vagina. In other words, the adhesions to the rectum were such that I undoubtedly ruptured the walls of the rectum. But this was supported by the iodoform packing until that was removed, when the fæces escaped into the vagina. The patient did not show any bad effects from the temporary fæcal fistula.

Tubo-ovarian Abscess.

Dr. T. J. WATKINS: This specimen is exhibited for the purpose of describing the method I employ for removal of these abscesses when the disease involves the uterine portion of the tube. The specimen consists of the *entire* Fallopian tube, the ovary, and a portion of the uterine wall. After separating the adhesions of the tube and

ovary the ovarian artery is ligated external to the tube and ovary. The tube and ovary are now excised by division of the broad ligament from a point just external to the tube and ovary to the uterus, the dissection is carried into the uterus to a point beyond the disease, and all bleeding points are caught in artery forceps. Very little hæmorrhage occurs except from the uterine artery, which I sometimes ligate before severing. Ligatures are now placed, the forceps removed, and the wound closed with a continuous suture.

Advantages of the operation :

1. All diseased tissue is removed.
2. Large masses of tissue are not ligated.
3. No raw surface remains to form adhesions.
4. The use of large sutures and ligatures is unnecessary.

Dr. T. J. WATKINS : The Society is under obligations to Dr. Byford for exhibiting these very interesting specimens, and he deserves the congratulations of the Society for the very unique methods employed and for the results obtained. There is probably no doubt that the method used by Dr. Byford is far preferable to abdominal section because of the perfect drainage which is obtained. Dr. Byford, we all know, has been doing for a long time much pelvic surgery through the vagina, and a good many of us probably thought he was in error, but of late many operations are being done through the vagina.

Dr. H. P. NEWMAN : Undoubtedly the method of dealing with this growth was the best that could be done under the circumstances.

Very often the pelvis may be opened with perfect impunity and with advantage to the patient when the abdominal cavity is under operation, and certainly in this case it was the only method that could have been pursued with safety.

Dr. Watkins' case suggests the subject of vaginal section, not alone for pelvic abscess, but for the removal of the appendages and the uterus.

In his case the infection must have been present in the uterus also, and the question of entire extirpation of that organ would be one to consider. It is certainly an interesting case, and I am glad that it has been presented here.

Dr. T. J. WATKINS : Hysterectomy was not performed because intestines were adherent to the other broad ligament consequent upon removal of the appendage on that side some six months previously.

Abstract of a paper entitled

VAGINAL SECTION AND DRAINAGE FOR PELVIC
ABSCESS, WITH REPORT OF CASES.

BY T. J. WATKINS, M. D.

Under the above title the author says that "pus in the Fallopian tube, ovary, or pelvic cellular tissue will be considered a pelvic abscess."

The object of the paper is to advocate vaginal section and drainage for exceptional cases of pelvic abscess. Most of the literature on the treatment of pelvic abscess through the vagina appeared before the pathology of this condition was well understood and before aseptic surgery was practiced, and is therefore of little practical value. Many gynæcologists, among them our esteemed president,* advocate abdominal section in all cases of pelvic abscess. Dr. Clement Cleveland recently read a paper on The Treatment of Pelvic Abscess by Vaginal Puncture and Drainage,† in which he demonstrated that the operation was a valuable procedure in selected cases.

The author reports the following cases of pelvic abscess which he has treated by vaginal section and drainage :

Mrs. S. was referred to him by Dr. A. W. Bigelow in May, 1893. Examination showed an abscess filling the entire pelvis, pushing the uterus and vagina forward, and extending above the brim of the pelvis on one side. The abscess was of long standing, and the patient feeble and emaciated from sepsis. Vaginal section was performed with irrigation and drainage. About one pint of pus was evacuated ; operation extraperitoneal. The patient made a rapid and complete recovery. The drainage-tubes were removed in about four weeks. Dr. Bigelow reported on April 11, 1895, that the patient was in perfect health, and had no return of the pelvic trouble.

Mrs. S. O. was admitted to St. Luke's Hospital in January, 1895, suffering severely from disease of the left tube and ovary, which were adherent in Douglas' *cul-de-sac*. The uterus was retroverted. Her temperature was normal. Vaginal section revealed a small abscess between the ovary and the posterior vaginal wall, which was evacuated and the sac thoroughly cleansed. The separation of the adhesions

* Treatment of Pelvic Abscesses by Laparotomy, *Chicago Medical Recorder*, May, 1894, p. 295.

† *New York Journal of Gynecology and Obstetrics*, June, 1894, p. 652.

about the ovary and thickened tube was followed by restoration of the uterus to its normal position and elevation of the left uterine appendage. The right uterine appendage was normal. The wound was packed with gauze. Recovery from the operation was satisfactory, and the uterus and appendages remained in normal position. Recent examination shows some thickening to the left of the uterus, which does not occasion any special distress. The operation was made for exploration. The ovary and tube did not appear to be so diseased as to indicate excision.

Mrs. S., aged twenty-eight, patient of Dr. Joseph Trenchard, had a large abscess which filled the pelvis, pushed the vagina forward, and extended to the perinæum. It had occasionally discharged through the rectum. The patient was emaciated; temperature 100° to 103° ; pulse rapid and weak. In February, 1894, the author made vaginal section, irrigation, and drainage. The abscess contained about one pint of offensive pus and liquid fæces. The patient made a rapid and uninterrupted recovery, and the drainage-tubes were removed about four weeks after the operation. At this time examination revealed very little thickening posterior to the uterus. Fæcal matter escaped through the tubes for only a short time after the operation. On April 5, 1895, Dr. Trenchard reported that the patient had regained her usual health and had remained perfectly well. In this case abdominal section would probably have resulted fatally.

Miss L. R., aged eighteen, was admitted to St. Luke's Hospital June 24, 1894. Upon examination, a mass was felt posterior and to the left of the uterus, extending above the pelvic brim. Abdominal section revealed an agglutinated mass of omentum, intestines, and pelvic abscess. The adhesions were extensive and very firm. A left tubo ovarian abscess was found which contained about one ounce of pus. The abscess cavity was shut off from the general abdominal cavity by gauze packing, and the abscess was opened, drained, and a portion of the abdominal incision closed. Vaginal section was now made and an abscess of the right uterine appendages opened, irrigated, and drained. The patient's temperature soon became normal. The drainage-tubes were removed at the end of four weeks. Examination showed the uterus to be fixed and showed some induration in the pelvis. The patient felt perfectly well, however, and was discharged from the hospital. No recent report of the case could be obtained.

Mrs. C. C., aged thirty-two, was admitted to St. Luke's Hospital June 26, 1894. Examination showed extensive induration lateral and

posterior to the uterus. The uterus and upper portion of the vagina were pushed forward, and the mass extended upward on the left side of the pelvis. The abdominal walls were exceedingly thick. The patient had no symptoms of septic infection and her history indicated that the abscess had existed a very long time. Vaginal section was made with drainage and irrigation, and about one pint of pus was evacuated. The patient felt perfectly well after the operation. At the end of three weeks the drainage-tubes were removed. Examination showed some thickening to the left of the uterus. Two months later a large mass was found to the left of the uterus, which was opened through the old incision, drained, and irrigated. Examination during the operation led to the belief that the abscess was ovarian. The drainage-tubes were removed at the end of six months. Examination on May 15, 1895, showed a sinus two inches deep, some discharge of pus, and the uterus not freely mobile. Some thickening was felt posterior and to the left of the uterus, but no distinct swelling existed, and the patient's health was excellent. The abscess caused very little suffering; removal by abdominal section would have been difficult and dangerous.

Mrs. H. S., pelvic abscess following secondary abdominal section for severe hæmorrhage. On account of the feeble and anæmic condition of the patient blood-clots were left in the abdomen, which became infected and produced the abscess. The abscess displaced the posterior vaginal wall forward. Vaginal section was made in January, 1895, with irrigation and drainage; about one pint of offensive pus and blood-clots was removed. Recovery was satisfactory but slow, on account of the anæmic condition of the patient. Recent examination shows no evidence of pelvic disease. This patient could not have borne a third abdominal section.

Miss S. L., aged twenty-two, was admitted to St. Luke's Hospital on the evening of January 18, 1895. She had a temperature of 103° , pulse 120, and her general condition was exceedingly grave. She gave a history of induced abortion ten days previous. Examination showed a large mass high up in the pelvis to the left of the uterus. She had marked tympanites, general abdominal tenderness, and constant nausea and vomiting. The symptoms indicated general peritonitis. January 17th, temperature 103° , pulse 130. Shreds of offensive membrane and small pieces of placenta were removed from the uterus with placenta forceps and curette. Section of the vagina was made to the left of the uterus, and the finger was forced up between the folds of the broad ligament until it came in contact with

the Fallopian tube. A blunt instrument was introduced along the finger as a guide into the tubal abscess; the opening thus made was enlarged with the finger, and two rubber drainage-tubes were inserted into the abscess sac. Two to four ounces of very offensive sanguinolent pus escaped. Frequent antiseptic irrigations were used. The patient became almost pulseless during the operation, which occupied only a few minutes. Her condition improved slightly after the operation, but two days later a similar mass was found on the right side. An incision was made to the right of the cervix, and the abscess was treated like the previous one. This abscess contained also from two to four ounces of offensive pus. Both the operations were extraperitoneal. The patient's temperature immediately dropped three degrees and soon became normal, and her condition rapidly improved. She sat up in about three weeks, and left the hospital thirty-eight days after the operation, feeling perfectly well. The drainage-tubes were removed on the thirty-third day. Examination showed a movable mass, probably ovarian, high up to the left of the uterus. Examination of the right side revealed no evidence of disease. Examination made about April 1st showed no appreciable change in the mass. This will probably necessitate an abdominal section, which can now usually be safely performed. Had abdominal section been attempted in this case the patient would certainly have died during the operation.

Mrs. B. R., aged thirty, was admitted to St. Luke's Hospital March 10, 1895. She gave a history of a miscarriage two weeks previously, and her last menstruation occurred two months before. She had been curetted twice for supposed retained portions of placenta before coming to the hospital. Temperature 103° , pulse 140; marked anæmia; abdomen tympanitic; general condition grave. On examination, a mass was found which filled the pelvis and extended above the pelvic brim on the left side, and pushed the uterus and vagina forward. Vaginal section was made, and from one to two quarts of very offensive blood-clots removed. Digital examination within the sac revealed an enlargement of the left tube, which collapsed into the sac cavity. The case was undoubtedly one of extrauterine pregnancy, and the blood-clot had become infected during the curettements. The sac was drained and irrigated. The temperature dropped suddenly and gradually became normal. At the end of three weeks she left the hospital. At this time the discharge was slight, and the mass on the left side was small. Her family physician recently stated that he had removed the drainage-tubes, that all dis-

charge had ceased, and that the pelvis was apparently normal. An abdominal section would undoubtedly have been fatal in this case.

Mrs. M. S., aged thirty-seven, was admitted to St. Luke's Hospital March 23, 1895. Temperature 102.4°, pulse 118; abdomen tympanitic; severe pain in lower abdomen; patient anæmic; symptoms of general peritonitis. Examination revealed a mass filling the pelvis, pushing the uterus and vagina forward, and extending nearly to the umbilicus. Her last menstruation commenced on January 1st at the regular time, but hæmorrhage continued until the time of operation. Vaginal section posterior to the cervix was made and about one quart of partly clotted blood was removed. A mass remained to the left of the uterus. The sac was irrigated and drained. The case was probably one of extra-uterine pregnancy. The patient has been practically free from sepsis, pain, or any discomfort since the operation. Examination April 10th showed no evidence of pelvic disease. The drainage-tubes were removed and the patient discharged from the hospital.

Technique of the Operation.—The patient is prepared as for vaginal hysterectomy. The abdomen should also be prepared on account of the possible necessity of a cœliotomy. The patient is anæsthetized and placed in the lithotomy position; the posterior vaginal wall is retracted by Simon's speculum, and the cervix drawn down with a double tenaculum forceps. The uterus is dilated, the uterine cavity explored, curetted, irrigated, and packed with gauze if indicated. An incision about an inch long through the vaginal wall is made near the cervix, opposite the most prominent point of the tumor. This will usually be posterior to the cervix, but may be lateral, as in the case of Miss S. L., and possibly anterior to the cervix. Any connective tissue between the vaginal wall and the abscess is separated with the finger, or it may be necessary to divide some of the fascia with blunt-pointed scissors. Careful exploration is now made to determine whether the peritoneal cavity has been opened; if so, it should be carefully walled off with gauze packing. The finger may now be passed directly into the abscess, or if the wall is tough it may be opened by a blunt instrument, such as a grooved director or sound, and the opening enlarged with the finger or forceps. All of the pus is removed by thorough irrigation with sterilized water. Careful bimanual examination to determine the condition of the pelvic contents is now made with one or two fingers of the left hand in the abscess sac and the right hand over the abdomen. If additional abscesses are found they may be punctured through the abscess wall, may be opened by another vaginal section, or may be removed through

an abdominal incision. The mode of procedure must be determined by the indications in each case.

Two drainage-tubes sutured together, one large and one small, are now inserted into the abscess cavity. The large tube is perforated for a distance of one or two inches, the end split, inverted, and sewed so as to form a shoulder on each side which retains it in place after the abscess wall has contracted about it. The drainage-tubes are fastened to the cervix by a suture for retention until the abscess and vaginal walls contract about them.

The after-treatment consists principally in the use of peroxide of hydrogen, frequent irrigations, and antiseptic douches. Any gauze left between the vaginal and abscess walls should be removed twenty-four or forty-eight hours after the operation. The drainage-tubes should be left in place as long as the discharge continues. This may be for from three weeks to six months. When the rubber tubing becomes offensive it should be changed.

Indications for the Operation.—1. When the condition of the patient is such as to make abdominal section extremely dangerous.

2. When the abscess is large, of long standing, and situated low in the pelvis, and when the patient gives a history of peritonitis.

3. When abdominal section reveals extensive and firm intestinal adhesions.

4. When the abscess is on the floor of the pelvis and is complicated by rectal fistulæ.

5. Vaginal section may be indicated for the separation of adhesions which fix the ovaries and tubes on the floor of the pelvis, and for examination of the ovaries and tubes.

6. Puerperal abscesses. These abscesses frequently do not involve the Fallopian tubes or ovaries, and satisfactory results usually follow thorough drainage of them.

Results. 1. *Immediate.*—The author has done vaginal section for pelvic abscess nineteen times, and in every case with relatively satisfactory results. In two cases operations for secondary abscesses were required; in one case abdominal section was necessary to complete the operation. Excepting in the two cases which developed additional or secondary abscesses, the temperature has become practically normal within a short time after the operation. The patients have suffered very little after the operation—in fact, pain has usually been absent. The patients have almost invariably been out of bed at the end of two weeks. Aside from the accidents consequent upon anæsthesia the operation is devoid of danger.

2. *Remote*.—Many of the operations are of too recent date to permit a satisfactory report of the ultimate success. Some of the operations, however, date back three years. None of the patients have, to my knowledge, suffered especially from pelvic disease after the operation. Three of the patients have some enlargement to the left of the uterus which may later on require abdominal section, and two of them have a sinus.

Advantages of the Operation.—1. It is not dangerous to life.

2. It is followed by little or no suffering.

3. Recovery is rapid.

4. No raw surfaces are left in the abdominal cavity to cause adhesions.

Objections to the Operation.—1. It is applicable in only a small percentage of the cases of pelvic abscess.

2. Diseased tissue is not removed. The tissues may, however, become normal after the abscess is opened and drained, as has frequently been the case after spontaneous rupture or puncture of the abscess. The favorable results which have followed simple incision and drainage of abscesses in other parts of the body may indicate that some cases of pelvic abscess have been treated by too radical measures. The nature of the abscess may be a guide in the selection of the method of treatment. For example, tubercular or gonorrhœal abscesses indicate excision more than abscesses due to some other infection.

Remarks.—This operation should take the place of vaginal puncture or aspiration, which has been the usual vaginal operation for pelvic abscess. In the latter operation the bladder, rectum, or some other portion of the intestinal tract, and large blood-vessels have been punctured. The author knows of two cases in which large blood-vessels have been injured with fatal results. These accidents are avoidable in the operation which has been described.

Many authors advise, in cases in which doubt exists as to the choice between abdominal section and vaginal puncture, that cœliotomy be first performed, and then, if indicated, that puncture through the vagina be made. In such a case I would advise vaginal section, which could be immediately followed by abdominal section, if indicated. Should the latter operation be necessary, the previous vaginal section would not compromise the chances of recovery, but, on the contrary, would afford a perfect avenue for drainage and would remove the pus which otherwise would be liable to escape into the abdominal cavity.

For suspected disease low in the pelvis, vaginal section permits of thorough and satisfactory exploration, without subjecting the patient to the dangers consequent upon abdominal section.

DISCUSSION.

Dr. HENRY T. BYFORD: Dr. Watkins has covered the ground quite completely and his conclusions are just.

There are two or three points of great interest that have been brought out: the first is that these abscesses that follow labor or abortion are not all diseases of the tubes or ovaries.

Another interesting point brought out was the fact that intestinal adhesions are not always troublesome and do not always seriously inconvenience the patient.

Still another interesting point is that the intrapelvic pus may, before it is taken out, become practically sterilized and really may not require enucleation of the sac. I remember a case in which I opened the abdomen and found an abscess containing an ounce and a half of pus in one of the tubes, but the uterus, appendages, broad ligament, and intestines were so matted together over it that I thought I would be subjecting her to more danger than would be justifiable, that, after aspirating the tube and putting a catgut stitch over the peritonæum to prevent leakage, I examined carefully, putting one finger in the vagina and the fingers of the other hand into the *cul-de-sac* of Douglas by way of the abdominal cavity, so I might know whether there would be a chance to drain another time from below. She got well from this procedure, which was not much of an operation, and two weeks afterward I had her anæsthetized, took a curved trocar about an eighth of an inch in diameter, and, after pressing the parts down from the abdominal walls, I passed it up from below deeply into the mass. I moved it about some, but nothing came but a little blood. It has not yet, after several months, returned.

I had another case recently in which I came down upon similar tissue. I did not like to put the patient to very great danger, so instead of tearing loose all these adhesions I removed the other ovary, which was diseased and adherent, then stitched the pus sac to the abdominal wall without opening it, except to aspirate and remove two ounces of pus. A week later I opened with a knife and got but three drachms. The cavity contracted down so that it was scarcely large enough to allow the finger to move in it loosely. That is three weeks ago, and it is all healed except a little sinus from the top less than an inch deep. In other words, the abscess proved to be very small after

it was evacuated, and contracted immediately. In complicated cases it is sometimes better to first evacuate the pus from below, and, if necessary, maintain an opening until suppuration ceases. We can more safely remove them afterward, if the symptoms still require it.

I have had only one case of pelvic abscess which I have operated through the vagina, but I have had a great many such cases which could have been cured by vaginal section just as well as I cured them by abdominal section, and without subjecting them to the major operation. I know two cases that I believe died which could have been cured by such an operation as Dr. Watkins has described. Dr. Byford saw one of them with me, but her condition was then so bad that it would have been useless to have operated. I think if I had had the courage, or had our masters been teaching us at that time to do simple vaginal section, I would have probably saved the patients.

The operation Dr. Watkins advocates is in the line of conservative surgery, and I think it will entirely take the place of vaginal puncture.

If the paper of the evening is carefully read and followed it will do good. The doctor has hedged on every point and has made clear his position. His position is all right, but the subject of the paper will lead the careless to misinterpret its contents; many who read this paper will simply think of Dr. Watkins as advocating vaginal incision for pelvic abscess, and some will forget the points he has warned us upon. The consequence will be that every time a pelvic abscess is found anywhere one of these men, who is afraid to do abdominal section and therefore not fit to do vaginal incision, will plunge a trocar or some needle into the abscess, and in ninety-five cases out of a hundred disaster will result. Therefore I believe the paper will do harm in the fact that it will not be interpreted properly. It seems to me the abscesses that can be opened from the vagina in preference to the abdominal route, where enucleation should be done, would be limited to about ten per cent. of all cases.

Dr. Newman says the vaginal operation can be done by almost any one. That is the whole gist of the argument against the paper. If the paper will be taken as presented and all the points read carefully line by line and the precepts well digested, no one can go astray. Men who are not capable of doing good abdominal surgery have no right to do vaginal section. Now, I believe vaginal sections for pelvic abscesses may be done in about the following conditions: 1. The only cases that should be operated on in this way are those which can not be removed from above. 2. Those cases in which the tubes,

ovaries, and uterus can be removed *per vaginam*, as an operation of election. 3. A puerperal abscess of large size in the broad ligament. 4. Suppurating broad-ligament cyst, hæmatoma, or extra-uterine pregnancy.

Dr. T. J. WATKINS, in closing the discussion, said: I have not much to say except to thank you for the kind manner in which you have received the paper and for the thorough discussion which you have given it. I probably did not describe the pathological findings with sufficient clearness in the case referred to by Dr. Newman where he thought gauze drainage would have been preferable to rubber-tube drainage, or he would not have criticised the method of drainage. The lining of the sac wall in this case was covered with necrotic tissue, which sloughed and passed through the drainage-tubes, which could not have occurred through gauze drainage.

The substitution of vaginal section for vaginal puncture is an exceedingly important one, for the dangers of puncture which I mentioned are given in all text-books on gynæcology, and if these dangers were not important they would not be so generally recognized. I have personal knowledge of two cases where the uterine arteries were injured by puncture with fatal results. I also know of cases where the bladder has been punctured, and others where the rectum has been punctured. I see absolutely no advantage in puncture over section, but many disadvantages, which were mentioned in my paper. I can not appreciate how the case reported by Dr. Martin affects the position I occupy in my paper. If vaginal section should have done in his case, the abscess low down could have been drained, made as thoroughly clean as possible, and thoroughly packed with gauze; the other abscess could have been treated by vaginal section, by abdominal section, or by vaginal hysterectomy, and in either event the vaginal incision would afford an excellent avenue for drainage.

The point made with reference to the harm that may result from advocating this operation applies with equal force to all operations. I have heard Dr. Emmet say time and again that his operation on the cervix has done more harm than good, on account of its abuse, and yet no one of us regrets that he devised that operation. The same may be said of operations upon the vermiform appendix, of Tait's operation for the removal of diseased tubes, and of all operations. The abuse of operations does not make them useless. I have employed vaginal section in about fifteen per cent. of the pelvic abscesses which I have operated.

TRANSACTIONS OF THE CINCINNATI OBSTETRICAL SOCIETY.

March 15, 1895.

The *President*, THOMAS P. WHITE, M. D., in the Chair.

PRESENTATION OF SPECIMENS.

Specimen of a Vermiform Appendix.

Dr. C. A. L. REED : The first specimen to which I call your attention is that of a vermiform appendix. I was called to Hamilton a little over two weeks ago to operate for a strangulated hernia. I found the case to be that of a man of fifty-five, who had had a hernia for about ten years, a constant protrusion that had been irreducible, but that had given him no further trouble. Thirty-six hours before I was called the lump began to enlarge, the patient experienced a considerable amount of pain, had some persistent vomiting, but not of that extreme sort, however, which bespeaks obstruction.

Upon examination, I found the case to be one of direct inguinal hernia. The hernial sac was about the size of a hen's egg. I operated by making an incision obliquely across the sac about two inches above Poupart's ligament and as far down as was necessary to enable me to command all the conditions below. I then dissected out the sac, which I found to be adherent, and upon opening it there escaped about two ounces of fluid. The ring was very narrow and very tight.

I found the contents of the sac were adherent, and I found it impossible to reduce the hernia, even after having divided the ring in the ordinary way. I therefore proceeded to do the operation which I have described heretofore, going into the pelvic cavity above Poupart's ligament, and commanding the hernia from above. Even by this means I found myself unable to reduce the hernia without exercising undue traction.

But I was able to accomplish something I could not have accomplished from below without considerable difficulty. That was, I discovered that the contents of the sac was an enlarged and elongated vermiform appendix. I then dissected out the sac, inverted it and drew it out from above, and removed the appendage, the apex of which you will find adherent to this specimen. After ligating the vermiform appendix at its base, I closed the sac over the stump and

let the caput coli drop back. The case has made an uninterrupted recovery by first intention.

Specimen of Procidencia Uteri.

Dr. REED : The next specimen was removed three days ago from a patient brought to my office by Dr. Glaeser. The protrusion extended more than six inches below the vulva. The *cul-de-sac* of Douglas was drawn down to, in front of, and below the fourchette. The bladder was external to the ostium vaginæ. A sound introduced into the urethra dropped directly downward and outward. In other words, the hernia of the pelvic organs was practically complete. I operated upon this case by a vaginal hysterectomy, and in doing so I had recourse to a technique which I believe is applicable only in strictly non-malignant conditions of the uterus—namely, I left a circle of uterine tissue, by which means I was able to do the operation without either a clamp or ligature. There was no bleeding. After having done this, the operation being practically an external one, and being able to deal with it as I would with the stump of an amputation, I simply closed it completely by interrupted sutures, dressed it antiseptically, and reduced the protrusion. The only thing more about the case was the fact of the most profound shock I have had reported to me. She had not rallied when I left the hospital, but the shock seemed to be intensified, and it was protracted during five hours, during which time her temperature dropped nearly 95° in the axilla and the pulse was practically imperceptible, although there was easily not an ounce of blood lost in the whole procedure. The doctor in attendance, however, administered some nitroglycerin and whisky hypodermically, when reaction came on, and the patient regained her normal condition.

DISCUSSION.

Dr. PALMER : Did you take out the ovaries ?

Dr. REED : No, sir.

Dr. PALMER : What was her age ?

Dr. REED : Thirty years. You will notice on the external os a very extensive area of excoriation caused by friction. After the removal of the uterus the opening into the peritoneal cavity seemed almost as pretentious as was the vagina itself. I did not remove the appendages in this case for two reasons : In the first place, they were healthy, and in the next place, I felt that for the comfort of the patient it would be well to defer the menopause until the physiological period, if that

period could be hastened by the removal of the appendages. Then, too, the operation impressed me as affecting the patient considerably, there being profound shock. The interesting point is that you do secure very complete hæmostasis by leaving this little segment of uterine tissue surrounding the wound.

Dr. CLEVELAND : Was there any bowel in that sac ?

Dr. REED : None at all.

Dr. PALMER : Then you probably could not have pushed the thing back at all ?

Dr. REED : No, I could not.

Dr. CLEVELAND : Wasn't the hernia closed up ?

Dr. REED : Yes, it was closed up. I do not know whether there would have been suppuration ; the adhesions would probably have kept it alive. The patient had no action of the bowels during thirty-six hours.

Dr. STANTON : How long did he have the hernia ?

Dr. REED : About eight years.

Dr. PALMER : Do you suppose, Dr. Reed, you could possibly have detected the part of the abdominal viscera in that sac unless you resorted to the means you did ?

Dr. REED : I do not know that I could.

Dr. HALL : Wasn't it difficult to determine what part was in the sac even after you got your fingers on it ?

Dr. REED : I didn't know what it was until I got my finger into the pelvis. It was surrounded by some fat and old adhesions, and I did not know whether it was omentum or what.

Dr. HALL : This brings before us two phases for discussion : First, the operation of hysterectomy for procidentia, complete prolapsus, and the enucleation without ligature.

I think there can be no question as to the advisability of total extirpation in a case presenting the condition of this woman. All other operations up to date have been failures, so far as permanent beneficial results for the patient are concerned. The old operation of high amputation of the cervix and plastic operations have not yielded satisfactory results. In other words, we have had a return of the former prolapsus. Whether or not total extirpation, with the support that can be given by bringing the pelvic fascia together, and the plastic operations to follow will yield better results remains to be seen. The operation is on probation. So far it has yielded better results and the patients have remained better than after the old operations. A patient in this condition is an invalid and a great sufferer,

and demands relief. I have made a number of operations for total prolapsus, as in this case, and so far none of the patients are further than four or five years beyond the operation, yet they all remain well. None are so far from the operation as to say they will not have prolapsus or hernia later, but the time is sufficient to demonstrate that it yields better results than the old plastic operations, and I am inclined to the opinion that it is going to be the recognized method of treatment in these cases.

As to the method of enucleation. Since I was convinced theoretically that this operation would stand the test, I have not had a suitable case upon which to practice it. In other words, I do not believe that it is advisable to make a vaginal hysterectomy without a clamp or ligature, by this method, in malignant disease. I think it is adapted only to such cases as this, notwithstanding a man in the Northwest uses it in every case. I think in cancer of the uterus as elsewhere we should keep as far away from the disease as possible, instead of keeping so close to it as we must in the method which has just been described. It is a feasible operation, but it must be confined to the cases with non-malignant disease, and that is a rare condition for vaginal hysterectomy. So total hysterectomy, without ligature or clamp, is not going to be so universally adopted as the gentleman in Chicago would have us believe. I heard of an operation in a case of enucleation for epithelioma in which only one pressure forceps was used. I think we will all grant that in cases of malignant disease this operation would not give the patient the best chances for non-recurrence. The specimen is a very beautiful one, and a very beautiful result has been obtained. Why the patient should suffer so from shock in this case I can not understand from the description of the operation. I can not think the shock was due to the method of operating, and if he had operated with a ligature or clamp it would have been just the same.

In vaginal hysterectomy, where you pull the uterus well down, some patients suffer more from shock than in any other operation with which I am acquainted. The method of closing the wound I think is the correct one. The tissues brought together in this way strengthen the pelvic floor; in this case it made practically a new pelvic floor; it shortens it by taking out the middle segments, and the patient is less apt to suffer prolapsus. I am satisfied that after the plastic operation there will be no hernia through the pelvic diaphragm.

Dr. J. AMBROSE JOHNSTON: In regard to the case presented by Dr. Reed, I would say I wish to concur in his statements.

The cause of the prolapsus is probably to be found in the fact that the individual quite frequently walked up Sycamore Hill, carrying heavy burdens.

On account of the extreme prolapse, it seemed that every organ in the pelvic cavity had lost its connection with the pelvis. The vagina was completely prolapsed and the bladder accompanying it seemed to be wholly without the pelvis.

The operation went along smoothly and, for a while, I thought the uterus would be completely extirpated without entering the peritoneal cavity.

Whether the operation will be a success or not is a question, because of the redundancy of vaginal tissue and the very great laxness of the various uterine ligaments which, as I have said before, appeared to have lost all connection with the pelvis. However, it is to be hoped that the contemplated colporrhaphy and perinæorrhaphy will be sufficiently supplemental to the primary operation to thus overcome this prolapse.

I have seen Dr. Reed operate on several other cases of complete prolapsus which did not have so much laxness of the vaginal and uterine ligamental tissues, and in which, after removing the uterus, the pelvic floor was better restored than in this case.

Dr. GEORGE E. JONES: There is one point in the report just made that I think it would be well to bring out, under the circumstances, because it is a well-known fact that oöphorectomy does not always bring on the menopause. Now is the time, in a case of this kind, to prove most conclusively the idea advanced by the German surgeons, that the oöphorectomy, or taking the uterus away and leaving the appendages, is more apt to bring on the menopause than is total extirpation. As far as the shock from the operation is concerned, I do not understand it; I do not understand how such an operation could produce such shock. It is possible the build of the woman may have something to do with it. In regard to bringing on the menopause, however, by enucleating the uterus and leaving the appendages, a case of this kind of course will tend to prove whether the theory is true.

Dr. HALL: I intended to speak of one other point. In all cases of operations for prolapsus we have a relaxed condition of the pelvic floor necessarily from the preceding procidentia, and to make the pelvic floor shorter is a consideration. In all the operations I have made in this way, which are perhaps a half dozen or more (I do not remember just the number), I removed the ovaries and tubes in every instance. I do not make any effort to dissect the tubes and ovaries

out, but cut them off close to the uterus and then tie them, making a ligature, as in abdominal incision. After removing the appendages, bring the stumps together, which makes them very tight—they will not always reach, but make them reach as far as they will—and then close the peritoneal cavity off with sutures. Bring the raw ends of the stumps into the vagina and the peritoneal edges of the stumps across, which blocks off the pelvic floor in a way.

While I appreciate the doctor's position, and he is anxious to try this method of leaving the appendages, I believe he would have put his patient in better condition by shortening up the pelvic floor in that way. But I am interested to know the subsequent history of this case, especially in reference to the menopause, whether she will suffer at each menstrual period—which we are told and I believe they will and do, as they can't menstruate—or whether she will simply have the menopause minus the nervous phenomena, as the doctor hopes to have. If this woman must suffer the pain of menstruation for days or a week or more at each time, she will suffer more than before. Of course this is all theoretical. On the other hand, if she goes on perfectly comfortable, minus her reflexes, hot flashes, dizzy head, and sweaty hands, the operation will not have been done in vain.

Dr. PALMER: I have always taken the position, and I firmly believe, that when a hysterectomy is made it is advisable likewise to extirpate the ovaries and Fallopian tubes. There is no need of either of these organs when the uterus is taken out. The reason the ovaries should be removed when the uterus is taken out is because otherwise the catamenial molimen keeps on a number of years. So I believe when the woman is not near the cessation of menstrual life both the ovaries and Fallopian tubes should be taken out. The general condition of the woman in this case seems to have been the doctor's reason for leaving them. It is, however, under ordinary circumstances, it seems to me, best to remove them. No doubt the menstrual flow will stop, for the site of menstruation is the uterus, which has been removed in this case.

Dr. HALL (to Dr. Reed): I did not understand, in the report of your case, that you did not remove the ovaries because your patient was in such extreme shock, but that you wanted to leave them because there was no indication of disease. Is that true?

Dr. REED: This prolapsus was extreme, and after the uterus was removed I introduced my finger to feel for the appendages, and that Fallopian tube it seemed to me was six or seven inches long, with the leaflet of the broad ligament. Secondly, I have for some time been

weighing in my mind the propriety of leaving the ovary so as to delay the menopause. I think this preferable in some instances to the precipitation of the menopause. A third consideration was the fact that Dr. Johnson reported the patient not in a very satisfactory condition, and that rather confirmed me in my desire to leave the appendages. I confess not the least of them was the desire to study the physiological results.

Dr. JOHNSTONE: As to the shock, I had a case not long since in which there was absolutely nothing to do but saw through a very thick pedicle in a partial inversion of the uterus, through an os only sufficient to introduce two fingers, and my anæsthetizer kept saying, "What on earth are you doing? This woman's pulse is almost imperceptible." I experimented to see, and I found that whenever I got my finger up near the fundus uteri with the volsella and dragged down, I could produce the shock at pleasure. It seems to be due to pressure on the nerves. I have no doubt the doubling in of the folds has produced the shock in this case. I have had the pulse slow down and stay down until I took out the drainage-tube. The reason the shock was prolonged in this case was probably because the operator included the nerves in the sutures, and the ligature would not strangulate them, but just irritated them. In this case it was a suture and not a ligature which constricted the nerves. I thought Dr. Hall would make my speech, but he did not quite come to it. If you take these prolapsed uteri out through the abdomen, and do an abdominal instead of a vaginal hysterectomy for these prolapsed uteri, I think the results will be probably better in the way of preventing future relapses. Dr. Reed states the tube was six or seven inches long. Now, imagine the slack which must be taken up when the uterus is taken out. I was very much interested in watching this point in a case I showed you some time last fall. The pelvic floor was crowded down on the perinæum, and the vagina was extremely shallow. The vagina was tied up in that way with the great long, broad ligaments, which were shortened up considerably so as to take up the slack, and the opening or little pit you can feel in the top of the vagina is now, if anything, above the brim of the pelvis. And I believe it is the literal action of the guy ropes, in that way, where you dip away down and the loop of your ligature coming clear outside of the end of the tube and outside of the ovary; and removing one half to two thirds of the broad ligaments, that you get an anchoring which holds it up all right.

Dr. HALL: That is just what I did in the case I spoke of. It

can be done very easily that way. There is no difficulty whatever, except in a patient in this one's condition. It is perfectly easy to tie the ligament beyond the ovary and shorten it up that way.

Dr. JOHNSTONE: A vaginal hysterectomy I always did hate. I have never done it, and I don't think I ever will. There is no use talking, we can not remove the broad ligament as freely through the vagina as through the abdomen. In the vaginal operation we have to work through a little hole, and how are you going to do in a great big flabby woman with a long tube like this? You must remove it and make it shorten up by the production of scar tissue. I really believe it is worth the trial to see what would be the result of taking away all the broad ligament possible, to see if the cicatricial or scar tissue would not be like the rope in the suspension bridge. In that way I believe we can make a bridge across the pelvis which will assist us in our subsequent plastic work.

Dr. PALMER: Do you think an abdominal hysterectomy as safe as a vaginal hysterectomy?

Dr. JOHNSTONE: In my hands it is safer.

Dr. PALMER: The safety to the patient is of importance.

Dr. JOHNSTONE: Isn't the patient safer if you know what you are doing than if you trust to luck, as I have seen you fellows do many times?

Dr. HALL: But in an operation of this kind it is in sight. The uterus is already pulled down.

Dr. JOHNSTONE: That is what I am after; and you must take it up and remove enough to produce scar tissue and cause shortening. I am sure that in my own experience the abdominal operation would be safer. I have not lost a case from abdominal hysterectomy; but of course if I "blow" I will lose the next one. It is an impossibility to remove the slack from below, because you are producing more to bring it down. The largest hole I have seen was only two or three inches in diameter, and you can not operate through this as well as through the abdominal incision. A guy rope of scar tissue may be produced to hold up the parts, just as the rope on the suspension bridge; and when you have swung a guy rope of scar tissue across, I believe that will correct to a great extent the prolapsus.

Dr. REED: The most important point that has been raised in this connection is that of elevating and securing in its normal situation the pelvic diaphragm. It is the restoration of the pelvic diaphragm to its normal plane. Of course, that is what we are seeking to do. And we are seeking to do that by approximating, as far as possible,

the separated margins, and we hope to do that by the cicatricial process in the site of enucleation. I have had not a little, nor yet considerable experience. As compared with abdominal hysterectomy, it is child's play. This is practically an external operation. It bears some resemblance to that operation which the general surgeons speak of with such *clat* and flourish of trumpets—the amputation of the extremity. I should hesitate very much to do an abdominal hysterectomy in this condition. While the condition of descent has been accomplished and has become established, the condition of ascent has not been accomplished; and all of us know, who have attempted to replace these prolapsed uteri, that it is extremely difficult to push them up to, to say nothing of above, their normal plane. I have had two experiences in the removal of uteri of normal size by the abdominal method, and it is my earnest petition to the Throne above that I shall not again be called on to repeat the experience. Notwithstanding the Trendelenburg position, and notwithstanding all the advantages which we secure from the later developments of technique, it is certainly one of the most difficult things I have attempted. In one case I succeeded, and in the other case, having secured the best degree of hæmostasis possible, I bowed myself out with the best grace possible.

Dr. HALL: Do you believe it would have been an exceedingly difficult operation, then, to have made a vaginal hysterectomy in that particular case?

Dr. REED: Yes; the patient was an old maid with an exceedingly narrow vagina, and for that reason I thought the abdominal method best. Otherwise I would not have made the attempt from above. It would be better to shorten the broad ligaments above and secure a firm barrier from the deposit of cicatricial tissue by a secondary operation, if need be, than by a primary operation.

Dr. HALL: Just for the benefit of science, I may state that I will vouch for the correctness of the statement that one of the best-known surgeons in Ohio attempted to remove a normal uterus after the appendages were removed, but after working a couple of hours he quit and did not do it. I will also vouch for the qualifications of the man. He is considered a good man.

Dr. REED (in closing): I don't know that I have anything to add. The point that has been raised is to my mind one worthy of consideration, but I believe that in all the cases I have had in my hands I would very much prefer to effect the shortening of the broad ligaments by a secondary operation rather than by the primary operation through the abdominal incision. I question the safety of the abdom-

inal method. As a rule, the primary statistics of vaginal hysterectomy, even in malignant disease, are better than the statistics of abdominal hysterectomy for even non-malignant disease. I think that rule will stand investigation. Of course Dr. Johnstone spoke with a great deal of truth, probably, when he said he had never had a death from the abdominal method, but if he will attempt the vaginal operation he will find it easier.

THE STATUS OF GYNÆCOLOGY ABROAD.

FRANCE.

Intra-uterine Therapeutics.

DUMONTPALLIER (*Nouv. arch. d'obstet. et de gynéc.*, 1895, No. 6) strongly advocates the use of chloride of zinc for the treatment of endometritis. He refers to his statistics for the year 1889, where evil results followed this treatment in but four to five per cent., and these cases were in women who left the hospital too soon and would not submit to subsequent treatment. He uses a pencil containing but fifty per cent. of the caustic, and is careful to protect the cervix from contact with it. He considers the absence of evil effects due to these precautions. He urges the subsequent treatment: A bougie with an olive-shaped tip should be passed frequently into the uterine cavity for several months following the zinc application so as to break up glandular atresia, if this has been produced. If stenosis occurs, he recommends very gradual dilatation of the contracted part. He concludes with the statement that curettage has lost ground in professional estimation, and that many surgeons now employ the chloride of zinc immediately after curettage as an antiseptic and hæmostatic.

In the discussion which followed, PINCHEVIN cited the case of one woman, formerly treated by the zinc chloride, who suffered so terribly in consequence at her menstrual periods that hysterectomy had to be resorted to. He knew of another case where the patient was about to resort to the same radical operation for relief. He believed that curettage was less frequently practiced now because the indications of the operation were better understood and because the operation was confined to endometritis of the body of the uterus, cervical endometritis being treated by more radical operations.

CHARPENTIER maintained that the stenoses consequent upon the

employment of zinc were slow in forming, not appearing until several months thereafter. He had never seen atresia follow a curettage.

DOLÉRIS stated that, owing to the ulcerative process which the zinc produces, scar tissue is formed, with consequent tissue contraction. The physiological object to be attained is the reproduction of a new mucosa. Moreover, where disease of the appendages existed this was liable to be greatly aggravated by the production of secondary infection caused by the use of this agent.

PETIT had succeeded in restoring the uterine cavity in several cases of atresia, following the use of zinc, by means of negative electrolysis.

BONNET had seen three cases of uterine atresia following the employment of Dumontpallier's method.

BUDIN recalled the case of a woman similarly treated in whom atrophy of the uterus took place to such an extent that that organ now seemed hardly larger than the end of a little finger.

DUMONTPALLIER, in replying to this criticism, acknowledged the failures and accidents which had been quoted, but he maintained that these might be opposed by a record of success in hundreds of other cases. The chloride-of-zinc treatment offered danger only where patients had not been treated seriously. He thought it unquestionable that his method was at least indicated in hæmorrhage at the menopause and in the endometritis of old women. In these cases there could be no danger. In Germany his method seemed to have met with a favorable judgment, if the criticism recently made by Schöffler, of Berlin, could be taken as an indication.

Uterine Sclerosis following Cauterization with Chloride of Zinc.

PINCHEVIN (*ibid.*) presents a series of microscopical preparations and photographs. The first were of sections from the uterus of a woman who had died of pneumonia thirteen days after a curettage. In the thickness of the muscular layer were seen the bottoms of glandular *cul-de-sacs* which had escaped the sharp curette, and which would have acted as foci for the reproduction of the mucosa. Another section, removed from a uterus five months after curettage, showed the mucosa completely renewed. A third series of sections, taken from a uterus upon which Dumontpallier's method had been practiced several years before, showed an entire absence of glandular structure, and in the place of the mucosa was a thick, sclerotic zone formed of several layers of very dense, fibrous tissue.

[It can but be a matter of surprise to us that any surgeon to-day should advocate such barbarous treatment as that discussed in the foregoing paragraphs. It is even more surprising that such a method of treating endometritis should have received serious discussion, though it is satisfactory to see that Dr. Dumontpallier stood alone, apparently, in his advocacy of an escharotic to the lining membrane of the uterus. This treatment was also in vogue in this country forty or fifty years ago, but it has for several decades been relegated to that garret of worn-out methods and broken tools which is the necessary "catch-all" of advancing knowledge. We do not believe there is a man of even second-rate prominence in this country to-day who would dare to advocate such a procedure, and we are quite sure that there is not a single body of gynæcologists who would listen seriously to such a suggestion. Thanks to the tireless efforts of the pioneers in this specialty, who made of this country the *alma mater* of modern gynæcology, we are still too strongly imbued with the lessons of their experience, and recognize too forcibly the value of their observations, willingly to leave an eschar in any erectile tissue. This has been for so many years inculcated as an axiom that it has at last borne enduring fruit among gynæcologists, at least everywhere, we believe, in America. The axiom that scar tissue in erectile tissue is always and peculiarly liable to be the cause of after-complications, often of a serious character, is a truth discovered by an American, and its importance must, sooner or later, be recognized by the whole gynæcological world.]

It is difficult to understand why curettage as an operation should be losing ground in France, as Dr. Dumontpallier says, unless it is that the indications for this operation are not rightly understood. In this country, when curettage is performed for a diseased or long-standing congested condition of the lining membrane of the uterus, the results are uniformly good, if the proper aseptic precautions have been taken. But here, as well as in France, if curettage is used with the expectation of curing a pathological laceration of the cervix uteri or a pelvic cellulitis or peritonitis, the operator must lamentably fail, and the credit of the operation naturally suffers through his ignorance.—ED.]

Uterine Pathology and Basedow's Disease.

JOIN (*ibid.*) calls attention to the very intimate relation which, he believes, exists between the menopause and pathological conditions of the uterus and Basedow's disease. In this relationship he

places exophthalmic goitre in the position of an effect or consequence, and not the cause of the uterine condition. He proves this point by citing forty-three cases which came under his own observation in which the uterine lesion was observed to precede the goitre. Moreover, an improvement in the local condition is always followed by the appearance of the general disease. The author believes that this coincidence of these morbid processes is comparatively common, but exophthalmic goitre under these circumstances nearly always presents itself under obscure clinical forms. He suggests, therefore, that this disease should be differentiated and carefully searched for in each case. The menopause may, in like manner, determine the onset of Basedow's disease, and the author is inclined to admit that this form of goitre plays a considerable part in the pathology of approaching age.

Cysts of the Breast.

GAUDIER (*Gaz. méd. de par.*, 1895, No. 6, and *Cent. f. Gyn.*, 1895, No. 25) found in the milk of a patient, who had nodules in the breast, the *Staphylococcus albus* in a pure culture. He injected this culture into the breast of a nursing bitch, and two days later single nodules were distinguished in the glandular structure of its breasts, which gradually developed into cystic cavities. He concludes, therefore, that these cysts form the final stage of the nodules.

CHARRIN has also found the *Staphylococcus albus* in the milk of a healthy wet nurse, but no after-effects were found in the children whom she nursed.

GREAT BRITAIN.

A Mode of More Easily and Rapidly dilating the Cervix of the Unimpregnated Uterus.

DR. JAMES BRAITHWAITE (*Brit. Med. Jour.*, June 29, 1895) says that dilatation of the unimpregnated uterus is necessary chiefly for two purposes—the treatment of certain cases of dysmenorrhœa, and to examine the uterine cavity with the finger for diagnostic purposes. The object of this paper is to point out that the time chosen should be the last day of the menstrual period, just when the discharge is ceasing or has ceased. The directions given as to the best time for dilatation in text-books are to dilate between the periods; this is the universal practice, and it is the one that the author at one time followed.

The os internum between the periods firmly resists dilatation, and only yields to considerable force. Laminaria tents when withdrawn show a narrow ring corresponding to the tight, undilated os internum, all the rest of the tent being fully expanded. Moreover, as stated, it takes two sittings on consecutive days to dilate with tents and dilators, and even then it is often very imperfectly accomplished. Not infrequently a rise of temperature and rigor will follow the introduction of a tent, and the continuance of these symptoms with pain may necessitate its early removal.

Many years ago the author found that if the dilatation is done on the last day of the period, when the discharge has ceased, the parts are elastic and soft, and have little resisting power. Hegar's dilators can in many cases be passed in, one after the other, until No. 17 is reached. This admits of the passage of a medium-sized index finger. An anæsthetic is necessary. 'Two Sims' hooks close together are better than a volsella. They hold better, and are less likely to scratch the operator's finger. The process does not require more than twenty minutes. The smaller sizes of the dilators should have the terminal inch a little curved forward and less in size, so as to enter more readily.

Every uterus does not yield so readily as described, and occasionally a tough cartilaginous os internum is met with which almost refuses to yield at all, but even this is more dilatable than it would be in the intermenstrual interval.

To show the importance of dilatation for diagnostic purposes the author quotes two cases where hysterectomy has been done for small uterine polypi which might have been easily recognized and removed with a thorough dilatation of the cervix.

In conclusion, the advantages of the plan recommended are :

1. Danger from sepsis by the use of tents is avoided.
2. Inflammation, if rise of temperature with rigors and much pain indicate it—traumatic rather than septic—is also avoided.
3. The process, both to patient and operator, is easier, and is incomparably quicker.
4. Less structural injury is done to the parts, as they dilate more kindly and without much resistance.
5. The dilatation is more complete and perfect, so that if used for dysmenorrhœa a permanent cure is more likely to result, and if for diagnostic purposes, examination is possible in cases in which otherwise it would have been impossible.

Overoperating in Gynæcology.

SIR WILLIAM PRIESTLEY'S address, delivered in the Obstetric Section of the British Medical Association, received the following editorial notice (*Brit. Med. Jour.*, August 10, 1895): The best way to utilize Sir William Priestley's address is to scrutinize closely the work not of charlatans but of enthusiasts. Among the gravest features of the question is the attitude of certain Continental schools. Verneuil, as Sir William Priestley explained, was violently opposed to many novel radical measures. Unfortunately, several European authorities of high repute continually advocate extreme courses, such as total extirpation of the uterus with the appendages, in cases of chronic, or even acute, inflammatory affections of the tube and ovary.

Last June the German Gynæcological Association met at Vienna. A leading authority laid down the law that in gonorrhœal disease of the appendages it is absolutely wrong to leave the tube and ovary on one side, even if they seem healthy, and that it is much better to remove the uterus as well. Another authority supported him on the score that many "parenchymatous bleeding areas" are to be found in the uterus in these cases, so he always removes that organ. He does the same, he adds, in cases of malignant ovarian tumor—a clinical and pathological condition quite different from gonorrhœal inflammation. Veit, of Berlin, spoke in a vein of satire. The advocates of amputation of the uterus insist that when the appendages alone are removed exudations on the two pedicles set up pain and cause adhesions to the intestine, or else fix the uterus. Veit attributes the exudations to fresh gonorrhœal infection; therefore, says he, "castration of the husband is the best treatment for the patient." Unfortunately, in France, as well as in Germany, hysterectomy is extensively carried out. It is difficult to conceive anything more unsurgical than extirpation of the internal female organs for damage done by gonorrhœa; yet foreign authorities seem to go further—they recommend radical operations for pelvic cellulitis after labor. Sir William Priestley makes a note of this great abuse, and rightly adds that the operation is sometimes undertaken because the patient is too impatient to wait for the slow recovery which would have taken place in due course. The truth is, that an operation followed by successful results is not necessarily justifiable, and impatience on the part of the patient is not by any means more absolute justification than her more tardy consent after injudicious advice.

On Overoperating in Gynæcology.

WILLIAM DUNCAN (*Brit. Med. Jour.*, August 10, 1895) writes the following communication regarding Priestley's address on the above subject :

As many of those who, like myself, listened with pleasure to the address with which Sir William Priestley opened the Section of Obstetric Medicine and Gynæcology must have longed to (but of course could not then) discuss the burning questions dealt with in the address, I trust you will kindly find room in the columns of the *British Medical Journal* for some remarks thereon.

In the first place let me ask, Is there, as Sir W. Priestley avers, overoperating in gynæcology? Is it not rather the fact that the surgery of diseases of the female pelvic organs has participated in the immense advance which has been made in recent years in the surgical treatment of disease in all other parts of the human frame? I feel sure the surgeons and obstetric physicians of this country will repudiate the words of Verneuil (which Sir W. Priestley quotes), in which he describes those who remove the ovaries or resect a slice of the œsophagus or stomach as indulging in a "sanguinary debauch"! Sir W. Priestley states that a demand for less operating comes from across the Atlantic, and it is right that this should be so, as in America lacerations of the cervix (no matter how slight) have so frequently been sewn up and the uterine appendages removed for neuroses that discredit has been brought upon these operations; but I altogether refuse to believe that in this country such indiscriminate and unnecessary operating is ever indulged in.

Sir W. Priestley speaks "of the tendency in the present day of the obstetric physician to invade the domain of the surgeon in reference to what may be called external operations" (I presume he means operating on the uterus and its appendages *per ventrem*); and he goes on to say, "The College of Physicians will look askance at the claims for the Fellowship of those of its members whose chief work is avowedly surgical"; that is to say, that an obstetric physician may operate as much as he likes from below—remove fibroids, cure fistulæ, extirpate the uterus and ovaries *per vaginam* as hitherto—but once let his knife wander above the *mons veneris*, even though he feels convinced he can save his patient more surely than by operating *per vaginam* he puts himself outside the pale—the Fellowship of his College is not for such as he.

This statement, sir, is such a serious one that in the interests of

many present—and of all future—obstetric physicians it surely calls for some definite ruling on the part of the authorities of the College. Of all the obstetric physicians and assistant obstetric physicians in London and the provinces, there are, I believe, only five who do not perform abdominal section. Of the five, one was a very successful ovariologist until the claims of an extensive midwifery practice caused him to cease doing these operations; two are prevented by the rules of the hospital to which they have become attached from continuing to perform abdominal section, and the remaining two have, I believe, never so operated.

Sir W. Priestley suggests that those obstetric physicians who perform abdominal sections should take the Fellowship of the College of Surgeons; but, as one who possesses this valuable diploma, I would respectfully point out to the president and council of the College of Physicians that if they refuse the Fellowship to obstetric physicians who operate on the female pelvic organs *per ventrem* and give it, as has been done for many years, to those who operate *per vaginam*, a grave injustice will be inflicted on many gentlemen who, on becoming obstetric physicians, looked forward to being made Fellows of their College in due course, provided they had done nothing derogatory to the dignity of the profession. By all means, if it is thought desirable, let it be a law that in future obstetric physicians who perform abdominal sections shall not be eligible to become Fellows of the College, but, in common justice, let such law not be retrospective.

Sir W. Priestley asks, "Are our antiseptic methods a sufficient safeguard against the possible contamination of lying-in women by one who undertakes extensive surgical work in addition to obstetric practice?" I answer emphatically, Yes, and a man who has operated on a pyosalpinx or a suppurating ovarian tumor can in a quarter of an hour make it perfectly safe for him to attend a lying-in woman.

Let me ask Sir W. Priestley this question: "Which is more likely to keep himself aseptic—the obstetric physician who performs abdominal section, and who, from the very fact of doing these operations, is imbued with the profound importance of keeping himself and all his paraphernalia aseptic—or he who does not so operate, but who may at any moment have to attend a midwifery case soon after examining a patient suffering from a stinking vaginal discharge? The solution of the difficulty as to the obstetric physician operating Sir W. Priestley finds in "appointing a gynæcological surgeon to every hospital who shall work in conjunction with the obstetric physician." If by this he means that every disease of the female peculiar to her sex (carun-

cles, polypi, vaginal cysts, uterine cancer, etc.) may be diagnosed by the physician, but must be handed over to the surgeon for operation, then I say no obstetric physician of repute will hold office under such conditions; but if he means that the obstetric physician may (as at the Samaritan Hospital) do whatsoever operation he likes *per vaginam*, but must pass on all cases requiring abdominal section to the surgeon, then I say that in my humble opinion it is a case of "straining at a gnat but swallowing a camel."

For my part I agree with what Dr. Herbert Spencer, of University College Hospital, said in a paper which he read before the Medical Society: that it would be a wise and gracious act on the part of the surgeons in every hospital to hand over to the obstetric physicians all the cases of disease of the female generative organs requiring abdominal section. This has, I believe, been done for some years at King's College Hospital without friction between Professor Playfair and his colleagues.

In conclusion, let me repeat now what I said in the debate on Dr. Spencer's paper—namely, that as the art of obstetrics is in great part surgical, those who practice that art should be called obstetric surgeons, that the qualification for holding such a post at a hospital should be the F. R. C. S. and not the F. R. C. P., and that the existing anomaly was the fault not of the College of Physicians but of the College of Surgeons, which in years gone by refused to shelter under its wing the obstetrician.

GERMANY.

Anatomical and Clinical Suggestions in Regard to Ectopic Pregnancy.

M. HOFMEIER (*Centbl. f. Gyn.*, No. 31, 1895), on the strength of fourteen reported cases, speaks of the diagnosis and ætiology of this morbid condition. The diagnosis during the first two months is always difficult; an exact differentiation is, above all things, important. Frequently there may be noticed a very marked pulsation in the affected side; the disappearance of this, the non-increase in size, as well as a gradual hardening of the tumor, point to a commencing disintegration, while an increase in the pulsation denotes a growth of the pregnancy. The removal of a piece of the uterine mucous membrane for investigation, which, in the early stages, gives the best means of diagnosis, is exceedingly dangerous; and in further advanced and doubtful cases this procedure is of no value. The pains, which are usually referred to tubal contractions and grouped under

that name, are clear evidence, after the decidua has been thrown off, of the end of pregnancy.

The author maintains that an operation is indicated, as in other dangerous tumors of the tubes, so soon as the diagnosis is positively made. The evidence of hæmatoma does not obviate the danger of the condition, because the tumor may continue to increase in size after the death of the fœtus. Where the pregnancy occurs near the ostium abdominale there is tendency to tubal abortion, rupture occurring especially where the pathological conditions of the tube are favorable. A previous inflammation of the mucous lining of the tube is often not discovered, and older perimetritic changes are but seldom perceived.

Of the fourteen reported cases, the author operated upon nine, with one death. Of the five cases not operated upon, one died of hæmorrhage, one of septicæmia; two were cured by spontaneous atrophy of the tumor and one by the formation of a lithopædion.

Case of Incarcerated Hernia Obturatoria.

GERDES (*ibid.*) reports this case as occurring in a woman sixty-seven years of age who was suffering from a severe bronchitis. She was seized with severe pain in her right thigh and with nausea. Pelvic pain was also present. Pressure upon the vessels on the inner side of the thigh increased the pain in that limb. On vaginal examination, the finger in the neighborhood of the obturator foramen impinged upon an elastic and very painful tumor. Diagnosis: Hernia obturatoria. Herniotomy was thus performed: An incision, one finger's breadth below the horizontal ramus of the pubis, was made, about six centimetres in length, through the skin and cellular tissue; a movable, deep-seated mass of fat was disclosed. This was cut through and the pectineus muscle was laid bare. Upon cutting through this the finger came upon an elastic mass covered by loose connective tissue. Upon separating the latter, two inches of the small intestine came into view. This hernia was reduced, the patient made an uneventful recovery and was discharged in ten days.

SWITZERLAND.

The Results of Curettage in Endometritis Fungosa.

HANS VOGELBACH, in an inaugural thesis at Bâsle (*ibid.*), reports sixty-five cases of this disease treated by curettage at the Bâsle clinic, whose results he has recorded. Of these cases, 69.2 per cent. were

cured completely, 13.8 per cent. were cured after an interval had elapsed. His observation of the cases extended from one to six years. The curettage was performed with the patients in the Sims position.

Ureteral Fistulæ.

E. BUMM, of Bâsle (*ibid.*), after a thorough introduction concerning the ætiology and the present state of therapeutics of fistula of the ureters, gives the following personal observations: Patient, aged thirty, in childbed with her fifth child, after an early rupture of the membranes was delivered by forceps. Upon the introduction of the second blade the patient felt severe pain in the right side. Several days thereafter a hard mass was felt on the same side which, as soon as the urine was passed, disappeared. There was no fever; examination disclosed a fistula of the right ureter. On account of the refusal of the patient to undergo any dangerous operation, the fistula was closed successfully *per vaginam*, in spite of its unfavorable position. After eight weeks' preparation with hot injections, tampons and daily massage, it became possible to get at the fistula situated in a mass of hard tissue. An attempted closure with thread sutures caused stoppage of the flow of urine and its symptoms. At first it was possible only to form an artificial vesico-vaginal fistula in the neighborhood of the ureteral fistula; later the edge of the bladder was sewed to the edges of the ureteral fistula. At a third operation the vesical fistula was entirely closed. The patient was cured without any subsequent bladder symptoms. The author recommends this method—which produced so excellent a result in an apparently very unfavorable case—for those uretero-vaginal fistulæ especially which are situated high up in the vagina and are complicated by the presence of much scar tissue in their neighborhood.

HUNGARY.

A Rare Case of Extra-uterine Pregnancy.

TÓTH, of Budapest (*ibid.*), reports a case of rupture of the sac in the third month. The fœtus continued to grow in the abdominal cavity until its death in the thirty-sixth week of pregnancy. An operation was performed ten weeks later, and the condition was found to have been a tubo-ovarian pregnancy. There was absence of fever.

Two Cases of Extra-uterine Pregnancy.

ELISCHER, of Budapest (*ibid.*), reports two more recent cases of ectopic pregnancy which he cured by means of elytrotomy. The first case was that of a secundipara, twenty-six years old, whose first labor occurred seven years previously and was uneventful. The operation was performed at three months without anæsthesia. Severe hæmorrhage, on account of wounding the placenta, during the vaginal incision. The placenta and fœtus were removed by forceps. Febrile reaction set in on account of infection from a portion of placental tissue left behind, which was thrown off on the seventh day. The cavity, thirteen centimetres in depth, was then treated with creolin and iodoform-gauze tampons. Three days of continuous delirium without fever, which the author ascribes to iodoform poisoning, complicated the case, which thereafter went on to recovery without further disturbance.

The second case was that of a multipara, twenty-five years old, who was also operated upon at the third month of pregnancy. The clinical symptoms were those of post-uterine hæmatocele. The placenta, on account of its high position, could not be removed, so, after the extraction of the fœtus through the vaginal opening, the cavity was firmly packed with iodoform gauze. The placenta began to come away about three weeks later. In this case also there was a febrile course, although without marked exacerbations. The treatment already described was followed by recovery.

The author, who, at a more recent date, has cured five cases with this condition by means of elytrotomy, gives the preference to this operation over abdominal section, especially in anæmic patients.

ITALY.

Should Pregnancy in Tuberculous Women be Permitted to go to Term?

MARAGLIANO, of Genoa (*Centbl. für Gyn.*, No. 29, 1895), brings up this important question as a result of the following personal observations: In 835 phthisical patients the onset of the pulmonary trouble dated from pregnancy or childbed in 226 cases. Similar observations in the cases of pregnant and non-pregnant phthisical women, conducted over an equal period of time (twenty-one months), showed that among the former death occurred in ninety-four per cent. and among the latter in but eighteen per cent. In forty-two pregnant women with circumscribed tuberculosis, only three cases remained stationary, while in seven cases death occurred within three months

after childbirth, in nine cases within three to six months, in ten cases between six and nine months, and in four cases after the period of one year; finally, nine women died in childbed.

Circular Rhachitic Pelvis.

BODO, of Turin (*Centbl. für Gyn.*, No. 30, 1895), gives an anatomical description of the contracted pelvis of a rhachitic woman who had died of tuberculosis. In early childhood she had suffered from a spontaneous luxation (posterior) of both thighs. It is known that in spite of the luxation she became pregnant and was twice in labor, though whether at full term and unassisted instrumentally is not known.

He especially calls attention to the fact that the bilateral luxation of the thighs modified the rhachitic character of the pelvis and gave a circular form to the vaginal outlet.

Hæmatocele.

LAURO, of Naples (*Centbl. für Gyn.*, No. 31, 1895), describes the case of a twenty-eight-years-old patient who had had a miscarriage and in whom symptoms of post-uterine hæmatocele suddenly occurred after severe exertion (the sewing-machine). One month later the tumor was opened through the vagina on account of severe pain fever, loss of strength, etc. The sac was drained and rapid recovery ensued. The peculiar interest of this case lies in the fact that it is the first time, according to the author, that hæmatocele has been operated upon in Naples.

On the Influence of the Removal of the Ovaries upon Metabolism.

EMILEO CURATULO and LUIGI TARULLI, in a communication to the Edinburgh Obstetrical Society (*Edin. Med. Jour.*, August, 1895), maintain that the starting point for all researches on this subject is the now acknowledged clinical fact that patients can be cured of osteomalacia by oöphorectomy. None of the theories based upon this fact have, according to these authors, a strictly scientific foundation. They refer to Petrone's researches, which tend to show that the good effects of the operation upon the disease is due to the anæsthetic (chloroform) and not to the spaying.

They suggest that the proper method by which to arrive at a true and scientific conclusion regarding the effect of castration lies in a previous study of the changes occurring in the metabolism after castration under healthy conditions. They refer to the fact that animals after castration tend to grow fat; but no scientific investigation of this

phenomenon, with its resulting changes in metabolic activity, of respiration and urinary composition, after the operation, have ever been made. Their efforts have been directed to fill this gap in our ætiological knowledge for the purpose of obtaining light in regard to the effect of castration upon the development of mollities ossium.

In their experiments, the animals (bitches) were kept upon a constant diet previous to castration, so that an almost constant average excretion of nitrogen and of phosphates was obtained. After castration a very marked and long-continued decrease in the quantity of phosphoric anhydride was observed. In one case, in a bitch which excreted before operation a daily average of 9.93 grammes of nitrogen and 1.50 grammes of phosphoric anhydride, the average of nitrogen discharged after the operation remained about the same, but the phosphoric anhydride diminished to 0.75 gramme. The daily examinations were continued for a period of eighty-five days.

It is important to note the remarkable rapidity of this decrease after operation. In one case, where primary union was obtained in three days, the decrease in the discharge of phosphates was noticed six days after.

The authors are inclined to believe, in view of the fact that the quality and quantity of the food given to the animals experimented upon was constant, that the decrease in the elimination of phosphates after castration does not depend upon the introduction of a smaller quantity of them through the food but upon a diminished oxidation of the phosphorus which exists in organic form in the tissues; and this, being stored up in the system in combination with calcium and magnesium, would accumulate in the bones in the form of calcium and magnesium phosphate.

They therefore believe that the removal of the ovaries is advantageous in this disease but deny the theory both of Petrone, who believes that the *fermentum nitricum*, ascribed as the cause of the disease, is destroyed by the chloroform narcosis, and of Fehling, who maintains that the ovary represents the *stimulus*, which determines the mollities ossium.

The theory of the authors is founded on the general theory of Brown-Séguard, which refers a kind of internal secretion to the ovaries, in common with all other glands of the body—*i. e.*, “they continually introduce into the blood a secretive product, the chemical constitution of which is still unknown, capable of facilitating the oxidation of the phosphoric organic substances which supply the material for forming the salts of the bones.” It results, therefore, that when these

glands are removed there is a greater retention of organic phosphorus, which, in combination with other minerals, gradually restores the needed earthy salts to the bones with recovery of their solidity.

The authors hope to extend this theory, with a further advance in experimentation upon animals, to the question of fat combustion, as an explanation of the phenomenon of fattening after castration and, perhaps, of that frequently noticed in connection with the menopause and in sterile women.

AMERICAN PÆDIATRICS.

Rational Therapeutics of Cholera Infantum.

BLECH, GUSTAVUS (*New York Medical Journal*, June, 1895), outlines the following plan of treatment in cholera infantum :

First, remove, if possible, the disturbing causes; second, treat symptoms which *per se* are liable to endanger the life of the patient; and third, sustain vitality.

Therapeutics, based upon the ætiology and pathology of a given case, is the only one to be employed.

In the ætiology of cholera infantum the author considers one thing certain, and that is that it is due to a chemical decomposition of food, causing an inflammatory condition of the digestive and alimentary canal.

As soon as called to a case of cholera infantum the author prohibits for the first day any food whatever. He gives strict instructions in this direction. He finds remedies of little value. He had used peroxide of hydrogen (medicinal) until he tried hydrozone; the latter he found was twice as strong.

He washes out the stomach with a solution of hydrozone—half an ounce to a pint of water. The vomiting usually ceases after the first washing; this may be repeated if the vitality of the child will permit it. In every case, no matter how far advanced, the author does not omit an irrigation of the bowels, for which purpose a soft-rubber catheter attached to a common bulb syringe is used, and the catheter is introduced as high in the colon as possible. The water should be sterilized, and to every quart two ounces of hydrozone should be added. This, if necessary, may be repeated in two hours. Improvement after the first or second irrigation is marked. Only two other

remedies are employed—morphine and strychnine. Both should be administered hypodermically according to indications. No antipyretics should be given. If the fever is very high, and if irrigation of the bowels does not reduce it, the whole body should be washed with alcohol.

For the next twenty-four hours the author allows nothing but sweet, strong Russian tea. Most remarkable success has attended this method of treatment.

Masturbation in Early Childhood.

Dr. J. P. WEST (*Cleveland Medical Gazette*, July, 1895) thinks that while the practice and results of masturbation in older children and adults are well known and appreciated, the habit in early childhood has not received the attention that its importance deserves. The practice of this habit in young children differs so much from that in older children, causing such a puzzling chain of symptoms and such dire results, that the subject should receive a place in every book devoted to the diseases of children. The fact that children under two years of age can and do masturbate is a revelation to many physicians. Literature on the subject is very scarce. Thigh rubbing is referred to by some authors, and nearly all give masturbation as a cause of different diseases in older children; but a succinct account of the symptoms of this habit in the very young is very difficult to find. The author reports three cases, not with the intention of adding anything new, but to call attention to this neglected subject:

CASE I.—Female, now five years and a half old, pale and undersized, although a good-sized baby at birth; was very slow learning to talk, and still talks imperfectly. She had not until this winter required any medical attention except for this habit, and on four or five occasions for convulsions. Mother thinks the child was six or nine months old when it was noticed that frequently when sitting in her high chair she would grasp the handles, stiffen herself, and stare. The mother was directed to watch the child and report. In a few days she stated that in addition to the stiffening and staring she would rub her thighs quickly together several times, come to herself with a sigh, tired, relaxed, and sweating. This would occupy one or two minutes. These seizures never occurred during sleep. If the mother saw her begin the act, a sharp word would stop it, but if once begun it would be carried through.

After diligent search the cause was found in improperly arranged clothes. She had no genito-urinary or intestinal trouble. By a

proper arrangement of clothing and almost constant watching, the habit was overcome, and no convulsion has since occurred.

CASE II.—Male, three years and a half old, was thought to have stomach trouble on account of his rubbing his stomach so much, and complaining of its hurting him. The author was consulted for supposed stomach trouble and extreme nervousness. The child was small, had a scowl on his face, looked wearied and bloated, was nervous and fretful, a poor eater and sleeper. It was found that he formerly handled his penis a great deal, but had been easily broken of this. No stomach trouble was found. A touch of the penis caused an erection. This organ was large for a child of his size and age, the preputial orifice narrow and the prepuce tightly adherent to the glands. This was loosened under chloroform, quite an amount of smegma removed, and a tonic ordered. He improved for a time, but in a few months was brought again for "stomach trouble"; was very nervous and very costive; prepuce was not adherent, but was swollen. While the mother was talking, the child, looking out of the window, began to rub his stomach. This rubbing consisted of his grasping his clothes over the lower abdomen and pulling them so as to rub his penis, at the same time contracting his abdominal muscles and drawing up one leg; after this a sigh and a flushed face. His diet was regulated and he was given a mild laxative and half a grain of monobromide of camphor four times a day. The habit was easily broken and a marked improvement occurred. The habit was caused at the age of one year and a half by the condition of the prepuce, and later kept up by constipation.

CASE III.—Female, eighteen months old. This child had been greatly troubled with pinworms, and several had been found in the vulva. The irritation from the worms first started the habit, which was practiced by rubbing the vulva with the hand, and continued after the removal of the worms. This was prevented, but it was soon noticed that she was accomplishing the same object by thigh rubbing; this was soon stopped. In all of these cases some cause of local irritation must be carefully sought for. Dr. Jacobi says: "All causes resulting in direct or indirect irritation of the nerves of the genito-urinary organs are apt to give rise to masturbation in the young."

The two most important means to be used in breaking up this habit are the removal of all sources of local irritation and extreme watchfulness.

Remarks on the Hygiene of Children's Shoes ; Measurement of Length.

Dr. CROZER GRIFFITH (*University Medical Magazine*, April, 1895) calls attention to the importance of proper foot covering for children. Almost always shoes are improperly made. It is often supposed that a baby's foot, because plump and well rounded, is therefore shapeless. Attention has been called to the proper shape of the shoe by various writers, and has awakened the interest of many mothers, but not of many shoemakers. Shoes are constantly seen which are clearly cramping the baby's toes, with the unnatural result of producing ingrowing toenails and the like. In the effort to incite needed reform in this direction the author has made a number of foot tracings of children of different ages. They were prepared by painting the sole with a mixture of lampblack, turpentine, and sweet oil, and then pressing it upon a piece of blotting paper. These show that the child's foot at a very early age is of the same shape as the adult's. The conclusion naturally drawn is that the earliest shoes should be rights and lefts, and made to fit the feet.

Measurement of Length of Children.—Sometimes it is of importance as well as of scientific interest to determine how rapidly a baby is increasing in length. The determination of weight is simple enough, but the holding and measuring of a child against the wall is an awkward and inaccurate method for measuring its length. To facilitate this, the author has devised an apparatus. It is similar to the foot measures used by shoemakers, but much enlarged. To use it, the baby should be laid on its back upon a fine mattress ; the end piece can then be placed above the head, and the sliding piece moved along until it touches the foot, both toes and heel. The apparatus can be easily constructed by any clever carpenter.

Some Economic Aspects of Hospitals.

BAYARD HOLMES (*Bulletin of the American Academy of Medicine*) separates the hospitals of this country into two not very distinct classes. In the first class are institutions organized by city, county, or State, conducted by legally appointed officers, and supported by sums raised by taxation. In the second class are all those hospitals organized by groups of citizens, and governed by autocratic and often self-perpetuating directors, and supported by subscriptions secured from private individuals. These hospitals are not responsible to the public, though many of them receive not only remission of their taxes, but frequently legislative and other public grants of money or privilege. For the

most part the institutions and their directors are entirely free from any public supervision, and their accounts are not audited by any public officer. It is of the second class of hospitals alone that this paper treats. The economic factor represented by medical charities, as a whole, and typified in the hospital, is a subtle and complex factor highly evolved, acting and reacting upon itself and upon various other social factors. Only a few aspects of the question, and those the most obvious and simple ones, will be referred to here :

1. The endowment of hospitals, like the endowment of any other institution, is, socially considered, an error.

To this proposition many exceptions will be taken, but which the unprejudiced student of sociology is bound sooner or later to admit. Through its endowment, in whatever form this endowment may be made, the hospital becomes an exploiter of labor, and as an exploiter of labor its interests and prejudices become identical with the interests and prejudices of other capitalists. As a rule, we may say that the prejudicial influences of endowments make the hospital and all other charities into engines of tyranny to beat down the living of the poor, whose miseries they ought to relieve instead of multiplying. If the gifts for hospitals were expended within ten or twenty years for hospital treatment, this abuse might be somewhat minimized.

2. Indulgences, business and social, are purchased by the rich through hospital endowments.

Our present business methods are excessively unethical and competitive in the worst sense of that word. Successful competition in manufacture depends upon the destruction of the home, the destruction of the family, and the arrest of education and of culture. Few successful men are so callous as to fail to discern results of a business career under the circumstances of modern business methods. This is especially true of men as they approach the end of life. Then comes the thought of a possible indulgence to be purchased of the accusing conscience by traditional charitable gifts, such as hospital endowments. The activity of women in hospital building is easily understood when we consider the cruelty of women in society. The society woman is hard and unjust to all women lower than herself in the social scale, and this cruelty is a necessary mark of rank. But society women are not entirely without consciences. The prick of constant injustice and cruelty shown daily and hourly toward her servants and toward all but her own set makes life miserable and almost unendurable. Then she seeks the mollifying influences of charitable activity to soothe the mind pestered by self-accusing thoughts. It is strange that the pub-

lic is so easily deceived into thinking every hospital builder a lover of man. It is especially strange that medical men co-operate with the enemies of society in deceiving themselves and the public.

There is no more discouraging sign in the horizon of medical sociology than the attitude of the medical profession toward the wealthy. It is the attitude of the body servant, or often worse—that of the would-be body servant.

3. Eleemosynary hospitals beat down the wages of workingmen and lower their standard of life.

In any community where a large class depends upon the hospital in case of sickness a smaller and less complete home is necessary, less intelligence needs to be exercised by the mother for the care of the family, less devotion and less time needs to be given by her to domestic affairs. Under these conditions the wages paid to the head of the family can be correspondingly reduced, because, with the hospital at hand, public opinion will not be aroused against the low wages and the consequent low standard of life by the unexpected and unusual suffering incident to sickness at home.

4. The hospital furnishes a remunerative occupation to the charity monger.

To secure contributions to hospitals the most unethical procedures are frequently undertaken. A successful solicitor out of employment has been known to press the need of a peculiar class of cases, and at last get an organization formed and begin its endowment on a commission of twenty per cent. of the cash receipts from subscriptions. On no other basis than this can the multiplication of hospitals be explained. No special class of pathological conditions, no religious sect, and no nationality has escaped the acute eye of the exploiter of charity. Every city in the United States, in its list of hospitals, bears testimony to this conclusion.

OBSTETRICS.

By J. D. BISSELL, M. D.

The Height of the Fundus Uteri during the First Stage of Labor and at the End of the Second Stage.

Dr. W. E. FOTHERGILL upholds the views expressed by Schröder, Stratz, Hoffheinz, and others, that the fundus uteri does not sink dur-

ing the first and second stages of labor. This fact he considers proved (1) "by clinical observation during labor, measurement showing the fundus to be as high just before the head escapes from the vulva as at any moment earlier in the labor; (2) measurements of frozen sections of parturient women give the same result." Measurements of thirty cases were taken during the intervals between pains, and it was found that the average of these cases showed (1) the fundus to rise 0.3 inch before birth, (2) the uterus to narrow laterally 1.1 inch before birth, and (3) the tape measurement from pubes to fundus to lessen one inch before birth. From these facts he concludes that the uterus is narrowed during labor, both laterally and antero-posteriorly, though it is not reduced in length. Its cubic content, however, is lessened as it loses its rotundity, which is accounted for by (1) the passage of part of the child from the uterus into the vagina; (2) by the loss of liquor amnii.—*Edinburgh Med. Jour.*, June, 1895.

Superfoetation: A "White" Child and a "Black" Fetus.

Dr. A. W. WHITE (Gov. Med. officer, Trinidad) reports an interesting case of superfoetation as having occurred on May 9, 1895: A female foetus six inches long was first delivered; from its size and appearance it was supposed to be about four months old. It was dark-colored like its mother. Soon after the removal of the placenta a full-formed, full-term female infant, which had all the appearance of a "white man's child," was born.—*British Med. Journal*, July 6, 1895.

"White Leg" after Confinement.

Dr. C. HERBERT ROBERTS read a paper before the Obstetrical Society of London in which he gave details of sixteen cases of so-called "white leg." He pointed out the differences observed in these cases from those mentioned in text-books of the present day, and endeavored to show that the condition described in such books was not that commonly met with after delivery. He thought that the term "white leg" should include several forms which differ widely in many particulars. He proposed the following classification: 1. Cases due to pressure. 2. Cases associated with general disease. 3. Cases of a true septic nature. 4. Cases of thrombosis apart from sepsis. 5. Cases of thrombosis and sepsis combined. His conclusions were: (a) The common variety after delivery in the thrombotic, the brawny white leg, is rare. (b) In such thrombotic cases there are not neces-

sarily signs pointing to sepsis, and that such thrombosis is rather a blood change associated with or due to severe loss of blood at the time of delivery. (*c*) In most cases the thrombosis starts primarily in uterine and pelvic veins. (*d*) That such thrombotic legs are not brawny and white, but dusky in color and œdematous, invariably painful, with definite tender spots, and that the femoral or saphenous veins are constantly felt thrombosed. (*e*) Both legs may be affected, but always one after the other. (*f*) The onset of the disease is about the tenth or twentieth day. (*g*) Pyrexia is the rule for a variable period, but does not necessarily indicate sepsis. (*h*) Such cases run a definite course of about six to eight weeks. (*i*) Complications are uncommon, but pulmonary embolism is the greatest danger. (*j*) The prognosis to life is good. (*k*) The prognosis to the leg itself is not good; the majority, perhaps, get well, but many remain permanently damaged.—*British Medical Journal*, May 11, 1895.

The Advantages of Walscher's Position in Delivery.

Dr. W. E. FOTHERGILL, in a paper upon this subject, states that by allowing the legs to hang, the weight of the limbs will be transmitted to the innominate bones, causing a rotation of the pelvic girdle about an axis passing through the two sacro-iliac joints, and when the symphysis moves downward in their rotation the conjugate is increased. The increase in the diagonal conjugate may reach 1.2 centimetre, the average increase being 0.93 centimetre. In other positions the chief power in forcing the symphysis down is the contraction of the uterine and abdominal muscles. Much of this force or energy is saved by the weight of the limbs, and the pressure of the head on the symphysis is avoided. When the legs are allowed to hang, the perinæum is not put on the stretch, and hence the danger of laceration is greatly diminished. The position saves the perinæum from undue pressure by forceps, especially when high forceps are used.—*Edinburgh Medical Journal*, July, 1895.

The Effect of Maternal Mental Emotions upon the Fetus.

Dr. J. W. COKENOWER has endeavored to show the unsoundness of the popular opinion that to the maternal mental influence is due the vices of conformation and birthmarks. He states that malformations, deformities, and birthmarks are rare and the number small compared with the whole number of births. He quotes the statistics of the Imperial Lying-in Hospital in Vienna, where out of 23,413 births there were only 60 malformations, of which clubfoot and harelip

predominated. "Hence, if we compare the frequent mental emotions of the gestating female with the rarity of human malformations, it would seem clearly proved that the maternal mind does not exercise any influence in the abnormal physical development of the fœtus *in utero*." The process of evolution is from the periphery to the center, those portions most remote from the median line being formed first and the others last. Therefore any arrest of evolution before the development of all parts of the body be completed must result in malformation corresponding to the stage of evolution at the time of its arrest. If the hand has been formed, and from any cause the process of evolution arrested, then the child will be born with a hand where the shoulder should be and without arm or forearm. The process of evolution may be excessive as well as incomplete, producing supernumerary fingers, toes, and other appendages, overdevelopment of the capillaries producing nævi, etc. If the maternal mental emotions ever affect the fœtus so as to induce deformity it must be done at the precise time when the deformed part is undergoing evolution. It would be impossible for mental emotion to produce a deformity of a part after that part had been completed. He draws the following conclusions :

1. "That various intense mental emotions and expected malformations are common with all gestating women, yet abnormal births are exceedingly rare, and the alleged law governing them of no utility.

2. "That the apparent relation of cause and effect is due to accidental physical and evolutionary coincidences, which would be less frequent if the facts could be learned previously, instead of subsequently, to the birth of the child.

3. "That like causes produce like results. Hence malformations should be manifested accordingly, yet a diversity of maternal emotions are assigned to the same cause of deformity.

4. "That in a large proportion of cases of malformations no mental or even physical explanation is offered by the parents or friends.

5. "That nævi or birthmarks are due to retarded, arrested, or accelerated local capillary circulation, and perhaps embarrassment to normal development.

6. "The malformations may arise from abnormal generative matter of one or both parents, abnormalities in the maternal organism, or from diseases of the ovum and umbilical cord.

7. "That malformations of the same kind and degree occur repeatedly and can be systematically classified, whether in the animal

or vegetable kingdoms."—*International Journal of Surgery*, May, 1895.

The Walking Treatment of Women after Confinement.

Dr. R. J. NUNN reports a case attended by him where the woman got up on the day following her confinement. She was a widow and the mother of several children, and was compelled to work. He adopted the following method of treatment: "Twice daily the patient was to use a douche of warm solution of boric acid, immediately after which she was to report to his office. Here the uterus would be thoroughly cleaned out with camphnodine, the faradic current used with a vaginal electrode, a tampon applied, and an abdominal bandage constantly worn."

In about four weeks the patient was discharged cured. She declared that her recovery had been better than after her first confinement, when she kept in bed ten days.—*Virginia Medical Monthly*, May, 1895.

Inversion of the Uterus followed by Severe Hæmorrhage.

Dr. A. ROSS MATHESON reports a case where profuse hæmorrhage followed immediately after the third stage of labor was completed. On examination, he found a resisting mass in the vagina, and was at first greatly perplexed as to its true nature. It proved to be an inverted uterus, and was soon restored to its normal position. Hæmorrhage was then arrested.—*Brooklyn Medical Journal*, August, 1895.

Some Observations on the Maternal and Fetal Blood at Birth.

GEORGE ELDER and ROBERT HUTCHISON (*Edinb. Med. Jour.*, August, 1895) have found that their observations upon the blood of children and mothers made immediately after parturition have so exactly coincided that they have united their reports into one.

The observations were made independently, in the Royal Maternity Hospital, between August, 1893, and January, 1894.

The observations were upon the blood of the child taken from the umbilical cord after it was severed, and from that of the mother taken from the lobe of the ear during the latter part of the first or during the second stage of labor.

The number of red and white corpuscles were estimated by the Thoma-Zeiss instrument for the purpose (the hæmocytometer and leucocytometer), using the usual sulphate-of-soda-and-acetic-acid solution for the former, and for the latter a one-third-per-cent. solution of acetic acid tinted with methyl green.

Blood of Newly Born Child—Red Corpuscles.—The blood of children within a few hours or days of birth has been found to contain more red corpuscles than that of adults. Hayem found 5,368,000 per cubic millimetre; Sørensen, 5,665,000; Otto, 6,165,000; Schiff, 5,825,465; Gundobin (1), 6,700,000. Practically all these results, however, are obtained from children several hours to several days after birth. Most of the highest numbers given have been some hours—six, eight, or more—after birth; and Schiff (2) has asserted that this is due to the fact that during this time the child takes no nourishment, while it is losing fluid by perspiration, urine, etc., and, accordingly, the total volume of blood being decreased, the proportion of solids (corpuscles) is increased, just as one finds, according to the same observer, that the number of corpuscles is greater in the morning, after the fast of the night, than during the day, when the loss of fluid is made up for by the nourishment taken then.

Observations taken at the moment of birth are, from this consideration, of some value, although for comparison the authors have no figures of their own of the blood some hours after birth, as they found extreme difficulty in getting a sufficient quantity of blood from a child of a few days without pressing it out, which would, of course, completely destroy the value of the results. In six cases, carefully observed, the figures varied from 4,100,000 to 6,750,000 per cubic millimetre, the average being 5,346,560. The individual results were: 4,100,000, 4,150,000, 5,375,000, 5,825,000, 5,875,000, 6,750,000. These results show that the blood of the newly born contains *from 350,000 to 500,000 more red corpuscles per cubic millimetre* than does the blood of the adult.

Although these results correspond almost exactly with those of Hayem (3), they are below those of most of the other observers, and would tend to show that during the first day or two of life the number of red corpuscles per cubic millimetre increases. This has been explained by Hayem on the suggestion that a great many young corpuscles are thrown out into the circulation then; while Schiff explains it by the decrease in the total volume of the blood which then occurs, leading to a relative increase of blood-corpuscles per cubic millimetre.

Another point brought out by the figures given is the great variation in the number of corpuscles per cubic millimetre present, which is much greater than in adults, a variation which has been shown to occur, not only in the blood of different children, but of the same child at different periods.

These changes, which occur sometimes within a few hours, are too rapid to be accounted for by any processes of hæmopoiesis or hæmolysis, and must be chiefly due to changes in the total volume of blood present, and show that the increase of red corpuscles per cubic millimetre soon after birth is not altogether due to rapid production of red cells, as has been suggested, but rather to variations in the volume of blood.

The authors did not observe that there was a greater difference in the size and shape of the red corpuscles in children than in adults.

A large proportion of nucleated red corpuscles were observed in the blood from the cord, varying usually from one twentieth to one eighth of the white corpuscles present. Occasionally the free nucleus of one could be observed, but none were seen with mitosis of the nucleus.

Erythroblasts were present in considerable numbers, and were seen by the authors on the second or third day, but are believed by them to disappear by the fifth day, the disappearance being rapid toward the latter part of gestation.

Blood of the Mother at Parturition—Red Corpuscles.—It is interesting to compare with these figures the results got from the examination of the mother at parturition. In sixteen cases examined, the number of red corpuscles varied from 2,900,000 to 5,000,000 per cubic millimetre, giving an average of 3,978,937, which is considerably below the number present in the blood of the normal adult, and still more below the average number present in the child at birth. In every case the red corpuscles of the child were considerably more numerous than those of its mother; when those of the child were below normal the blood of its mother was still more anæmic, whereas when the mother's blood reached the average of the healthy adult that of her child was considerably above this; nearly always was there 1,000,000 red corpuscles or more per cubic millimetre difference between them.

Compared with the standard of the healthy adult, anæmia is the rule in the mother, plethora is the rule in the child.

Hæmoglobin in the Child.—Although there seem to have been fewer observations on the hæmoglobin of the child than on the red corpuscles, the results are much more unanimous. The authors examined the blood of nine children with Gowers' hæmoglobinometer, and found that in these the hæmoglobin varied from 95 per cent. to 115 per cent., giving an average of 105.6 per cent.

If it is remembered that very few adults have 100 per cent. hæmoglobin, as reckoned by Gowers' hæmoglobinometer, and that probably 85 per cent. is a good average for healthy adults, it will be seen that

there is a great excess of hæmoglobin in the blood of the newly born child. This increase of hæmoglobin does not directly correspond to the number of red corpuscles present, as shown by the fact that in one child with 5,875,000 red corpuscles there was 98 per cent. of hæmoglobin, while in another child with 5,825,000 red corpuscles there was 112 per cent. Further, it appears to be evident, for the reason given above—viz., that 100 per cent. is much too high a percentage for the hæmoglobin present in the blood of the healthy adult—that not only is the fœtal blood richer in red corpuscles, but that each corpuscle is richer in hæmoglobin than is the blood of the adult.

Schiff has shown that the quantity of hæmoglobin present decreases gradually during the first fourteen days of life from 104 per cent. to 90 per cent., as estimated by Fleisch's instrument. This decrease is relatively greater than the decrease in the number of red corpuscles during the same period.

Hæmoglobin in the Mother.—In seven cases examined, the hæmoglobin was found to vary from sixty per cent. to eighty-three per cent., giving an average of seventy-two per cent. This shows how very poor in hæmoglobin is the blood of the mother compared with that of the child, on an average containing only two thirds as much per cubic millimetre.

White Corpuscles in the Child.—Authorities have varied considerably with regard to the relative proportion of the white corpuscles, but this variation was probably due to variations in the periods of observations. The authors found in seven cases an average of 17,884 per cubic millimetre. In a rough estimate they found about twice as many white corpuscles as in the healthy adult.

The authors have found the following varieties of white corpuscles in the blood of the newly born: 1, small mononucleated; 2, large mononucleated; 3, neutrophile; 4, eosinophile. They found no basophile cells.

Lymphocytes varied from thirty-five per cent. to forty per cent., which is higher than the proportion in the blood of the adult.

Large Mononucleated formed from two to 3.5 per cent. of all the white corpuscles in our specimens—much the same as in normal blood.

Neutrophiles formed from fifty-five per cent. to sixty-five per cent. of the white corpuscles. This is below the number in the blood of the adult, where they form usually seventy-five per cent. or upward of all white cells.

Eosinophiles were from one to 2.5 per cent. In adults they form about two to four per cent.

White Corpuscles in the Mother.—It has long been known that during pregnancy the number of white corpuscles is increased. The author's observations confirm this. In eleven cases examined by the leucocytometer the number of white corpuscles varied from 8,000 to 25,000 per cubic millimetre, giving an average of 14,522. It will be seen that this average, though much higher than that of the normal adult, is somewhat below that of the newly born child. Although there was no case where the number of red corpuscles of the mother equaled that of her child even approximately, in the case of the white corpuscles the numbers of the mother and of her child were in some cases practically identical.

SUMMARY.—1. The blood of the newly born child is relatively richer in red corpuscles than that of the adult by 350,000 to 500,000 per cubic millimetre.

2. For a short time after birth (up to about two days) the red corpuscles seem to increase in number. This is probably due to the fact that the total volume of blood is less, from the fluid lost from the body during this time being in excess of that absorbed. Thus concentration of the blood is produced. After the second day or so the red corpuscles gradually decrease.

3. The number of red corpuscles varies much more than in adults, probably because of greater variations in the total volume of the blood.

4. At birth there are always present a considerable number of nucleated red corpuscles.

5. About the sixth month of intra-uterine life the number of nucleated red cells is very much greater than at birth. They probably rapidly decrease in number during the later months of pregnancy, and altogether disappear from the blood a few days after birth.

6. The blood of the newly born child is relatively much richer in hæmoglobin than the blood of the adult.

7. Not only is this so, but the individual red corpuscles are richer in hæmoglobin than those of the adult.

8. The blood of the mother at parturition is anæmic.

9. In any individual case the blood of the mother is considerably poorer in red corpuscles per cubic millimetre than that of her child, and it is still more deficient in hæmoglobin.

10. Both the blood of the mother and that of the child contain a larger number of white corpuscles than normal adult blood. The blood of the mother may be quite as rich in white corpuscles as that of the child.

11. The blood of the child contains a distinctly larger proportion

of lymphocytes and a distinctly smaller proportion of neutrophile leucocytes than the blood of the adult; the number of eosinophile cells seems to be slightly deficient.

12. At the sixth month this excess of lymphocytes is probably even more marked than at birth; they probably decrease during later months of pregnancy.

13. After parturition the number of white corpuscles in the blood of the mother (at least of those who suckle their children) decreases markedly in a few days.

GENERAL CONSIDERATIONS.—The great difference in the constitution of the blood of the mother and that of the child would refute the idea of their being mixed, if histological investigation had not already done so.

Considering intra-uterine respiration and metabolism, the excess of red corpuscles and hæmoglobin in the blood of the child over that of the mother is of great importance. The excess of hæmoglobin and hence oxygen-carrying power of the child's blood over that of the mother has been long known, but its importance in the processes of metabolism has not usually been considered in this connection. The oxygen of the fœtus, being available only from the blood of the mother, creates the necessity for the excess of hæmoglobin, and when the child begins to get its oxygen directly from the air this necessity ceases, and the fact is that the hæmoglobin decreases rapidly in the first two weeks of extra-uterine life.

The excess of hæmoglobin and red corpuscles in the blood of the child shows that its life is to a certain extent independent. In cases of anæmia the blood of the child does not suffer with that of the mother, but, on the contrary, the child gets more than its share.

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A REMARKABLE CASE OF RUPTURED ECTOPIC PREGNANCY; LATE OPERATION; RECOVERY.*

BY GEORGE H. NOBLE, M. D., ATLANTA, GA.

On account of the complications and the contingency successfully met, this case is presented as one of interest. She was a woman twenty-five years of age, mother of four children, the youngest two years old, and had had two abortions, the last three years since. The menstruation was normal; the last two months, however, it did not appear. For the past four weeks she had had some nausea, and occasional vomiting, with pains in the back and abdomen.

For the week preceding her admission to the hospital she had sharp pains in the lower part of the abdomen, and on the night before coming in they were accompanied by nausea, vomiting, and cold sweat. The following day there was dullness in the hypogastric region, tender on pressure; pulse 100, quite weak; temperature 98.2°. At intervals of a day or so the pains were repeated, with a gradual increase of dullness, until a prominence appeared in the hypogastric region, which was mistaken for a distended bladder. The temperature ranged from subnormal to a slight increase above normal, the circulation growing weaker and the surface paler. Such was the history prior to the time I first saw her.

On inspection, I found that the prominence in the hypogastric region had extended upward to within two inches of the umbilicus

* Read by title before the Medical Association of Georgia, April, 1895.

and laterally a little beyond the central portion of the inguinal region upon either side, which, taken in connection with the history and the character of the circulation, suggested ruptured ectopic pregnancy. Preparing to examine *per vaginam*, I was informed that she was menstruating; but feeling assured that it was a metrostaxis, and explaining the same to the attendants, I confirmed the diagnosis by outlining the lower portion of the immense clot in the abdominal cavity. I advised an immediate operation, but through some misunderstanding she was not placed in my charge for about forty hours, at which time the blood-clot had extended to a point two inches above the umbilicus, with a regular rounded outline, distending the abdomen fully as much as a six and a half months' pregnancy. The circulation was very weak, and the temperature below normal. By the time preparations were completed for the operation the outline of the mass of clots had changed, a projection or protuberance about the size of a No. 250 orange appearing on its margin in the left hypochondriac region.

The operation was done on the tenth day after the primary rupture. The incision passed through a gangrenous patch of peritonæum about two inches and a half in diameter, which could be easily removed by sponging. The omentum immediately beneath it and overlying a very firm portion of the clot was uninjured and not adherent to the abdominal wall, though firmly attached to the uterus, upper margins of the broad ligament, and brim of the pelvis. After releasing it both broad ligaments were clamped, as it was impossible to determine without loss of time which side the hæmorrhage came from on account of the mass of adhesions and clots.

Above, the mass of clots was sacculated by agglutination of the intestines, except at the point described as a protuberance. There the gestation sac was found completely severed and lying loose in the left hypochondriac region.

After cleansing the cavity and separating the adhesions, a surface as large as my two hands upon the coils of small intestines was raw and bleeding. A spot about the extent of sixteen square inches on the descending colon was perfectly black, being in a very low state of vitality, and just below it was another place of equal size of a dark-green color, while in the pelvis no healthy peritonæum was left.

After liberating and tying off the appendages the clamps were removed. Upon the right side there was softening of the ligament, which, with the pressure of the clamp and tension of the ligatures, caused the broad ligament to slowly tear away from the uterus to a point below the internal os. This was a feature altogether unexpected,

and the woman being in a precarious condition, having lost before the operation blood enough to destroy the life of two persons, made the situation rather serious.

The bleeding ligament was tied in two sections, but the margin of the uterus was so friable that ordinary measures of hæmostasis were impracticable. I was therefore brought face to face with a hysterectomy in a woman whose pulse was 160 per minute and very feeble, even under vigorous stimulation. As ideal surgery is not always the best surgery, the quickest and shortest way out of the difficulty was adopted. The uterus was drawn up out of the wound, encircled with an elastic ligature, transfixed with "skewer" pins, and cut off below the internal os (retraction of the bladder from the constant upward displacement enabling it) and anchored in the lower angle of the wound by a running silk suture, all in less than two minutes. At this juncture forty-eight ounces of salt solution were thrown in the median basilic vein before its effect became perceptible upon the pulse. The operation was then completed by thorough irrigation, gauze packing to keep intestines out of the raw pelvis, and a rubber drainage under the gangrenous peritoræum. She was kept upon the table and surrounded by artificial heat and stimulated until the pulse came down to 140, when she was transferred to the bed. Under active stimulation she made a good recovery. The stump came away in fourteen days and the wound healed without any evidence of weakness in the abdominal wall.

In the outset hysterectomy was not desirable, the uterus not being sufficiently diseased to require it. The appendages on both sides, however, were sacrificed, on account of the mutilation necessary to liberate them from the extensive adhesions.

As to the method of removing the uterus, it was not an ideal one, but the only one admissible under the circumstances. The time necessary to have done a complete hysterectomy or an intraperitoneal stump would have cost the patient her life; hence a life-saving method instead of an ideal or fancy operation was employed.

ÆTIOLOGY AND PATHOLOGY OF ALBUMINURIA OF
PREGNANCY, INCLUDING PUERPERAL ECLAMPSIA.*

BY J. C. JOHNSON, M. D., ATLANTA, GA.

The part which has been assigned me in the discussion to-night involves the consideration of three essential points: The cause, manner of development, and peculiar nature of albuminuria in pregnancy.

It is obvious, from its common occurrence, that the parturient state predisposes to it. It is easily apparent how the condition of the system, with its usual environments during this period, favors and contributes to its production; but the exciting cause is more obscure, and in that obscurity rests the reason why one woman is attacked and another escapes, and why it varies in intensity and degree.

The discovery of this cause will determine the relation which the physiological changes incident to pregnancy sustain to the pathology of the disease, and at the same time reveal the exact nature of the cause itself, for in the character of its effect, and manner of operation, the influence and agency of each is practically defined.

An abnormal product or excess of elimination is due either to an excess or abnormal waste of the elements of that product in the system, or a failure of the system to appropriate the proper amount supplied. An excess of excretory product in the system is due either to an excess supplied, abnormal formation, or deficient elimination. So the resultant value of our present study will be commensurate with the correctness of our discernment, how predisposing conditions and the exciting cause or causes induce the departure from the normal physiological action that allows albumin to appear in the urine and urea to be retained in the blood.

How closely akin the disease is to ordinary albuminuria is not satisfactorily known, but the absence of material organic change in the kidneys, as a rule, is proved by the prompt and spontaneous recovery when pregnancy ends; while in ordinary Bright's disease it is due chiefly to an exfoliation of the epithelium of the uriniferous tubules, it is not successfully disputed that a slight and transient amount may appear without organic change, or the credit of pathological significance, so far as the kidneys themselves are concerned. Whatever the morbid anatomy may be, it can differ from that of ordi-

* Read before the Atlanta Obstetrical Society, August 15, 1895.

nary nephritis only in so far as the cause is manifest and an essential part of the lesion. The extent of organic change is of no significance, so far as the pathology is concerned, save for the assistance it lends in estimating the potency of the influences which led to its development.

Accepting these statements as facts, we can omit to review the various morbid conditions of nephritis and direct our attention chiefly to the general condition of the body. Whether we are warranted in pursuing this course can only be determined by further investigation. I am inclined to the opinion that it promises the most satisfactory solution of the question.

That the mere mechanical pressure upon the kidneys or renal circulation, in the absence of other influences—as changes in the quality of the blood supplied, or change in the texture of the kidneys themselves, previously existing—is incapable of producing the phenomena under consideration, admits of no serious doubt. It is true that obstruction to the return of blood from an organ does produce passive congestion which may give rise to interstitial changes, but this result in pregnancy is the exception rather than the rule, notwithstanding the condition is invariable.

Besides admitting the influences of pressure upon the renal circulation, it is more than probable that the same pressure is exerted on the artery as the vein, though less direct, as the vein is situated just in front of the artery. If this be true, the blood could return from the kidneys with as much facility as it entered.

Again, there is no evidence that the relative sizes of the mother and fœtus has any part in its production; on the contrary, it occurs as often when the fœtus is small as when it is large, and twins do not seem to exaggerate the tendency or the disease.

Bearing in mind that a disturbance of the kidneys or their function is possible only in the existence of such conditions as affect the quantity and quality of their blood, and having proof that there is no appreciable organic change prior to pregnancy, we reasonably look to systemic derangement for the chief and most potent factor.

Following the line of study suggested by this presumption, we are led to the consideration of the various influences exerted in the production of this derangement.

Without particular reference to the cause or nature of the physiological changes which take place in the nervous system, suffice it to say that the susceptibility is increased. The effect of this increase may be estimated by the same rules that govern its relation to trophic

and functional action in health, so it is only necessary to remember the reciprocal action of the blood and nervous system to properly associate them in their causative relation to the disease.

Eminent obstetricians and physiologists assert that with the progress of pregnancy there is a loss of albumin and a decrease of red blood-corpuscles in the blood. While there is nothing remarkable in this fact, being consistent with and a natural consequence of the dietetic and digestive habits of the patient during the first three or four months, the reason why it should obtain in the latter months is not so clear. It is true that the growth of the fœtus demands more rapid tissue metamorphosis and more food, but the food taken during this period usually exceeds in amount that to which the mother was previously accustomed.

Yet it suggests a clew to the part which the blood plays in the pathology of albuminuria. Of course the character of the food has much to do with determining whether or not, and to what extent, the loss of albumin and red blood-corpuscles is due to a diminished amount of ingesta furnishing the essentials of these constituents. There is no reliable evidence that less of this class of proximate principles is taken into the stomach or that their digestion and absorption is less perfect. As a rule, barring organic lesion of the stomach, its capacity to prepare and introduce the food into the system is commensurate with the ability of the system to appropriate the same. Hence we must look further for the grounds upon which these writers might seek to establish their claim. If our conclusions so far are correct, it is evident that the lungs must bear a great part of the responsibility in the development of albuminuria. It is not improbable that the mechanical interference which the gravid uterus opposes to the natural respiratory function, and the close confinement to which pregnant women subject themselves during the latter months of pregnancy, so lessen the relative amount of oxygen taken into the blood that the deficiency superinduces imperfect combustion of nitrogenized principles, and thus hinders the proper and full appropriation alluded to above. As a result of this deficient appropriation the blood plasma is congested, the systolic force is increased, arterial tension is raised, osmosis is perverted, nutrition is impaired, and functions suffer according to the disturbance of the organs to which they belong, and Nature seeks to balance her vital economy, to maintain her equilibrium by discharging this excess, the extraneous. *Liquor sanguinis* is effused into the cellular tissue, while the kidneys fall chief heirs to the excess of solids—albuminuric acid and their kin; and thus between the alter-

nate action and perversion of the blood and kidneys the various phenomena of albuminuria are produced. The train of nervous symptoms are dependent upon this derangement, and are intensified by the predisposition which the increased susceptibility of the nervous system affords.

We all know that there is doubt as to the pathology of puerperal eclampsia.

The physical act of muscular inco-ordination, save in intensity and duration, differs very little, it matters not the condition or the cause. Any and every convulsion, general in character, involves simply a disturbance of the normal relation between the brain and spinal cord. Whatever diminishes the inhibitory function and directive agency of the one, or increases the excito-motor action of the other, favors inco-ordinate movement. This statement is supported by the fact that convulsions are a common complication in infantile diseases.

The manner of nervous organization and the mental habit determines the susceptibility of an individual. The more highly nervously organized, the more susceptible is he, and the power of resistance to diseases of neurotic origin, or due to neurotic impressions, is in inverse proportion to his susceptibility.

Applying these facts to the study of the pathology of puerperal eclampsia, we find three conditions operating in its production :

I. The physiological increase in susceptibility.

II. Increased arterial tension, and excitation by morbid products in the blood, which, by perversion of trophic action, increases the susceptibility.

III. (Applicable to eclampsia of labor) established muscular contraction with exaggerated cerebral tension.

THE VALUE OF ICHTHYOL IN GYNÆCOLOGY.*

BY ELIZABETH M. CLARK, M. D., PHILADELPHIA.

In gynæcological practice, as in that of dermatology, the necessity for local treatment and the shortcoming of our present methods causes the practitioner to be ever on the alert for new remedies. Foremost

* Read before the Philadelphia Obstetrical Society, September 5, 1895.

among those lately recommended is ichthyol, a comparatively new drug, which has been alternately lauded by some as being almost a specific in certain forms of disease and condemned as loudly by others as being quite without effect.

That such widely different results are said to be obtained by the use of the same drug in different hands may be accounted for either by the enthusiasm of the observer, by error in the recognition of the true pathological condition, or by the more ready response of certain groups of individuals of different habits, temperaments, and climate.

Twelve years would seem to be a sufficiently long time in which to test accurately the virtues of a drug that has been freely used by surgeons, dermatologists, gynæcologists, and clinicians. Still we read conflicting reports of its value as a therapeutic agent.

Ichthyol was first prepared by Schrötter in 1882 by the dry distillation of a bituminous sulphurous mineral, rich in a deposit of fossil fish, obtained from the mountains of the Jura. This oily product is said to contain from ten to fifteen per cent. of sulphur in chemical combination. By neutralization of its acid properties with alkalis we get the ammonium and the sodium salts. The sulpho-ichthyolate of ammonium is the one in general use. It is freely soluble in water, in equal parts of alcohol and ether, and in all oils and fats—hence lends itself readily to almost any desired method of administration.

Ichthyol was introduced to the profession by the celebrated dermatologist Unna, of Hamburg, in 1883, and at once took high rank as an analgesic, discutient, and alterative, especially applicable to local inflammatory conditions of the cutaneous and subcutaneous tissues. Unna's theory of its action was that "by its reducing power it deprives the endothelium of the blood-vessels of oxygen, and so causes them to contract." This view has been combated, but no better one has been advanced.

Dr. W. H. Freund, Physician to the Women's Wards of the Strassburg University Hospital, was the first to apply pure ichthyol to gynæcological practice. He claimed speedy and radical cures in subacute and chronic pelvic inflammatory disease (parametritis and perimetritis, so called), with exudation and adhesions, in chronic metritis and tubo-ovariitis, cicatricial atrophy of the vagina and cervix; that it is valuable in pruritus, vaginitis, and in fissured nipples. He prescribed it internally in doses of a minim and a half from two to eight times daily, in rectal suppositories, by inunction over the abdomen and on the vaginal tampon in a five-per-cent. glycerin solution. He claimed that it was not only an analgesic, but that it possessed dis-

tinctly resolvent properties. Freund has had many followers, especially in the German clinics.

Bloch, of Vienna, is said to have first applied pure ichthyol to the endometrium, and was at once convinced of its resolvent and anodyne power.

He reported great improvement in cases of chronic metritis with venous engorgement.

On the other hand, Oberth's conclusions from a study of forty-two cases (published in 1891 in the *Wien. klin. Woch.*, No. 16) were entirely adverse. He denied its power to control pain and affirmed that it had no resorbent action; that, used internally, it had no influence over the appetite or general nutrition; that the suppositories did not control tenesmus, but, on the contrary, frequently irritated the rectum, and that while sometimes a cure followed its application to the catarrhal uterine mucosa or to an eroded os, the results were neither so certain nor so satisfactory as those obtained from the use of other astringents.

Égosse says that in France the claims of Freund have not been substantiated, and that in Auvard's clinic its use has been abandoned.

The literature on the subject up to within the past year has been very thoroughly reviewed by Dr. Malcolm Storer in a paper read before the Massachusetts Medical Society, June 13, 1894, and subsequently published in the *Boston Medical and Surgical Journal*.* Dr. Storer's paper is complete and interesting, and from an extensive use of the drug in his own gynæcological practice he reaches the following conclusions:

"First: While ichthyol is by no means the gynæcological panacea that some observers have claimed it to be, still it has sufficient approved value to deserve a high place in our list of remedies.

"Second: While its chief action is to relieve pain, it does possess certain resorbent qualities which in some cases are relatively powerful.

"Third: That its use is unattended with danger and discomfort.

"Fourth: That it has not yet been proved that it has any gynæcological value other than as a local application."

In my own observations, made mostly in the gynæcological department of the Polyclinic Hospital during the past eighteen months, I confess to considerable disappointment in the results, or rather lack of results, obtained from the use of this drug.

* Vol. lxxxi, No. 5, 1894.

In a careful study of fifty cases, including endometritis—simple and specific—metritis, ovaritis, salpingitis, subinvolution (simple hyperæmia, passive congestion of the uterus and annexa), malpositions with adhesions, infiltrations, and recent or old exudations, *there has not been a single case in which we could be absolutely sure that the use of ichthyol alone was productive of marked benefit.*

Some of these cases received semi- and tri-weekly treatment for months, the drug being persistently applied upon a tampon wet with a twenty-per-cent. solution in glycerin.

The majority of patients presenting themselves for treatment in our dispensaries are subject to conditions of life which of themselves predispose to faulty metabolism and consequent ill health.

The gynæcologist who simply considers the pelvic condition, being content to give only local treatment, in nine cases out of ten would be doing gross injustice to his patient.

We can not but be impressed with the similarity of symptoms complained of by these women, although the pelvic lesions, functional or organic, may differ widely. What are these symptoms? Pain in some region of the abdomen or pelvis, a dragging sensation, soreness, leucorrhœa, menstrual disturbances, bladder irritation, headache, loss of appetite, general weakness, insomnia, nervousness, and, almost without exception, constipation. These symptoms are so common to all uterine diseases that they have been called the uterine syndromata, and are applied to all pathological uterine conditions with certain modifications.

They tell nothing of the real trouble, yet for their relief the patient seeks our aid, and when they decrease in intensity or disappear she considers herself cured. We examine and treat locally according to the condition found. Since ichthyol is believed to be a sedative, to cause capillary contraction, and to promote the absorption of exudate, we frequently use it, hoping to get its astringent and anodyne effect, at least, if nothing more. But we do not permit our patient to go on being poisoned by her own secretions and retained excretions, neither do we fail to give tonic, alterative, or sedative medication if called for, and this fact some enthusiastic observers seem to have lost sight of, attributing results thus gained to local applications.

If the pelvic condition is one of functional disturbance and not due to any gross lesion, as is often the case, or if there has been a recent but not extensive inflammation with perhaps a slight amount of exudation and infiltration, we may acquire brilliant results with

the ichthyol treatment; but then it must be remembered that these cases do well with any form of local treatment.

Cases like the following seem to be amenable to ichthyol:

B. B., aged thirty-nine, married twenty-two years; has had five children; no miscarriage. The last pregnancy occurred twelve years ago. For the six months previous to her first visit she had been suffering with pain in the back and abdominal pain, coming on two days preceding the onset of menstruation and continuing the first two days of the flow. She had a leucorrhœal discharge and was constipated. Upon examination, the uterus was found in normal position, freely movable, ovaries apparently normal in size and position, tubes slightly thickened, and an eroded os. In short, we had a case of simple endometritis with catarrhal salpingitis. Laxatives were given to regulate the bowels. The granular tissue around the os was touched with pure carbolic acid (which, by the way, we find more effective than applications of pure ichthyol), the vaginal vault painted with the tincture of iodine, and the twenty-per-cent. ichthyol-glycerin solution applied by means of the tampon. Seven treatments were given, extending over two menstrual periods, and the patient found herself so comfortable that she did not consider it necessary to return.

But in cases of deep-seated chronic pelvic inflammatory disease, with all the pathological tissue changes induced by it, we have ceased to expect any specially curative effect from the use of ichthyol, however applied.

We know how frequently the treatment of such conditions by counter-irritation and depletion, with the indicated constitutional medication and attention to hygienic laws, is followed for a time by complete remission of symptoms, and our patient finds life again enjoyable and thinks she is well. We also know that a very slight cause will rekindle the old trouble, no matter what kind of local treatment is resorted to.

A report like the following, taken from an abstract in the *American Journal of Obstetrics*, April, 1894, is misleading, and calculated to do much harm by encouraging the general practitioner to apply thoughtless routine treatment to pelvic diseases, regardless of the various and varying pathological and ætiological factors. The report referred to is that of Polacco, of Milan. He records a series of over nine hundred cases, treated by himself and his colleagues, extending over a period of fifteen months in 1891 and 1892, which were *cured*, he says, by the local and internal use of ichthyol.

Note his classification: "Eczema of the vulva; pruritus vulvæ;

vaginitis; vaginal cicatrices; erosions of the cervix; ectropion; cervical lacerations (multiple, bilateral, and deep); cervical and corporal endometritis; metritis; subinvolution; prolapse of the annexa; oöphoro-salpingitis, single and double; periovaritis; perimetritis and parametritis; antelexion and anteversion (with complications); retroflexion and retroversion (with complications); hæmatocele."

Why not add complete procidentia and neoplasms to complete the list?

Such so-called conservative gynæcology defeats its own ends, and scarcely needs comment, were it not, as I have already said, productive of great harm to the patients of its advocates and followers.

If to be conservative means to be preservative of the life and health of our patient—and surely that is the true meaning of the word, used medically—then must we learn to remove a pathological cause whenever possible, to correct a malposition as far as possible, to unite torn structures, to recognize beginning degenerations, and to study into the remote, reflex, and underlying nervous phenomena of pelvic disease.

After eliminating those conditions the cure or amelioration of which depends upon some surgical procedure, and those slighter ailments which are always relieved and often cured by simple constitutional and hygienic treatment, we find the field for the use of ichthyol greatly narrowed.

As a means of counter-irritation, applied pure to the vaginal vault, it has not in our hands yielded as certain results as Churchill's tincture. In some cases it appears to irritate the sensitive mucous membrane, producing desquamation of the epithelium and consequent distress to the patient.

As an application to the endometrium, either subsequent to irrigation or without it, the same criticism applies. A mixture of equal parts of carbolic acid and tincture of iodine is to be preferred. We have administered it internally to only a limited number of cases, but have not observed any benefit accruing to those from its use.

My opportunities for testing its value in acute pelvic inflammation have been limited, but, so far as I have been able to observe, I believe that here it is of greater value to the gynæcologist than in chronic conditions. It does help to mitigate pain, and seems to hasten the resorption of the recently exuded plastic lymph.

REPORT OF A CASE OF ENURESIS TREATED BY
INJECTIONS OF NITRATE OF SILVER.*

BY RAMON GUITÉRAS, M. D., of NEW YORK,

Professor of Anatomy and Operative Surgery in the Post-graduate Medical School ;
Consulting Surgeon to the French Hospital ;

Surgeon to the Columbus Hospital and to the City Hospital (Genito-urinary Department).

When a case of enuresis or incontinence of urine in a female comes under a physician's observation it usually suggests a pathological condition of the bladder, generally of a catarrhal nature, although neoplasms and ulcerative processes may produce the same symptoms.

If the bladder is, however, found to be in a healthy condition after an examination by the bimanual method, and the urine excreted from it shows no evidences of any extraneous matter suggestive of disease of the urinary tract, as pus, blood, mucus, albumin, etc., the inference is that the case is one of an irritable bladder due to a diseased condition of some of the adjacent tissues or organs. In this case the urethra is first examined to see if it contains strictures, or if there are caruncles or other growths about its meatus which might give rise to these symptoms. This being found free, the next step is to examine the generative organs—first the vagina, then the uterus, to see if its cervix is lacerated, or if it is causing pressure upon the bladder through displacement, or through pathological growths, or on account of being gravid. The tubes and ovaries are next examined for neoplasms, and the presence or absence of adhesions to the bladder are also noted. As the lower bowel is closely associated with the urinary tract through its intimate anatomical relations, an examination of the anus should be made for the purpose of discovering the presence or absence of fissures or hæmorrhoids, and of the rectum for neoplasms, strictures, ulcers, or ascarides. If no disease of the genito-urinary tract or the contiguous organs or tissues can be found, the general condition of the patient, especially that of her nervous system, as well as her habits, are inquired into.

The condition of enuresis is frequently considered a neurosis, particularly if it occurs in nervous or hysterical women, and especially if they are under a nervous strain or undue nervous excitement. The

* Read before the Manhattan Medical and Surgical Society, June 8, 1895.

abuse of the sexual functions is also said to be followed at times by this condition.

In case that it is not dependent upon any pathological condition of the genito-urinary tract or the surrounding organs and tissues, and in case the nervous system is not at fault, and there has been no excessive use of the sexual apparatus, there are still conditions of the urine that may account for this which do not point to any disease of the urinary organs, such as overacidity and variations in its density.

The object in reviewing these various conditions which may cause enuresis is that the reader may be better able to form an idea of the probable condition of the case to be reported, and may draw his conclusions as to the way in which the patient was relieved by the treatment resorted to, and its consequent value in similar cases.

The report of the case is briefly as follows :

Mrs. O. B., aged fifty-three years, French Canadian, housekeeper.

Previous History.—Throughout her life until the commencement of her present trouble she has been singularly free from sickness, and, with the exception of the time of childbirths, has rarely ever been confined to her bed. Her habits have always been good. Her diet has been simple, and she has drunk very little with her meals excepting tea or coffee. She began to menstruate at the age of seventeen. Her periods have always been regular, the flow moderate, and accompanied but by a slight amount of pain. She has given birth to fifteen children, most of whom are now living. About twelve years ago, one year after the birth of her last child, she began to menstruate every two weeks, the duration of the flow was three days and the character the same as before. This condition of frequent menstruation continued until the time of her menopause.

History of her Present Trouble.—Her present trouble began ten years ago. At that time she noticed a dragging feeling associated with a sense of pain in the region of her bladder, accompanied by a frequent desire to urinate. She did not pay much attention to this at first, thinking that it would wear off in time. The condition, instead of improving, however, became slowly worse, until she was obliged to consult some of the local physicians in the city where she resides.

She remained for some years under the treatment of various physicians at her home, but notwithstanding this continued to grow steadily worse until her condition became almost unbearable, and she decided to come to New York to see if she could obtain some relief.

The patient entered my wards in the French Hospital January

16, 1895. At the time of entrance she complained of a feeling of pain and weight in the region of the bladder with an imperative desire to urinate. The voiding of the urine seemed to relieve her pain, although it was followed by a burning sensation at the urethral orifice which was nearly as disagreeable, and by considerable tenesmus.

This intense desire to urinate she estimated as coming on every five minutes during the day, while at night it escaped from her involuntarily during her sleep.

Examination.—The patient was a tall, rawboned woman of a nervous temperament. Her external genitals were healthy and free from any abnormal growths. The perinæum had been lacerated during her numerous confinements, but not to any marked degree. The meatus urinarius and the urethra appeared to be normal. On palpation the bladder seemed to be free from any pathological conditions, although the entire region of this viscus was hypersensitive. The organ was small, and did not seem capable of holding more than eight or ten ounces. There were no calculi or evidences of any growths in its interior. On examining the generative tract the vagina was found to be free from any discharge or evidences of inflammation. The cervix uteri had been lacerated, but there were no erosions, ulcerations, or any signs of malignant growths. The tubes and ovaries also seemed to be normal. The lower bowel appeared to be healthy, and there were no lesions of any nature about the anus. The urine was of a reddish-brown color, acid, with a specific gravity of 1.020. It contained no albumin or sugar, but a heavy deposit of urates.

Treatment.—The patient seemed to be suffering so intensely on entering the hospital that I prescribed suppositories containing a quarter of a grain each of the extract of belladonna and morphine, to be used every four hours, and directed the house surgeon to wash out her bladder daily with a boric-acid solution. In addition to this, I advised complete rest and regulated her diet, among other things cutting off her tea and directing her to drink three pints of water a day between meals.

In a few days she seemed to be much relieved, and I then substituted for the suppositories a diluent and antispasmodic mixture containing bicarbonate of potash, tincture of hyoscyamus, and infusion of buchu, and ordered the bladder to be washed out daily with a 1-to-1,000 solution of nitrate of silver and afterward with a boric-acid solution.

The patient was kept on a simple diet, and directed to drink two quarts of water during the twenty-four hours and nothing else.

From the time the injections of nitrate of silver into the bladder were commenced the patient began to improve rapidly, and on February 16th, one month after entering, she left the hospital, passing her urine but three times during the day and once at night—that is to say, but four times during the twenty-four hours.

This seemed to be quite a rapid and beneficial result for a patient who had been suffering for so long a time with this trouble, and whose sufferings had been so intense but a month before. I therefore advised her to remain longer in the hospital in order to obtain more permanent relief. She assured me, however, that she felt quite well and was anxious to resume her household duties.

She promised to keep me informed of her condition, and to place herself again under treatment if she became worse at any time.

Just four months after her departure from the hospital I received a letter from her saying that she had again resumed her household cares, that about two weeks after her return she had had a slight return of her ailment, which was, however, relieved by some injections of boric acid, and that at the time of her writing she was feeling quite well.

Since that time I have received no communication from her, and judge that she continues in her improved condition.

Conclusions.—When this case presented itself it appeared to me to be one of an irritable bladder not due to any appreciable pathological condition.

There were several factors in the case, however, which probably tended to produce this condition—namely, nervousness, worry, acidity of the urine, an increased amount of urates, too much tea and coffee and not enough water.

The immediate condition of nervousness was relieved by the rest and the suppositories of belladonna and morphine. The increased amount of water diluted the urine and the diluent mixture neutralized it. The patient was thus brought into a better condition and therefore had more chance of improving under the local treatment. The effect of washing out the bladder with a 1-to-1,000 solution of nitrate of silver was decidedly beneficial, and the improvement of the patient under this treatment was so rapid that I think there must have been some area of hyperæmia about the neck of the bladder, or possibly a small ulcer or excoriation, either there or in the urethra, which was healed by the frequent irrigations of the silver solution.

An endoscopic examination made at this time might possibly have revealed some such condition, and I look forward to the more extended use of the cystoscope and endoscope to clear up many of the cases now known as those of enuresis, irritable bladder, functional derangement of the bladder, etc.

23 WEST FIFTY-THIRD STREET.

HYSTERECTOMY FOR PUERPERAL INFECTION.*

BY MORDECAI PRICE, M. D., PHILADELPHIA.

In a discussion at Baltimore of Hysterectomy in Puerperal Septicemia I made the statement that this operation should be considered nothing less than a criminal procedure; and I stand by that statement to-day. There is no condition of suffering woman to which we are called that appeals so earnestly to our hearts and calls so loudly to us for a helping hand as do these cases of puerperal infection during and after labor. None where we can do so much mischief by meddlesome surgery, or so much good if we but properly appreciate the conditions and only apply the teaching of common sense to the treatment. Some of our surgical brethren would have us believe that in hysterectomy we have the long-looked-for relief for this desperate condition, and as proof for this statement refer us to the long list of terrible failures and deaths. Out of all the cases operated on there is scarce a single successful one. Let us for a moment look at a condition these men say they can best treat by hysterectomy and we can the better understand why they fail. For instance, we are called to a patient three to five days or more after her labor, with a temperature ranging from 103° to 106° or more, with all the complications that come of a badly treated case of confinement in ignorant hands, or it may be a desperate case in the hands of a competent attendant, with all symptoms the very worst, with a foetid discharge or not as the case may be, with pulse temperature and skin all indicating a general septic condition.

Now we ask ourselves what is best to be done, for the danger signal is up and our patient must be rescued from impending death

* Read before the Philadelphia Obstetrical Society, September 5, 1895.

The first and most important question to my mind is to find out the cause of the danger, for it is not always from the uterus, but from injuries of the pelvic floor, or bungling and dirty and badly done surgery now so common after labor, or the unclean attendant and his unclean materials in making repairs. But, leaving out all these conditions and accidents, and coming down to the uterus and to those cases where we believe the cause of infection is in the uterus, what should be done first? We all know that we should remove every possible source of infection.

How shall this be done? Must we follow the teaching of those who believe in curetting the uterus with a sharp curette, and then, if not at once relieved and the high temperature reduced in a few hours, remove the uterus by hysterectomy? Or should we remember that in the past there have lived men who thought the finger the proper instrument to do this work in a most thorough manner, and without the cutting, wounding, and mutilation by the sharp curette in a position where septic materials can not be excluded?

With the finger every particle of membrane and placenta remaining after labor can be removed; if not without ether, we can always do so with its aid. No one can properly clean out the uterus without firm support of the uterus by the hand outside the abdomen. Pushing the uterus down so that the finger can reach to the entire depth of the uterus, the finger will remove all that should be removed without wounding the parts in the least. And what is best about this way of doing the operation is that we know when we are done, and the smooth surface of the uterus cleaned by an instrument endowed and educated as the surgeon's finger, and it can not help but do better work than the sharp curette or any instrument devised by the instrument maker. Follow this with thorough irrigation of the uterine cavity with a double-channel irrigator, first with an antiseptic and then only with pure water at a temperature of 110° . I am daily more and more convinced of the dangers of any meddling in cases of confinement, and find those women do better who have the least handling in and after labor. There is one other point that my experience daily confirms, and that is, if we are clean, and our patients are kept clean and not meddled with, they all get well. How many old practitioners in the country who can point to many hundreds of women they have delivered without a death! Water is the best antiseptic yet, and at a proper temperature will give the very best results.

In looking over the reported cases of puerperal hysterectomy that have recovered, I find them to be those cases of diseased append-

ages with abscess and a localized peritonitis, or it may be a general peritonitis, with the entire abdomen filled with pus.

We all know that there is scarcely a member of this Society who has not reported cases of this character cured by abdominal section with irrigation and drainage, some of them desperate ones. I know I have had a number of them. There is no operation that has given me so much satisfaction as this one.

In cases of puerperal infection where I can demonstrate local lesions with symptoms of pus and locate the pus, the way is clear what to do, and we should remove the pus at once by operation.

Those surgeons recommending hysterectomy in puerperal sepsis have not as yet given us a single proof of its advisability either in the discussions of the subject or in their many reports of operations done for its relief. On the contrary, their arguments in favor of the operation have nothing in them to convince us of its usefulness or of their ability to decide, even from their side of the question, the proper cases for operation. The mortality, I think, will settle the question if nothing else—one hundred per cent.; rather high for a good showing. Not many women would accept the risk.

Puerperal sepsis has darkened the pages of medical history from the earliest times. The subject has engaged the attention of the most active and thoughtful men of our profession, and nowhere can we find any form of medical or surgical treatment without some recoveries to recommend it. I have seen a great number of puerperal women in the last twenty-five years suffering from septic conditions; some of them were lost, but a very large percentage recovered under the treatment as stated above. The medical treatment I do not propose to discuss here. It is utterly impossible to say what cases will recover. Some of the very worst and most desperate get well; others, seemingly mild cases, perish. To select those for surgical treatment would be impossible. Then to operate on a woman in a general septic condition, to leave a large wounded surface in a woman already poisoned unto death and expect her to recover from an operation that taxes the strength and endurance and recuperative power of one in good condition to its uttermost is simply absurd. I can therefore only condemn in the most positive manner puerperal hysterectomy for sepsis.

COELIOTOMY IN GENERAL SUPPURATIVE PERITONITIS, WITH REPORT OF A CASE.*

BY MILES F. PORTER, A. M., M. D.,

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Speaking of puerperal peritonitis, Grandin and Jarman † say "the women die no matter what the form of treatment employed."

"To my knowledge there has never been reported an undoubted case of general purulent peritonitis from any cause whatever in which an abdominal section or any other line of treatment has succeeded in saving the patient's life," says Dr. J. M. Baldy. ‡

Dr. A. F. Currier, of New York, § said at the last meeting of the American Gynæcological Society that in cases of general septic peritonitis he "believed that abdominal section would always result fatally."

At the same meeting Dr. A. L. Smith || said he "believed that the gynæcologist is powerless in general peritonitis."

That the mortality of general septic peritonitis is frightful all will agree, but that it is always fatal is certainly not true. Such extreme views as quoted above have a pernicious influence in that they encourage a cowardly do-nothingism or a make-believe medical treatment, and discourage the employment of means and methods that may save life.

Dr. Abbe, at the last meeting of the American Surgical Association, ^ showed a patient in whom recovery from general peritonitis followed operation.

Henrotin ◇ reports two cases of "diffuse peritonitis" which recovered after operation.

B. E. Hadra, † of San Antonio, also reports a case cured by operation.

* Read before the Mississippi Valley Medical Association, Detroit, Sept. 5, 1895.

† *Obstetric Surgery*, p. 187.

‡ Abdominal Section for Puerperal Septicæmia. *Am. Journal of Obstetrics*, July, 1895.

§ *Medical News*, June 15, 1895.

|| *Loc. cit.*

^ *Medical News*, June 15, 1895.

◇ *American Journal of Obstetrics*, August, 1893.

† *New York Medical Journal*, June 2, 1894.

The *Universal Annual* for 1895 credits Singh, of Sholapoor, India, with the cure of a case, but upon reading his report, which was transcribed for me from the *Indian Medical Record* through the kindness of Dr. E. M. Foote, of New York, I am of the opinion that his was not a case of general peritonitis. I have operated upon three cases of general peritonitis, all purulent. Two followed abortion, criminally induced, and one followed labor at term. Two cases died, one recovered. The two that died were operated *in extremis*, one dying in less than an hour after being removed from the table and the other within twelve hours.

A brief history of the case which recovered will not be out of place here: Mrs. G., aged twenty-four years, was taken sick with chill, fever, vomiting, and severe abdominal pain five days after she had introduced a catheter into the uterus for the purpose of producing an abortion. I saw her at the request of her attending physicians, Drs. H. V. and B. V. Sweringen, about twenty hours after the onset of the trouble. She had just had a second rigor. The pulse was 140 per minute, temperature 105.5° F., abdomen distended, tender and tympanitic, nausea continuous, and vomiting frequent. The bowels had been moved by salines at the onset and were still loose. Medication being regarded as useless, the consent of the patient was obtained, and she was at once moved to Hope Hospital, where, with the assistance of her physicians, I opened her belly and flushed it thoroughly with several gallons of sterilized hot water, put in a large glass drain and put her to bed. On the second day after the operation she had another chill with a rise in temperature and pulse-rate, both having improved after the operation, when the abdomen was again freely flushed through the drainage-tube. After this convalescence was slow, though practically continuous. The diarrhœa continued for several days after the operation. As soon as the peritonæum was incised there escaped a large quantity of turbid, stinking serum, followed later by pus of the consistence of cream. There were no adhesions, the pus being free in the peritoneal cavity. These are all the cases of which I have knowledge in which recovery has followed operation for general septic peritonitis; but there are probably more, and even though there are no more, they suffice to disprove the idea that the disease is fatal always and under all kinds of treatment. If the idea that death is inevitable in these cases be dropped, and the belief substituted that some at least can be saved by operation, we will soon have more recoveries and fewer deaths than we now have.

The principal reason why surgeons have not succeeded in saving life oftener by operation is, in my opinion, because the operations have been done too late. The advantage of early operation lies not alone in the fact that the resisting power of the patient is greater then than later in the disease, but because also we are less likely to find at this time such great distention of the bowel, adhesions, etc., which, when present, may require opening and drainage of the bowel itself, or separation of adhesions, and thus increase the danger of the operation *per se*. Perhaps the greatest advantage of early operation lies in the fact that, at least in many of these cases, we have to deal in the first hours of the disease with an inflammation localized in the peritonæum, with simply a septic intoxication or sapræmia and not a progressive septicæmia or pyæmia to account for the general symptoms.

Whether anything more than opening, flushing, and the establishment of drainage should be done depends upon the conditions present. In cases with great intestinal distention and constipation the bowel should be opened, emptied, and perhaps flushed.

Henrotin* ascribes the recovery in his two cases, previously referred to, to the formation of an artificial anus. In the first case the anus formed, as a result of the pathological process, on the third day after cœliotomy. Up to the time of the formation of the anus the child was doing badly, but began to improve immediately after the escape of fæcal matter commenced. Reasoning from this, he made an artificial anus in his second case, and practiced lavage of the bowel as well as of the peritoneal cavity. In the case of Hadra's, above cited, no drain was left in the abdomen, but the intestinal drainage was relied upon entirely. If the bowels are loose, either as a result of cathartics or sepsis, the intestinal opening will not be required. In some cases it would perhaps be better after emptying the bowel to close the opening made in it and return it to the abdomen.

This is neither the time nor the place for long-drawn-out papers. My object in writing this paper is to assist in arousing a sentiment against the too prevalent idea that in general septic peritonitis death is inevitable; and to encourage in these cases prompt operative interference.

47 W. WAYNE STREET.

* *Am. Journal of Obstetrics*, August, 1893.

THREE CASES OF HYSTERECTOMY FOLLOWING CÆLIOTOMY FOR PUS-TUBES.*

BY J. H. CARSTENS, M. D.,

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Chief of Staff and Gynæcologist of Harper Hospital, etc.

Vaginal hysterectomy vs. cœliotomy in cases of bilateral pus-tubes seems to be the burning question of the day with abdominal surgeons, and a small contribution to this question seems to me desirable in order to ultimately settle this much-disputed question of the hour. As I have had three cases in a short time requiring hysterectomy after having undergone operation for pus-tubes some years before, I thought the report of these cases and the result of the discussion might be of interest to the Society.

CASE I is that of Mrs. A., aged thirty-six years, mother of four children. She had been a sufferer for many years and had had repeated attacks of pelvic inflammation, being confined to her bed for months at a time. Then she would improve so that she could sit up for a few weeks and move around the house. This had continued for about six years, so that she was reduced to a mere skeleton when I saw her first, four years ago, in consultation with Dr. F. L. Newman. The doctor had properly diagnosed pus-tubes and urged an operation, which I verified, and we received her consent to an operation at her own home. It was a most difficult case with the limited facilities that could be found in a small cottage, and I had great difficulty in removing the tubes on account of most extensive adhesions. But the operation was finished, the abdomen flushed, a drainage-tube inserted, and the patient finally recovered. She could again attend to her household duties, gained flesh and strength, but continued to menstruate every month. As menstruation sometimes continues after the operation for removal of tubes and ovaries for six months, a year, or more, little attention was paid to this ; but as it did not cease after three years—in fact, became more profuse—constitutional and local treatment was instituted to check the flow, which was again becoming a drain upon the system, but it seemed without avail. I was again

* Read before the Mississippi Valley Medical Association, September 5, 1895.

called, put her under chloroform, thoroughly curetted the uterus, and cauterized the cavity with nitric acid. It seemed to have no effect on it at all; the pain during menstruation became more severe, and the flowing was more profuse than before the curettement. Although microscopic examination did not detect anything malignant in the shreds removed, I advised vaginal hysterectomy, to which she consented and went to Harper Hospital, and I operated on her April 6, 1895. On account of adhesions, some difficulty was experienced in removing the uterus, but it was finally accomplished, and on the right side was found about half an ovary, which still functionated and was evidently at the bottom of the whole trouble.

There was nothing very difficult about the operation, but still the patient did not get along, and continued to vomit, and finally died on the sixth day. Her temperature varied from 99° to 100° , but the cause of death was evidently sepsis. I could not explain why she should have sepsis; she was not septic, and the usual precautions had been taken; but in spite of all our efforts we sometimes have sepsis and do not know why. There are still so many things beyond our ken.

CASE II. was Mrs. Q., aged thirty years, mother of four children, the wife of a physician, and had a lacerated cervix; was operated upon by me. Then she had chronic salpingitis and ovaritis of puerperal origin, for which I operated two years ago. She improved for a short time, but did not cease to menstruate; then the menstruation gradually became more profuse, to such an extent that she was greatly reduced in flesh and strength, and unable to be about the greater part of the month. I urged hysterectomy, to which she consented, and went to St. Mary's Hospital, where, on the 10th of June, I performed *abdominal hysterectomy*. I found a small particle of ovarian tissue remaining which contained Graafian follicles, which was evidently the cause of the menstrual trouble. She made a rapid and uninterrupted recovery.

CASE III.—Mrs. E., aged thirty, operated on three years ago for pus-tubes and long-continued sepsis. She had been reduced to a skeleton, and was very weak and anæmic. The operation was difficult on account of extensive adhesions, but was performed at Harper Hospital with the aid of a Trendelenburg table. The operation was more easily performed than in Case I. Still, the patient became very low during the operation, and was taken from the table virtually pulseless. Saline subcutaneous transfusions, stimulants hypodermically, and the most energetic effort on the part of the nurses finally brought her around, but she made a slow recovery. In the track of

the drainage-tube a fistula developed, which continued even after she had recovered sufficiently to leave the hospital. She continued to menstruate; the fistula troubled her—mentally, I think, more than otherwise—so that she returned to the hospital a year after, and I operated on the fistula by draining it into the vagina. The fistula was cured, but the menstruation continued and became more profuse, so that a year ago I had her again enter the hospital, and I thoroughly curetted the uterus and cauterized the cavity with nitric acid.

For one period the flowing was less, but then recurred, and continued to increase until I suggested abdominal hysterectomy, and as she had a small ventral hernia, I could also repair that at the same time. She reluctantly consented to have the fourth operation, and entered Harper Hospital on June 18, 1895. I removed the uterus by abdominal section in the usual manner. On the right side I found part of the ovary functioning and evidently the cause of the trouble. She made an ideal recovery, has rapidly increased in flesh, her cheeks have become rosy, and she is the picture of good health, feeling, as she told me a short time ago, better than she had for many, many years.

These three cases are splendid examples to show the necessity of removing the uterus in cases of bilateral pus-tubes, the advocates of this method of operating will say; but I can not look at it in that light. When I think of the many cases of pus-tubes, and that I only have a few which cause trouble in the future (say three or four per cent., and of these troubles many of them are of a mild type), I certainly can not see why vaginal or abdominal hysterectomy in pus-tubes should be the correct operation. I am positive, from my experience, from the complicated cases I have seen, and the extensive adhesions, that the mortality would have been very decidedly increased—not doubled, but, I verily believe, trebled.

In the present state of my knowledge I am convinced that the removal of the uterus and the pus-tubes in the peculiar cases cited above would have certainly resulted in death in the first place. The operations were difficult, and prolonging them by trying to take out the uterus would certainly have been fatal. Removing the uterus *per vaginam* and simply draining the tubes, without making much effort to remove them, may temporarily relieve some cases, just as these three cases cited; but such cases will not permanently recover unless a perfect operation is performed and every particle of ovarian stroma and the whole of the tubes are removed. It is the *imperfect operations that prevent a perfect cure*, and perfect operations we can not *always* per-

form. The adhesions and the complications are so difficult and the effect of the anæsthetic so bad that in many cases we can not absolutely complete an operation unless we want to lose our patient. We do an operation in part and leave the rest to some future time when the patient has recovered sufficient strength. I know we read of wonderful statistics about immediate results, but I would like to know positively of my own knowledge the ultimate outcome of these cases in order to advocate the removal of the uterus in preference to abdominal section.

I have removed the uterus *per vaginam* and also by abdominal section in cases of pus-tubes, but those were special cases with special indications, and it seems to me that we *can not lay down definite rules suitable in all cases*. Being an evolutionist, I believe in adaptation to environments, and that each case requires an operation of its own. In some cases vaginal hysterectomy, with removal of the tubes and ovaries, or part of them, is the better operation, while there are other cases where the abdominal method of simply removing the tubes and ovaries, or part of them, with or without drainage, is the proper plan of treatment, including, in some cases, even the removal of the uterus. As a rule, by abdominal section we can *completely remove every particle of ovarian and tube tissue*, hence establish the menopause, bring about senile atrophy of the uterus, and cure our patients. Our failures are due to *incomplete operations*.

In *résumé* I would say :

First, it seems to me, in the light of my present experience, in cases of bilateral pus-tubes, that a more perfect and complete operation can be performed by abdominal section with less danger of injury to the bladder and intestines and with smaller mortality and better ultimate results.

Second, that in certain cases a better immediate result is obtained by vaginal hysterectomy and drainage; but these cases frequently require a second operation to remove the ovarian tissue and parts of the tube (which at first, in many cases, can not be removed) before a perfect ultimate cure is established.

Third, where the sympathetic and other nerves are affected the cause is not in the uterus, ovaries, or tubes alone, but partly in each. We are unable to state which organ is at the bottom of the trouble. Sometimes it may be only one, sometimes the other, sometimes two or all three; hence in such cases I would say :

Fourth, in many cases with marked nervous symptoms the best results are obtained only after the *complete removal* of every particle

of the generative organs—that is, uterus, tubes, and ovaries—be this accomplished at one, two, or three operations, *per vaginam* or by abdominal section.

HOW SHALL WE REAR OUR BABIES?*

BY JAMES H. TAYLOR, A. M., M. D.,

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How shall we rear our babies? is a question full of weight and importance; it is asked at the fireside of every home; it is written in the countenance of every mother; it is of equal interest to the poor and the rich. Last, but not least, it is one of the most difficult problems which confronts the physician in his daily life. The answer, "Comply with the laws of Nature," is one which, I trust, will harmonize with the views of all. Were this rule observed in every detail the many pains and discomforts of early life would be diminished, the slumbers of many a household more peaceful, and the duties of the physician less arduous.

To be consistent with the "*laws of Nature*," every mother should nurse her infant at the breast. Chemists and bacteriologists tell us to use "sterilized milk." How can there be a more complete sterilization than is found in the mother's breast? Society and fashion have led many mothers (much to their shame) to abandon Nature's method. Many women resort to different means under the false pretense of some trivial hindrance to lactation. Every mother who willfully, and without just cause, refuses to nurse her child, to that degree contributes to the increase of infantile mortality. Ill health, congenital malformation of the breasts, and some other causes sometimes render the function of lactation impossible.

Mother's milk is the best. Some other mother's is the next best. A wet-nurse, therefore, should be secured. The "busybody" neighbor, who is a curse rather than a blessing to a community, suggests by all means to use the bottle. She depicts in glowing terms the advantages of leaving her infant with the nurse while attending the theatre, a party, or some other place of amusement. She encourages the young mother by relating many instances of successful rearing by

* Read before the Mississippi Valley Medical Association, September 4, 1895.

the artificial method. But, alas! she fails to disclose the names of the dear little ones whose very silence in the cemeteries betrays the fallacy of her methods.

The fitful cry of the infant appeals to the physician at this critical moment. It is to him it looks for aid. From the physician the mother should seek advice. He should awaken to the keenness of his responsibility. He will tax his skill and energy to the utmost in battling with some fatal intestinal malady which indirectly is the result of his neglect to outline, in the hour in question, a means which promises to prevent the malady. If a human being ever needs the advice of a physician it is the innocent babe born as a tramp dependent upon the door-to-door refuse for its sustenance. If the physician succeeds in procuring a wet-nurse his services have been invaluable, his efforts timely, and his method prophylactic. Give the physicians more wet-nurses and they will show a decrease in the number of intestinal disorders on the records of our boards of health. I would favor educating our women among the poorer classes to become wet-nurses. Dispensary physicians and members of charity organizations could accomplish much in this direction. In their daily visits they should endeavor to instruct the mothers as to the advantages to be gained by nursing their own infants, and the manifold comforts which would result by their becoming wet-nurses in the homes of others. Let the medical profession take a bold stand in favor of this plan, and public sentiment would soon lend its support. The flattering results which would accrue to the succeeding generation of infants would be our reward.

Nature's method alone will not suffice if obstacles are thrown in her pathway.

There is one very common and fruitful source of injury which I will term "just a taste." From time immemorial there has existed the pernicious custom of taking baby to the table and giving it just a taste. Nature never intended beefsteak, mutton chops, potatoes, gravy, and the like, for the delicate digestive tract of the newborn babe. "I want my child to get used to it," says the mother, with an expression of wisdom and self-assurance. As well let it get used to a razor or hot curling iron for the service they will render in years to come. The manner in which "just a taste" is usually given is filthy and disgusting, to say nothing of its deleterious effects. I have seen the mother take a morsel of food, chew it until it becomes soft and mixed with the myriads of bacteria which her saliva contains, and then feed the poisonous mass to her baby. The interchangeable use

of tobacco and chewing gum among adults would not be more obnoxious; and such a practice, though loathsome, would be far less liable to produce disease. "Just a taste" is a common bearer of the elements of fermentation and disease. Aside from its uncleanness, in the light of our present bacteriological knowledge the custom merits universal condemnation.

A condition antagonistic to "Nature's method is unclean nipples. The mother should be taught the importance of washing the nipples with a boric acid or some other antiseptic solution before and after each nursing. The mouth of the infant should receive the same antiseptic treatment. Attention to these points would enable her to prevent fissured nipples, mastitis, and some other conditions which are the sources of gastro-intestinal troubles in the child. These points, together with many others—such as cooling the breasts after being overheated, rest after exhaustion, overjoy, grief, etc., before nursing—may seem little things, but a careful observance of them often prevents graver evils.

One of the most influential factors in the proper rearing of the infant resides in the mother *per se*. There are many qualifications embodied in the "perfect mother." I will mention some of them: Purity of morals, love and affection for her baby, fondness for her home and its occupants, a congenial disposition, and other elements which tend to complete the environments of a true domestic life. Such an one will not nurse her baby while in a fit of anger or excitement, thus precipitating convulsions and sometimes death. Such an one will not indulge in intoxicants and impart the habit to the innocent offspring. Such an one will not forsake her home and turn the baby over to the indifferent care of others, in order that she may enjoy the pleasures of society or revel in an atmosphere of dissipation.

Nay! such an one will find ample pleasure within the realms of her own home; she will devote her daily life to that which is good and noble; she will exert such a combined influence that the infant reared by her will develop not only physically, but morally and intellectually.

Bathing, clothing, and hygienic surroundings hold an important place in the rearing of infants. From the time the baby receives its "hot-water plunge" immediately after birth, it should have a daily morning bath. The temperature of the water should be from 85° to 95° Fahr. A portable bath tub made of tin, non-irritating soap, soft towels, hot water, and a warm room are within the reach of all. One

thing more is necessary to complete the readiness for this essential ordeal, and I regret to say that my observation has found it too often lacking. I refer to the *thirty minutes* which many mothers claim can not be spared on account of other more "*important duties.*"

The clothing should be very simple. A soft flannel band should be worn both winter and summer. Woolen stockings should also be worn. In short, the abdomen and feet should be kept warm, and the body of the child protected against all draughts. As a rule, children are too warmly dressed. Oftentimes have I been astounded and disgusted at the removal of the countless number of wraps before the body of the almost "roasted" babe could be exposed for examination. If the house is kept at a proper temperature (about 70° Fahr.) very little clothing is required indoors. Then, when taken into the open air, the little one will not be overheated and in condition for taking cold; and wraps may be added as the indications of the weather demand.

In this connection I desire to mention a few hints about the diaper. The material out of which they are made is cheap, and an ample supply should always be kept on hand. The cloth should be removed as soon as it is soiled. If the excretions are permitted to remain in contact with the body too long they become a source of irritation, make the baby cross, and in many ways do harm. For the same reason rubber diapers are particularly objectionable. They are hot and uncomfortable; they hide the soilings and are carriers of the germs of disease. As soon as a diaper is soiled it should be removed and thrown into an antiseptic solution for twenty-four hours before being washed. If not treated in this manner it becomes a source of infection.

In the rearing of infants too little attention is given to matters of hygiene. The room should be well ventilated. The infant's bedding and clothing should be clean and well aired. The "pallet on the floor" should not be exposed to currents of air. The floor itself, preferably without carpet, should be kept scrupulously clean.

Another feature bearing an important relation to the welfare of the infant is weaning. No rule can be absolute. I believe that many mothers prolong the nursing of their children too long. Some, on the other hand, resort to weaning prematurely. In the former case the mother's strength fails, the milk becomes less in quantity and poor in quality, the child's nutrition becomes impaired, and the development of rickets or some other form of disease is the result. All things being equal, the infant should be weaned about the end of its

first year, at which time it requires additional nutriment. *Weaning should not* take place during the hot months of summer unless continued lactation betokens absolute peril to the infant's life. If hand-feeding becomes a *dernier ressort*, no matter at what period of infantile life, a difficult task presents itself. Statistics show the mortality of artificially-fed infants in foundling institutions to be exceedingly high, in some falling little short of one hundred per cent.

The physician is the *one*, and the *only one*, who should assume the grave responsibility of selecting a proper substitute for the natural food.

The time allotted in this paper will not permit a detailed account of artificial feeding. Suffice it to say, however, that a more universal familiarity with the chemistry of milk—its method of preparation and preservation; a more careful study of the quantity of food and intervals of feeding; more elaborate instructions concerning the care of bottles, nipples, and all other minutiae in hand-feeding—would aid materially in the attempt to *imitate "Nature's method."*

I can not leave this subject without calling attention to what I consider a vital point in relation to the rearing of infants—a *failure to make a correct diagnosis* of infantile disorders. Physicians are too careless in examining their patients, and especially among children. Too many meaningless names of disease are used by the laity and too readily accepted by the profession. Too often are medicines prescribed for *names*, regardless of their relative value to the real existing conditions.

The infant is said to have a "pain." An opiate is given because opium is good for a "pain." A little care might disclose the fact that the band was too tight or a pin was sticking the babe.

A child is said to have a "chill." Quinine is prescribed because it is the remedy for "chills." But the oft-repeated chills ultimately call for an examination, which reveals the presence of a diphtheritic mass in the throat too late for its relief.

A name for which so many indiscriminately prescribe is fever. Treating fever on general principles, without a clear conception of the cause, is a common error and one productive of evil. A case in point strongly illustrates this: I was called to see a child that had been treated with tincture of aconite and sweet spirits of nitre (on general principles) for "fever." It had been ill almost a week, with conditions growing rapidly worse. On being questioned, the mother stated that a week previously the child had run a splinter into its foot, "but," she continued, "the foot is almost well now, for I took the splinter out myself."

Unfortunately for the child, the mother's statement had been accepted.

Suspecting the cause, I made a bold incision and removed from the deeper structures of the foot a splinter as large as a shingle nail. Twenty-four hours later this case of "*fever*" would have developed into one of tetanus, and only because the physician had failed to make a correct diagnosis by neglecting to observe the ordinary methods of examination.

THE CHALFANT, INDIANAPOLIS, IND.

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EDITORIAL.

ANNOUNCEMENT.

With the next or November number of this JOURNAL we publish the *official Transactions* of the New York and Philadelphia Obstetrical Societies and of the Chicago Gynæcological Society. Thereafter the complete Transactions of these three societies will appear each month, and within six weeks after their occurrence, side by side. They will not appear in any other journal until they have been published *officially* by us.

With the beginning of the new year we expect to make several marked improvements in the JOURNAL, both in size and scope. Our usual monthly number of original papers will be much increased, while the same representative character of our contributors will be maintained. The Review Department shall receive special attention and all new books of importance relating to our several specialties will be reviewed promptly, conscientiously and without favor. Our Abstract Department, already developed to a high degree, shall, as we promised some months ago, be made of still greater practical value, while the greatest care shall be exercised to make "The Status of Gynæcology Abroad" as well as the "Obstetrics" faithfully representative of the condition of these two branches of medicine in the many countries covered by these abstracts. We believe we may say without vainglory that even now our abstracts from foreign sources are more complete than any others in this country with the exception of those of the *American Journal of the Medical Sciences*, that excel-

lent periodical which served as our inspiration in respect to these abstracts and our only serious competitor in this respect.

The great practical importance of these abstracts can scarcely be underrated by our subscribers, and the knowledge of the independent work done by our brethren across the seas must be to us both a spur and a deterrent, as their successes and their failures, their wise advances and their foolish blunderings, are succinctly placed before us for comparison.

THE MEDICAL PROFESSION, THE MORAL AND THE CIVIL LAW.

It is with adequate cause that our daily press has strongly commented upon some astounding statements propounded before the Medico-legal Society at its recent meeting in Washington. The author of the atrocious sentiments and gross slander against our profession thereat expressed was not, we rejoice to say, of our ilk, but the fact that the *Mister Bach*, who thus gained an unpleasant notoriety, was not immediately and with the utmost severity condemned by the unanimous verdict of all the medical men present, has placed an odium upon the whole profession which would be well deserved, were we, the medical editors of this country, through indifference or cowardice, to keep silence or to speak with uncertain voice. The slander in question was briefly this: We, as a profession, were publicly charged with *the habit of deliberate murder* and, to put the stamp of credibility upon it, the ease of its accomplishment was shown and the motive for our action defined and extolled as the highest philanthropy. We are thanked because, it is charged, we mercifully extend to our incurable patients the *euthanasia* of the ancients. So monstrous a charge we could well afford to pass over in silence, were it not for the occasion of its making and the apology, at the same time, offered for us. It is this impertinence of *Mister Bach* in placing himself as our apologist which alone saves the accusation from the simply ludicrous. It is not the charge in itself which carries weight enough for refutation, but the fact that we should be defended in this charge by a man so utterly perverted in his moral ideas as this member of the Medico-legal Society claims to be. Whatever his opinion of the intrinsic inviolability of human life may be is beside the question; for the civil law is explicit, in all civilized countries, that human life may be

destroyed only as a retributive punishment for acts committed, which are also defined. The only exception made to this law—an exception whose inconsistency we have more than once pointed out in this JOURNAL—is the legalized foeticide on the score of expediency, permitted to the medical profession. The destruction of human life, therefore, after birth is, with the restrictions stated, simply *murder*—the greatest crime known to the law. There is no class of authorized criminals under the law and least of all are medical men fitted, either by training or mental aptitude, to form such a class. The medical profession is not conspicuous over other classes of their fellow-men, either for profound intelligence or for greater moral training. On the contrary, the very exceptions, which the law makes in their favor, in the matter of the free employment of poisonous drugs for the cure of disease, the restricted permission to destroy human life *in utero*, the right of judgment as to the justice of risking life in operating, the position as arbiter of the reputation and happiness of many individuals and families—all these things tend to destroy the natural instinct of respect and love for abstract mortality and the civil law which is founded thereon. The temptation to its abuse, which the possession of power always carries with it, unites doctors with the rest of men in the inherent weakness common to all humanity. The necessary position of the former, as judges of the application of the law and of their own responsibility under it in many cases, has the natural tendency to make doctors feel that they may make themselves exceptions to the law which the law itself does not recognize. In brief, a doctor's position and professional training tend to obscure his moral sense and to impress upon him, in its stead, *the law of expediency* as the only standard by which all his professional acts should be governed.

We have said that this is the tendency to which the doctor is subjected, and we do not believe the statement can be refuted: How greatly to the honor of the profession is it not, therefore, that its members are, with comparatively few exceptions, respecters and upholders of the law in the strict sense? With far greater temptations than any other class of men and many opportunities for complete concealment, they still maintain, as a profession, their self-respect and condemn, with unanimous public opinion, all infraction of the law.

The infamy of *Bach's* accusation, as such, lies in the fact that it can not be legally refuted, for the doctor does his work often without witnesses other than his conscience. His sense of duty to God and to his fellow men, without the fear or danger of human punishment,

are often the physician's only buckler of defense against the selfish importunities of his patients and his own self-interest. And, to his honor be it said, he, as representing the great majority, does not yield. The argument of *Bach* is this: Physicians have every facility for committing this crime; I believe they are entirely justified in committing it; I know many physicians who do commit it; therefore it is the general practice among physicians. If the major premise of this very illogical argument is true, *Mister Bach* might turn the just indignation of the profession he has so infamously slandered into gratitude, if he would reveal the names of these habitual criminals among us to the County Medical Societies, that the former might be publicly disgraced and turned over to the civil authorities in common with professional abortionists and other mercenary malefactors, who have the privilege of sharing with *Bach* his views on moral law. Our professional abortionists might impart to *Bach*, in return for his apology for murder, some practical information, gleaned from their own experience, upon certain disadvantages of the law of expediency when this runs counter to the civil law.

The truth of the matter is we believe *Bach* has lied.

REVIEWS.

PRACTICAL DIETETICS. With Special Reference to Diet in Special Diseases. By W. GILMAN THOMPSON, M. D., Professor of Materia Medica, Therapeutics, and Clinical Medicine in the University of the City of New York; Visiting Physician to the Presbyterian and Bellevue Hospitals, New York.

While this book can hardly be said to "fill a long-felt want," it is only from the fact that the want has only just begun to make itself felt by our increasing appreciation of the great value and importance of scientific accuracy and attention to detail in matters of practical hygiene and dietetics. As the author remarks, "the subject of the dietetic treatment of disease has not received the attention in medical literature which it deserves, and it is to be regretted that in the curriculum of medical colleges it is either wholly neglected or is disposed of in one or two brief lectures at the end of a course in general therapeutics."

While the advances of surgery and pathological research have been most brilliant, and the innumerable synthetical compounds dis-

covered in our laboratories productive of great good, still, the luster of a brilliant operation or the accurate diagnosis of a pathological condition is somewhat dimmed and not altogether satisfying if the patient succumb to exhaustion from our failure to furnish the proper and necessary food for the repletion of the wasted tissues.

While the author fully concurs with Bennett—who wrote, as early as 1858, “of all the means of *cure* at our disposal, attention to the quality and quantity of the *ingesta* is by far the most powerful”—that appropriate dieting is often more needed than medication, still he “distinctly disclaims the advocacy of any *special* dietetic system as a *cure-all*, as well as the specific influence of any one food in the general treatment of disease.” As an evidence of the awakening interest and appreciation of this neglected field a course has been recently opened at the Pratt Institute, Brooklyn, to cover: 1. Selection of food material as to quality, food value and cost. 2. Methods of preparation of food in a large way and by appropriate apparatus. 3. Proper serving of food, etc.

The author has not only succeeded in furnishing “a text-book in which the practitioner of medicine may find detailed the appropriate diet for each disease which is at all influenced by right feeding,” but he has materialized those “glittering generalities” with which the text-books abound—“A proper but restricted diet,” “The patient should be carefully fed,” “General dietetic treatment is of primary importance,” etc. The book is a valuable contribution to medical literature, and a work that will prove both interesting and instructive not only to the general practitioner but to the various “*specialists*” as well. The style is clear and concise, and the subject-matter presented in a most practical way, being replete with suggestions and interesting observations from authorities and competent observers upon the different subjects discussed. A very complete index and table of contents make it possible to easily turn to the article relating to any subject desired, thus increasing its value as a book of reference. E. P. M.

THE SCIENCE AND ART OF OBSTETRICS. By THEOPHILUS PARVIN, A. M., M. D., LL. D., Professor of Obstetrics and Diseases of Women and Children, Jefferson Medical College; Ex-President of the American Gynæcological Society, etc. Philadelphia: Lea Brothers & Co.

After the very favorable reception accorded the two previous editions of this treatise the present volume needs no commendation.

The activity that has marked the study of obstetric phenomena and of obstetric practice has compelled the author to rewrite much of the book. Additional illustrations have been introduced, and the author has endeavored to make it a faithful reflex of obstetric science and art at the present hour.

The arrangement of the work seems to be very rational. It is divided into two parts, the first relating chiefly to physiology and the second to pathology. The former includes the physiology of pregnancy, of labor, and of the puerperal state, and the latter the pathology of these. With the pathology of labor obstetric operations are presented, and with that of the lying-in are embraced not only the diseases of the mother but also those of the newborn. After a careful perusal of this work one finds much to commend and little to criticise.

The study of the physiology of pregnancy is preceded by chapters upon the anatomy of the pelvis and the female sexual organs, with their physiology. These chapters seem to be exhaustive. They are excellently written and are profusely illustrated. The colored plates are particularly effective.

The chapters most deserving of praise are those which describe the mechanical phenomena of labor; the description is exceedingly clear and is illustrated by an abundance of excellent cuts.

The conduct of labor is especially valuable to the student, as many details which are omitted in other text-books are fully set forth. The instructions given for the introduction of the catheter we think might be improved upon. The glass catheter, boiled immediately before using and introduced by sight after the parts around the meatus have been cleansed, is preferable to "the flexible rubber guided by the well-anointed forefinger," as advised by the author.

In another edition the writer has given various means for saving the perinæum advised by different authorities, but in this he has contented himself with one that a more extended experience has shown to be the best.

In the section devoted to the pathology of pregnancy a chapter on ectopic development of the ovum and of the placenta (placenta prævia) is included.

The discussion of ectopic gestation has usually been confined to works on gynæcology, because more of these cases have fallen into the hands of the gynæcologist than the obstetrician, but the pathology of pregnancy seems an appropriate place for its consideration. In the twenty-five pages devoted to this subject an excellent *résumé* is given, rich in good illustrations.

In the chapter on anomalies of the pelvis the subject of pelvimetry is touched upon, but not with the degree of emphasis that its importance demands.

Upon an accurate knowledge of the configuration of the pelvis and its capacity by the physician often hangs the fate of mother and child, and upon this knowledge depends the principle of election in obstetrical operations which marks the most advanced era in the science of midwifery.

The use of the forceps is explained with clearness and intelligence, and the illustrations are all that can be desired. It is an excellent exposition of the subject.

The operations of Cæsarean section and symphysiotomy are given the attention that their importance demands. Puerperal fever is considered at length. The treatment, however, is not satisfactory from its meagerness. In the treatment of septic endometritis no mention is made of curetting and of packing the uterus. The author does not advocate local measures with the degree of confidence entertained by the majority of the profession in this country. A chapter upon the diseases of the newborn completes the book. To the publishers credit is due for the excellent typographical work and the neat binding.

G. H. M.

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

September 5, 1895.

J. C. DACOSTA, M. D., in the Chair.

Dr. ELIZABETH M. CLARK presented a paper on

The Value of Ichthyol in Gynæcology.

(See page 355.)

DISCUSSION.

Dr. G. BETTON MASSEY : According to a statement of the paper, I judge that Dr. Clark applied the remedy only incidentally to the uterine cavity. Now, nearly all the symptoms mentioned by her point to a local catarrhal condition of the uterine mucous tract, and I can

not conceive how a remedy is to be fairly judged which is not brought in contact with the seat of disease of this kind. Her allusions to the good effects of surgical treatment of reflex conditions seem hardly borne out by the reported results of this work.

Dr. J. M. BALDY: Frequently we have drugs brought to our notice the value of which are lauded so greatly that unless one experiments for himself he is apt to conceive the idea that the greatest possible reliance may be placed on them to produce certain definite results. Such a drug is ichthyol. Dr. Clark is to be most heartily congratulated for having not only closely studied the effects of this remedy as used in gynæcological practice, but for having the courage of her convictions in pointing out the utter uselessness of this drug in face of the almost universal laudation it has and is receiving from supposed experts. The reports of the benefits to be derived from this drug read more like fairy tales and quack-medicine advertisements than like reasonable scientific investigation. The quotations made in Dr. Clark's paper speak for themselves in this respect, and need no other comment than to increase the list of diseases cured by adding cancer, tuberculosis, small-pox, and all other diseases known to the medical profession. Although Dr. Clark has drawn her conclusions from her experience as assistant in my own clinic at the Polyclinic Hospital, she has reached these conclusions entirely independent of and uninfluenced by me. The assistants have had full and complete charge of that clinic, and have been allowed to follow their own inclinations as to treatment and observation. The results reported you to-night by Dr. Clark, however, coincide so closely to my own experience in other clinics of which I have charge, and in my private practice, that I can not refrain from emphasizing her conclusions. I differ with her in but one respect—in the results in acute cases. The drug is as useless in acute as in chronic cases. The reason why she has observed apparent results in the acute cases is because acute disease has a tendency to get well, and in the majority of cases would get well without any particular treatment whatever. My own experience, in brief, as regards the use of ichthyol in any form or in any way administered or used in gynæcological practice is that it is a superfluous and useless drug. In using it the vagina is dilated, air is admitted, the mucous membranes are cleansed, the parts are more or less manipulated, tampons are placed, the uterine cavity is cleansed, etc. These same manipulations carried out without the final and concluding application of ichthyol will give exactly as good results as if the ichthyol be used. The present exaggerated teaching in the use of this drug

is furthermore dangerous in that it induces men to place reliance on the drug and often lose time where better methods are being neglected.

DR. TALLEY: I wish to indorse all that has been said by Drs. Clark and Baldy. Believing ichthyol to be a much overrated drug, I took occasion to contrast a series of cases so treated with others treated in the old-fashioned way. With this end in view I placed alternate cases, as they presented themselves for treatment at my dispensary in the hospital of the University of Pennsylvania, upon ichthyol and upon the time-honored iodine and glycerin tampon. As the cases were contrasted for more than a year, there can be no doubt that the test was a fair one. I found, however, that the cases treated with ichthyol did not recover a whit sooner than the others, and I have used it internally, applied pure to the vaginal vault, upon tampons, and injected into the uterine cavity. I concluded, therefore, that cases amenable to local treatment would do as well with any rational local treatment, and, as ichthyol is expensive and of unpleasant odor, I have discontinued its use entirely.

I would also emphasize the danger which the universal recommendation of such a drug may and does do. Every year scores of cases present themselves to operators for the relief of pelvic conditions in which valuable time has been lost by the use of some such cure-all or electricity, and are operated upon with a double risk to themselves and great inconvenience to the operator.

The SECRETARY then read

A Communication from Dr. W. J. Smyly, of the Rotunda Hospital, Dublin.

DUBLIN, September, 1895.

To the Secretary of the Philadelphia Obstetrical Society:

DEAR SIR: I am much obliged to you for bringing my letter before your Society, and am sorry that Dr. Price's unsatisfactory reply compels me to trespass further upon your kindness. The statement to which I took exception was made with regard to curetting in connection with abdominal surgery, and was reported as follows: "If you read the reports of the Rotunda Hospital you will find that the curette is used freely, and you will find that the mortality from puriform disease is very large. In one year there were six suppurations in the pelvis opening above the pubic arch."* Refer-

* *American Gynæcological and Obstetrical Journal*, vol. v, No. 4, p. 395.

ence to the report, however, showed that the use of the curette was not followed by any reaction, and that the cases of suppuration were not curetted.* In reply, Dr. Price is reported to have said that "either the report is false or this statement is incorrect." † The truth of the report does not affect the question, and the correctness of my statement can be easily tested by reference to it. I challenge Dr. Joseph Price to produce any report of the Rotunda Hospital which supports his allegation, and I now add to my former statement that there is no mention of curetting in connection with abdominal section in the reports, nor of a high mortality from puriform disease. Instead of defending or retracting his statement, Dr. Price made another even more absurd than the former one. "Dr. Smyly," he said, "does not deny that one hundred and five cases is correct, and the fact that the curette was used in one hundred and five cases shows that there is something wrong in the maternity work—this amounts to ten per cent. and probably more." This is assuming that the one hundred and five cases had been in the maternity department, which is contrary to the fact; they were admitted to the gynæcological department from all parts of Ireland, and prove nothing at all about the maternity work, and this was also the case with regard to the suppurations already referred to.

What would Dr. Price think if this kind of logic were applied to himself? If, for example, I were to say: If you read the reports of the Philadelphia Obstetrical Society you will find that Dr. Joseph Price does not use the curette freely and you will find that he meets with a large number of pelvic suppurations, which shows that there is something wrong with his obstetric work.

When Dr. Price states that he has done a hundred abdominal sections consecutively without a coated tongue and without a pulse above 100, and that in over one thousand four hundred maternity cases at the Preston Retreat, not to speak of the thousands of cases in his individual practice, he has not lost a case, are we to accept these statements as more correct than his quotations from the Rotunda Hospital Reports? I remain, dear sir, yours faithfully,

W. J. SMYLY,

Master of the Rotunda Hospital, Dublin.

* Report of the Gynæcological Department of the Rotunda Lying-in Hospital for the year ending Nov. 3, 1887. By Alfred Smith, M. B. *Transactions of the Royal Academy of Medicine in Ireland*, vol. vi, pp. 241-246.

† *Annals of Gynæcology and Pædiatry*, vol. viii, No. 6, p. 401.

Hysterectomy for Puerperal Infection. By MORDECAI PRICE, M. D.
(See page 365.)

DISCUSSION.

Dr. J. M. BALDY: It is almost impossible to discuss papers when the authors persistently and knowingly misrepresent the facts. The paper under discussion, for instance, states that the mortality of hysterectomy for puerperal septicæmia is one hundred per cent. The author of this paper was present at Baltimore when I reported a series of nineteen such operations with seven successes. Among these operations there were many in which the operation proved beyond peradventure that there was no disease of the Fallopian tubes, ovaries, or broad ligaments, but that it was confined exclusively to the *uterine walls*. Two of this class of cases recovered. There can then be no doubt as to the knowledge of the gentleman of the correct facts, and in the face of these facts, with the evident intention of perverting the truth, the statement is made that the mortality is one hundred per cent. Those of us living in Philadelphia are getting used to these untruthful statements from this source, and it has ceased to be a matter of surprise.

When it comes to the statements used to uphold the position that a man is criminal when he performs a puerperal hysterectomy, I must most emphatically disagree with all that has been said by the author of this paper. It is most true that the finger is the best possible means of removing pieces of retained placenta and blood-clot from the puerperal uterus, but if the gentleman means to convey the impression that puerperal fever is dependent alone upon infection of these clots and pieces of placenta, then I disagree with him, and believe that in my disagreement I have the whole profession at my back. If it is agreed that the uterine decidua is frequently infected in this disease, I must again disagree with the gentleman if he thinks the finger is the best method of removing this diseased decidua: it is impossible for the finger alone to do it, and it is just here that the curette is invaluable. If, on the other hand, the gentleman believes that it is better not to interfere with this diseased decidua by any method whatsoever, but that the patient's chances of recovery are better under the expectant and supporting plan of treatment, then, although I differ with him, still I admit that he has some very good authority to back him.

On the other hand, if he contends, as he seems to do, that the disease never penetrates deeper into the uterine walls than the decidua,

independent of any disease of the uterine appendages or lymphatics, then again I find myself at variance with him. The absolute proof of the correctness of my position is found in the fact that such conditions have been found during operations, and at least two such cases were saved, as shown in the list of nineteen puerperal hysterectomies collected and reported by me in a paper read before the American Gynæcological Society at its Baltimore meeting. Large numbers of such cases have been found post-mortem in the past.

Now, if such cases do exist—cases with abscesses (multiple, most probably) in the uterine walls, and the physician knows of the existence of the condition—I ask which is the most criminal act, to remove these abscesses or to deliberately let them alone? Their removal, of course, means hysterectomy, as nothing short of complete ablation of the uterus will insure the result aimed at. I admit that these cases are comparatively rare and that it takes the nicest kind of discrimination to pick them out, but when you do meet one and are fairly sure of the condition, I contend the only fair thing to the patient, as well as the only scientific procedure, is hysterectomy. The results, even at this early stage in this method of treatment, are most encouraging, and as more diagnostic skill and discretion in picking proper cases is brought to bear, the results will be much better. Many well-established and universally successful operations have started out in the beginning under less auspicious circumstances and with worse results.

The point against this procedure is repeatedly brought up that the woman is suffering from general septicæmia, and that therefore the disease has progressed beyond the uterus, and the removal of the uterus can do no good. It would appear from this that these gentlemen do not consider puerperal septicæmia a *local disease*, but still hold as of old to the opinion that it is a *general disease*. If such be the case, and no other interpretation is possible from their remarks, then once more I differ, and differ most radically, from their views, but can at last appreciate their objections to puerperal hysterectomy. I believe most uncompromisingly that puerperal septicæmia is a local infection, that only in a few cases does it become general, and then only by actual extension along the blood-vessel and lymphatic walls, or by embolism. The general manifestations of the disease, such as the temperature, pulse, etc., are due to absorption from the point of local infection, and that at any time this absorption can be stopped by removing the point of local infection. After removing the local point the question of whether or not the patient will get well will depend upon the answer to the question, How badly has the blood become

degenerated before the absorption has been stopped? If it is too badly degenerated the patient will die ; if not, Nature, with the proper aid, will conquer the infection which is already in the blood and the patient will recover. The only difference between this and a chronic pelvic abscess or pus-tube is that the disease is more acute and virulent, and one must act more promptly if they expect to catch the patient, before the point is reached when the blood is too badly diseased to be able to recover itself.

The same conditions of rapid blood degeneration and the necessity for quick decision and action exist in certain acute forms of appendicitis, and an almost perfect analogy exists between the two classes of cases.

Dr. MONTGOMERY : I have been very greatly interested in the paper read by Dr. Price, and to a portion of it would heartily assent ; first, that there is no better instrument for the removal of portions of decomposing placenta and decidua than the finger—that is, the finger within the uterus and the hand external. In this way, also, not unfrequently, decomposing clots are squeezed out of the walls of the uterus and a large amount of detritus may be thus removed. In cases, however, in which infection of the structures is pretty extensive this will not be sufficient to remove all the infected tissue. In such cases it is preferable that its use should be supplemented by the curette. In all cases, however, of puerperal uteri the finger should be introduced into the uterus as a guide for the curette. The removal of the uterus is certainly not to be indicated in every case of puerperal sepsis. In those cases in which the disease has extended beyond the uterus, involving the peritonæum, producing suppurative peritonitis, we would expect but little benefit from hysterectomy. There are, however, cases in which the disease is associated with high temperature and marked constitutional symptoms in which autopsy subsequently disclosed that the pus collections have been situated within the uterine sinuses. These are cases in which the condition can be determined. It seems to me that vaginal hysterectomy would afford a chance for relief, as by so doing we are removing the focus from which the poison is being disseminated. I remember during my term of service in the Philadelphia Hospital a patient who had a high temperature, running over several days, in which the autopsy disclosed a collection of pus in the uterine sinuses to one side of the uterus. Another case apparently was convalescent from an attack of sepsis, but still continued to have a temperature varying from 99° to 101° , with too frequent pulse. After she had been up and about the

ward for a couple of weeks she was suddenly taken with collapse and died in a few hours. Autopsy disclosed that the entire fundus of the uterus had been disintegrated by small abscesses, leaving a portion of the uterus remaining resembling a funnel. Certainly in this case the removal of the uterus would have afforded a favorable chance for the recovery of the patient. If the patient is able to live with the presence of such a collection, the chances are much enhanced by its removal.

Dr. M. PRICE: I would like to ask Dr. Baldy one question before replying to the discussion of the members. I ask this favor in the interest of women. How many puerperal hysterectomies have you had?

Dr. BALDY: Two.

Dr. PRICE: Both dead?

Dr. BALDY: Yes.

Dr. PRICE: Now, Mr. President, Dr. Baldy tells us that he questions my statement that the mortality is one hundred per cent. I have most carefully investigated all the cases of this operation which I have had an opportunity to do, and in the very best surgical hands I find without exception they all perish. Dr. Baldy further tells us that he has seen one hundred puerperal septic women die—a large experience, and that, too, in the hands of a man who believes in puerperal hysterectomy, and out of that great number he only selected two cases for operative treatment and they both ended fatally. If Dr. Baldy with a hundred cases to select from, and with such vast experience in diagnosis of such cases and the ripe judgment that should come of experience of so many opportunities in this field of desperate surgery, has such results, I would ask who can select those that should be operated on and when? There have been a number reported as recoveries, and they are all of them, so far as I can find out, in the list of puerperal conditions where pelvic inflammations of tubes and ovaries are the cause of infection, or the infection has spent most of its force there, and is easy of access and can be removed by a much more safe and simple surgical procedure; and there is not an operating member of this Society that has not reported a number of successful cases of this character.

Dr. Hurst, in a report to the obstetric section of the college in June last, lost four out of the seven reported, and saved three; the only one he gives sufficient data to say as to the justification of the operation is the one operated on in the fourth week, and with conditions that have been cured by a much more simple surgical procedure; one also possessing not one tenth the danger to the patient,

an operation of removal of the infected appendages, with irrigation and drainage. Such cases about all get well.

We all know that hysterectomy is being done now for almost every conceivable condition, and I have no doubt that many of them will be reported as recoveries from puerperal sepsis. Dr. Baldy makes the further statement that in puerperal sepsis the infection has gone further than the lining of the uterine cavity. No one doubts such a statement, and these are the very grounds on which I condemn the operation of puerperal hysterectomy; the infection has passed far beyond the reach of the surgeon, and to amputate the woman at the neck would not remove all the poison. The advocates further say that the womb is filled with pus pockets, and at times the womb is almost or quite gangrenous. When the womb is in such a condition, what hope can there be for the patient? When Dr. Baldy selects only two for operation out of a hundred, what chance would we, who have had so small an experience, have in this desperate struggle to save life in puerperal hysterectomy?

Dr. M. PRICE also reported the following interesting cases :

Ovarian Cystoma.

Mrs. H., patient of Dr. Albright of Muncy, Pa.; suffering from cystoma of the right side. Dr. Albright sent the patient to me for operation. My reason for reporting this case is that it was supposed the patient was pregnant. While the tumor remained in the pelvis it was impossible to say she was not. The breast symptoms were those of continuous pain, with atrophy instead of hypertrophy; menses only partial. As soon as the tumor ascended into the abdomen all suspicion of pregnancy was at once removed. Patient had been married only one year, and all of her symptoms made their appearance after her marriage.

Three Cases of Appendicitis.

Mr. C. J., patient of Dr. Shaw, of Trenton, N. J.; suffering from appendicitis, with an abscess at the head of the colon. Operation and drainage. Appendix not removed, as the patient had been freely purged at the time of the operation by Dr. Shaw, and, as the peritonæum was not opened, there was no indication to do anything but drain. Recovery.

Mr. J. V., patient of Dr. Prendergast, of Philadelphia. First attack. Appendix sloughing and its outer two thirds gangrenous; localized peritonitis; appendix was encapsuled by the omentum, and very much

resembled the dressings on an injured finger as applied by the surgeon. The appendix was enucleated. It was found densely adherent, and irrigation and drainage were applied. It was removed. The general peritoneal cavity was opened, so it was irrigated and also drained. Recovery.

Mr. L. K., patient of Dr. Lopez; suffering with suppurating appendicitis. Patient was freely purged at the time of my visit, and I at once operated and found a large collection at the head of the colon and the peritonæum shut off from the abscess cavity. I removed a large concretion from the appendix; did not remove the appendix. Irrigation and drainage. Recovery.

Every case must be treated, and conditions and complications met as indicated. I have no reason to back down from the practice of leaving the appendix when the bowels are moving and the abscess shut off from the peritoneal cavity. They about all get well. I have done this operation a great many times, and have only lost three cases—all of them hopeless cases. I am not one of those who believe that this treatment is only palliative and not curative. Not one of my cases has had a return of the trouble, and at least seventy-five per cent. of them are yet living to call for help if they should have a return. When the bowels are not moving, and we can not get them to move, then more radical measures must be taken, and the appendix removed, all adhesions broken, and the bowel examined. A thorough washing of the entire abdominal cavity and glass drainage used.

A Porro Operation.

The patient, Mrs. Mary Frial, Lambertville, N. J., was a dwarf, twenty-seven years old, under the care of Dr. McGill; a native of Ireland; two years married; rhachitic; fifty-two inches in height. She came to term with a pelvis only an inch and a half in its antero-posterior diameters. The pelvis had the appearance of the figure eight, being most contracted in the center.

In making the examination two fingers only could be forced between the bones and but slightly opened; the head could not engage. The patient had been in labor for two days, in the hands of a midwife, before Dr. McGill got charge of the case. Fortunately the labor had been slow and mild. Dr. McGill at once recognized her condition and danger and telegraphed for me to come and operate. Fortunately she had three good men with her—Dr. McGill, Dr. Clauson, and Dr. Romine; so I had most efficient help in the operation. The operation consisted, after ether was given and

the abdomen properly cleaned, in making an incision long enough to deliver the womb and then placing gauze towels over the bladder and the intestines, so as to keep the bowels and peritonæum clean. The womb was then opened, the child delivered and given to an assistant, and, without further to-do, the nœud was applied and the womb cut away. The toilet was the same as in that of suprapubic hysterectomy. The nœud came off on the eighth day, and the woman nursed her baby from the third day. She had no more trouble than if delivered in the good old way by the vagina. She made a beautiful recovery.

Mrs. M., a patient of Dr. Shealer, of Reading. This patient was suffering from a rapidly growing tumor of the right ovary, and her condition was much depressed and her constitution broken down. On July 1st, with the assistance of Dr. Joseph Price and Dr. Hughes, I removed a sarcomatous tumor, with no complications and by a very short operation, six pounds in weight. The patient was in good condition when I left her, and again, at five in the afternoon, she was in what I thought the very best, having reacted perfectly from the operation. A little before six she complained to the nurse of a strange feeling at the heart. The matron was sent for and I was with her in a few moments but, before I reached her bedside, she was dead. I at once thought there could be but one cause of death so, as soon as I could, I had the abdominal cavity opened and the pedicle examined; it was as secure as at the time it was tied and no explanation can be given of the death of this patient. Such a result in so simple a case makes one grow old all too soon!

- *Multiple Fibroma with Adhesions.*

Mrs. H. A., a patient of Dr. Shealer, of Reading. She had suffered for nine years from the tumor and had carried it as long as she could. When she was no longer of any use to herself or to her family, she began to think of its removal and Dr. Shealer brought her to me for operation. On July 12th I removed a large fibroid tumor, divided into two large masses right and left and with a deep depression in the center extending the entire length of the tumor. The one on the right side was covered by the omentum and bowel densely adherent to the tumor and, after the removal of the latter, these adhesions gave a great deal of trouble in controlling the hæmorrhage. The tumor, which was twenty-five inches in circumference and thirteen inches in length, was removed entire and the vessels tied after it had been cut away. This patient made a beautiful recovery.

The tumor, on the side where the adhesions were so troublesome, was found to be undergoing marked changes. Large masses of cheesy and broken-down parts of the tumor were found with well-marked inflammatory softening going on, and I have no doubt that the entire tumor was taking on inflammation, that Nature was making an effort to protect herself and that these adhesions were the result of this effort.

Ovarian Abscess ; Fæcal Fistula.

Miss M., a patient of Dr. Frowert, of Philadelphia, had been suffering for only one week with severe pain in the left groin and continuous diarrhœa. The examination revealed a large tender mass in the region of the left ovary. The condition of the patient was such as to indicate septic trouble, and an operation was the only way to prompt relief. So, on the following morning, June 3d, with the assistance of Dr. Joseph Price, Dr. Frowert, and Dr. Hughes, I operated and removed quite a collection of pus in the left ovary. The bowel and the left tube were in a gangrenous condition, the stench from the contents of the abscess indicating that the bowel was thinned and in the same condition as the tube and ovary, and would in a few days give way from a slough. Thorough irrigation and well-placed drainage were all that could save this patient from death. The drainage continued very offensive and the discharge from the bowel was kept up with the assistance of small doses of the mild chloride. She continued to improve, and on the third day the glass drain was removed and rubber was used in its stead. On the fifth day small particles of fæces and some gas began to be discharged from the tube. Her condition continuing to improve, on the tenth day she had what she called "an explosion," great quantities of gas and almost all the contents of the bowels passing through the drainage tract. At this time, at the end of the second week, the patient began to show the effects of the bowel drainage and lost ground for some days, when a large slough passed through the drainage tract. She began again to improve and, at the end of the third week, the ligature passed through the drainage tract. This at once made her recovery sure in my mind. Up to that time I was sure the drainage could not close with an infected ligature in place, and there could be no doubt that the ligature was infected. At the end of the fifth week the gas and fæces had entirely stopped, and the patient continued to improve. At the end of the seventh week the patient went to Atlantic City a well woman. I report this case, because it is by all odds the very worst case I ever operated on, and the very worst case of fæcal fistula. I have never had a fæcal

fistula to give me the least concern as to its closure except this one, unless the patient was suffering from tuberculosis.

Hysterectomy: Extirpation of the Entire Uterus.

Miss A. L., patient of Dr. Janney, of Philadelphia, was a very large woman, and the addition of a tumor thirty inches in girth and fifteen inches in length made her condition anything but comfortable. The tumor was a multinodular one and involved the entire uterus. She first noticed it nine years ago while a nurse in Blockley Hospital, and from that time on it slowly developed but gave little trouble. Some five years ago she consulted Dr. Janney and he advised its removal. She asked how long she could live and work and was told probably four or five years if she did not have an accident. She then made up her mind to go on with her nursing, as she could not well be spared from her work; besides, she knew well the danger of so serious an operation. The tumor grew slowly until some six months ago when she had very severe pain, with rapid enlargement of the tumor and considerable dropsy, both limbs becoming greatly swollen. She had suffered from time to time with rheumatism which had crippled her heart.

Before I saw her Dr. Janney had told her how serious her trouble had become. She would now have to undergo the risk of an operation in her crippled state of health, if she expected to be of any further use to herself or friends. Here was a very large woman with a badly crippled heart, a dropsical condition showing a state of general health much below that we so much desire in a patient upon whom we expect to do so terrible an operation. On July 23d, with the assistance of Dr. Joseph Price, Dr. Janney and Dr. Hughes, I removed the tumor by entire extirpation. It was found at the time of the operation that the cause of her exaggerated symptoms was the twisting of one of the fibroid nodules on its pedicle on the right side of the appendix, and a portion of the omentum was included in a double twist of the pedicle. Appendix and omentum were removed with the tumor. This patient did nicely for the first week with the exception of a very weak and quick heart's action; this was only a continuation of what existed before the operation, so it was hoped there would be no trouble. At the end of the first week she began to complain of pain in the left side and at the back of the head. She was purged, hoping that would remove the headache, but it did not. The pain increased, profuse sweating now came on and I suspected sepsis. Her condition continued to grow worse and, on the twelfth

day, she died without a single symptom of any trouble in the abdomen. The *post mortem* of the abdomen showed a well-healed stump, without a single adhesion or a drop of pus to which we could attribute death.

Suprapubic Operation for Vesical Calculus.

Mr. H, fifty-four years old, a patient of Dr. Parsons, of Mount Holly, N. J., was sent to me for operation. He had been suffering, for nearly two years, agonizing pain at the end of the penis and in the bladder, almost incapacitating him from his work. He had been treated by many different doctors and always with the same result. I examined him very carefully with a sound, and so did many others who had had him under treatment, but no one ever found a stone. We all thought he had one but could not find it by sounding.

About one month prior to operation he thought he had found entire relief from his terrible affliction in a Christian Science doctor, who was then holding meetings and doing her great work at Mount Holly. For two or three weeks he was entirely relieved; he could walk, run upstairs and do many other things that he could not do before the treatment. All went well until he attended a Methodist meeting one evening, where the preacher took occasion to say that those who consulted such doctors and paid money for the treatment were only robbing themselves and their families. This was too much for our patient; he then and there had a terrible spasm, and from that time on the Christian Science doctor could not get on to his case again. So Dr. Parsons sent him to me and I did the suprapubic operation, either for drainage or the removal of a stone we felt so sure was there. I have here to show you a flat rough stone that looks much like those you see along rivers. It was low down behind the mouth of the urethra and imbedded, so as to be protected from contact with the sound. The man made a beautiful recovery.*

Adjourned.

FRANK W. TALLEY, *Secretary.*

TRANSACTIONS OF THE MISSISSIPPI VALLEY
MEDICAL ASSOCIATION.

Twenty-first Annual Meeting, held in Detroit, September 3 to 6, 1895.

THE GYNÆCOLOGICAL AND OBSTETRICAL PAPERS, WITH THEIR
DISCUSSION.

Abstract of a paper entitled

UTERINE FIBROIDS—WHEN TO OPERATE.

BY TOD D. GILLIAM, M. D., COLUMBUS, OHIO.

The author said the medical and electrical treatment of uterine fibroids is to-day in a very unsettled state. While it can not be denied that amelioration or even recovery has followed such lines of treatment, there has not been that degree of uniformity in results calculated to inspire confidence. In the opinion of the author, there is no better field for a competent observer than the study of the natural history of uterine fibroids; it will enable us to determine the true value of so-called curative agencies; it will insure a more certain prognosis; it will give the proper cue to surgical interference. If, out of one hundred cases, ninety suffering women can be restored to lives of usefulness and happiness, would it not be better to give them a chance? No surgeon is justified in doing hysterectomy, or the more serious operations for uterine fibroids, when the patient has not experienced sufficient trouble to make it a menace to her life.

DISCUSSION.

Dr. R. S. SUTTON (of Pittsburg): To be called on to discuss so important a question as that of fibroid tumors of the uterus this afternoon is to me a little surprise; we are not prepared for it. However, for many years—twenty or more—my mind has been constantly directed to this subject. In 1877 I remember opening Douglas' *cul-de-sac* and removing a fibroid tumor through the vagina. It was the first attempt which had ever been made in that direction. We knew nothing in those days of antiseptics; we knew little of asepsis.

The patient died. To-day that patient would have recovered in my hands. So much then for all the new methods and new technique as taught us. In 1880 the established method of dealing with fibroid tumors of the uterus involved the extraperitoneal treatment of the stump in the lower angle of the wound, sustained there by pins surrounded with wire, attached to the *serre-nœud*, all of which had been given to us by Koeberle, of Strassburg. The method of Koeberle—that is, making a stump in the lower segment of the uterus—is still an established operation. Mr. Bantock, of London, who has used the operation even more than Koeberle, stands to-day as its champion in England. In our country, Dr. Joseph Price and others have adopted the Koeberle operation. For the wire we substituted after a time the elastic ligature. We secure thereby greater safety. The operation, as I have said, is an established one, and I believe it will always be done by some operators. Price has had a mortality with this operation of less than six per cent. in supravaginal hysterectomy. But Koeberle's operation was destined to be superseded, and in 1881 Schröder, of Berlin, began seeking in the dark for a method of treating the stump so that it might be dropped into the peritoneal cavity. His mortality was about forty per cent. We had imitators and also men working independently in the same line in our own country, among whom I may mention Dr. Marcy. The operation, however, of Schroeder was destined to fall with Schröder himself—that is, the technique of the operation—and it remained for Dr. Baer, of Philadelphia, working in the same direction, to evolve a method which at one “fell swoop” did away with the old Koeberle operation, with the wire, with the elastic ligature, and with the old Schröder operation. Baer's operation you are doubtless familiar with. By means of it supravaginal hysterectomy is to-day one of the safest operations in surgery. But surgery, ever restless, not only upon the Continent of Europe but in our own country, is not content with leaving the stump or neck of the uterus in the top of the vagina. And why? Because the neck is liable to the same diseases to which it was liable when the superimposed uterus was *in situ*, and hence a new operation has been evolved. Out of the old vaginal operation for cancer of the uterus has come to us, principally through the French surgeons, and particularly Péan, the operation of *morcellement*, or removing the fibroid by the vagina piecemeal. For small tumors the operation is a good one; for large tumors it is also a good one in skillful hands, but exceedingly difficult. Péan has succeeded in breaking down and delivering by the vagina a uterus and tumors reaching to the umbilicus. But such an operation must,

of course, always be slow, requiring consummate skill and perseverance for its completion.

Abstract of a paper entitled

TUBERCULAR PERITONITIS.

BY L. H. DUNNING, M. D., INDIANAPOLIS, IND.

In the domain of surgery there is no more attractive subject for study than tubercular peritonitis. The mode of invasion, forms of the disease, diagnosis, and treatment were considered in the paper, and, finally, a brief history of five cases was presented.

With reference to treatment, tubercular peritonitis, with effusion, is now universally considered a surgical disease. Even in the acute suppurative cases abdominal section yields a sufficient number of successes to render its employment imperative. Senn excludes all forms of the disease from surgical treatment except the exudative form. Manclaire gives as the chief contra-indications to surgical treatment the generalization of the lesion and the existence of profound systemic infection. Linder analyzes the results in two hundred and five operations, the mortality being 7.5 per cent. The deaths resulting in most of these cases were from collapse. In case of involvement of the tubes and ovaries they should be extirpated. The author's experience in two cases leads him to the belief that we should, if possible, avoid using silk ligatures in tying the pedicle when it is necessary to remove the uterine appendages.

CASE I.—Mrs. A. B., aged fifty-six years, consulted the author concerning the extirpation of a fibroid tumor of the uterus. She had passed the menopause five years previously, but the tumor had gradually increased in size. At the time of examination it had reached the umbilicus. There was a small amount of fluid in the abdomen, and on opening it probably a quart of clear, straw-colored fluid ran out. The peritonæum and intestines were studded with innumerable small, grayish deposits of the size of a millet seed. Like deposits thickly studded the serous covering of the tumor. The intestines were agglutinated but were not adherent to the tumor. After removal of the tumor by supravaginal hysterectomy and ventro-fixation of the stump, the abdominal cavity was irrigated and then, leaving the drainage-tube just behind the stump, the abdominal incision was closed. Recovery.

In CASE II a diagnosis of ovarian tumor had been made. Examination revealed an accumulation of fluid in the abdomen which was encysted. The uterus was fixed, and an immovable mass was outlined in the pelvis upon the right side, which the author believed to be a small ovarian tumor surrounded by inflammatory exudates. An exploratory incision was made, and three gallons of dark fluid evacuated from the abdominal cavity. A small tumor was felt in the pelvic cavity. The incision was enlarged, the tumor enucleated and the pedicle tied off, together with the Fallopian tube. The left tube and ovary were likewise extirpated. On exposing the abdominal and pelvic cavities to view, it was seen that the viscera were deeply studded with small grayish deposits. Microscopical examination demonstrated the presence of tubercle bacilli. The patient is now, eleven months after operation, in good health.

CASE III.—Patient thirty-five years of age ; diagnosis, suppurating ovarian tumor. Abdominal section. A gallon of fluid evacuated through the incision ; probably a quart of this fluid was pus. The peritonæum, uterus and one Fallopian tube were studded with nodules of miliary tubercle. One was markedly involved and was extirpated. It was tied near the uterine cornu and cut away. Death six months subsequent to operation.

CASE IV.—Diagnosis of tubercular peritonitis. Abdominal section at the patient's home. Two gallons of fluid were found in the abdominal cavity, and innumerable nodules of miliary tubercle studded the parietal peritonæum and the serous coats of the intestines. The intestines were extensively agglutinated. The mesenteric glands were involved in the tuberculous process, but the tubes and ovaries were healthy. The patient rallied after operation but made a slow recovery. She died of general tuberculosis four months after surgical interference.

CASE V.—Suppurating ovarian tumor or encysted dropsy, in which suppuration was occurring. Abdomen incised and the encysted dropsy found, containing several gallons of fluid, a small portion of which possessed the microscopic appearances of pus. Tubes and ovaries were both adherent and imbedded in adventitious tissue. At the end of eight weeks there was still a sinus leading down into the pelvis, and there was a slight discharge. Proper treatment was instituted, the opening and fistula closed at the end of nine weeks, the patient in the mean time having regained her strength and buoyancy of spirits.

DISCUSSION.

Dr. GILLIAM (of Columbus, Ohio) : I wish to say a few words on the paper just read. Where we have tuberculosis of the tubes and ovaries, I believe it is a good plan to remove the uterus with them. I had an experience about five years ago that made such an impression upon my mind that I think I shall never leave any part of these structures that can possibly be removed, when affected, in operating on these cases. The case was that of a young lady who had had tuberculosis of both the ovaries and tubes. The parties interested wanted to restrain me in the operation from undertaking the removal of the tubes. I found the structures on both sides infected clear up to the uterus and involving it. When I applied my ligatures to these infected parts there was prolonged suppuration. The trouble had extended to the uterus; the woman is not well, and will not be well until the uterus is removed.

Dr. J. FRANK (of Chicago) : I would like to ask if any of the members have noticed a recurrence in the cases they have operated upon for tuberculosis of the peritonæum, or how long are the patients immune from further attack? I have had some experience in that line, but have not followed it out sufficiently long to speak with authority. I do not think the doctor touched upon that phase of the subject in his paper, and I shall be glad to hear from any of the members who have had experience with recurrent cases of tubercular peritonitis.

Dr. WILLIAM H. HUMISTON (of Cleveland, Ohio) : This is a very interesting subject. I have had two satisfactory cases of tuberculosis of the peritonæum. One case occurred in our City Hospital about a year and a half ago, the patient suffering from chronic inflammation of the knee joint. She was turned over to my service a year ago, and on examination I found disease of the appendages, tenderness of the abdomen, and suggested an operation, which was granted. Upon opening the abdominal cavity the whole peritoneal surface was studded with miliary tubercle, and there was quite a large amount of fluid in the abdominal cavity. I removed the appendages without any difficulty, using a fine silk ligature. The patient had been quite anæmic and did not progress toward health. The joint treatment had not been of any avail. Within three weeks after abdominal operation she began to improve nicely, and had gained twelve pounds in twelve weeks. At the end of this time the lower end of the incision became reddened, swollen, and hardened, broke down and discharged pus.

It remained open, in spite of washing and drainage, until April of this year, nearly nine months. About the 1st of April the ligature from one side came away and the part is healed up. She has gained twenty-five pounds altogether since the operation. The knee joint has become healthy, and she was dismissed from the City Hospital in July. If I had used a catgut ligature, I am satisfied there would not have been any trouble.

Dr. R. S. SUTTON (of Pittsburg) : It is the duty of every one to add to a subject when it comes before a body like this for discussion. I have seen a good many cases of tubercular peritonitis, although I have not operated on all of them. Until within a year I have been in the habit of washing the patients out with hot water, but at present I pay no attention to it. I simply open the abdomen, clean out everything, and I am convinced that while hot water does no harm, it does no good. I am satisfied it has no influence upon the disease. I have been told by operators on the Continent of Europe, within fifteen months, that they have had the same experience with hot water. Now, I believe in removing, so far as possible, all diseased organs. In the last case upon which I operated this year there was tubercular disease of the anterior wall of the bladder, and there was also disease covering the membranes of the uterus. I removed the uterus entirely with the cervix and about one third of the anterior wall of the bladder, taking out an elliptical piece quite to the fundus. The opening in the bladder required the application of from fourteen to sixteen sutures, so that you can get an idea of the length of the incision of the bladder by that. This patient recovered, and is now in good condition. It is too soon to tell what the final result will be, but it will probably be good. I have a case of tubercular peritonitis, operated upon thirteen years ago. Miliary tubercles were found. Where there are large points of exudate, and where the intestines are glued together, as well as the walls, you are liable to have fæcal fistulæ. I have seen fæcal fistulæ follow the operation, and your ligatures are likely to behave as in Dr. Humiston's case. I have known some of the catgut ligatures that were inserted to slip and allow the patient to bleed to death. I have seen one silk ligature slip, and I opened the abdomen as soon as it was determined there was internal hæmorrhage and succeeded in ligating the vessel and saving the patient.

Dr. HENRY O. MARCY (of Boston) : In 1887 I operated for the first time, by accident, on a case of tubercular peritonitis, and at that time we took particular pains to make an histological examination to

show that there was no mistake as to the tuberculosis being active, manifesting itself in disseminated miliary tubercles. She made an easy recovery, and I simply wish to say that only a little while ago I heard from her, and, although she is still an invalid, she is fairly free from suffering. At the time of the operation I supposed that death would soon follow, but we were glad at the end of a week subsequent to operation to find that she was going to recover. I have operated a good many times since then. I did not wash out the cavity in this case.

Dr. A. H. CORDIER (of Kansas City): I indorse the remarks of Dr. Sutton in regard to the uselessness of irrigation in these cases. I do not believe it is necessary. I also wish to call attention to the fact that Mr. Wells, as early as 1862, operated for tubercular peritonitis, simply incising the abdomen and draining, when the cases got cured. While I think drainage is the principal thing that brings about a cure in these cases, yet it is not thoroughly settled how. But the theory has been advanced by Dr. Morris, of New York city, that it is due to the admission of saprophytes into the peritoneal cavity. I do not think there have been any further investigations made since Dr. Morris first called our attention to it some years ago.

I wish to indorse the position Dr. Sutton takes in regard to condemning catgut. I would not use catgut in the abdominal cavity under any circumstances. It may be safe in the hands of Dr. Dunning, and kangaroo tendon may be safe in the hands of Dr. Marcy, but for the average operators scattered around over the country I think the silk ligature is far superior. You can make it aseptic; it is reliable; it will not slip; it will hold your vessel if you use silk of small size. The end of the ligatures should be cut short, so as to be imbedded immediately after the operation. I have operated on two cases of tubercular peritonitis, and my results have been very satisfactory. I think we owe to Mr. Wells, like a great many other things in abdominal surgery, the credit for first operating on cases of tubercular peritonitis.

Dr. BAYARD HOLMES (of Chicago): I desire to call attention to one point in connection with this paper, and that is in regard to adhesive peritonitis being a contra-indication to operation. I once had an experience in that direction which was very interesting and somewhat ludicrous. The patient had been under observation for a long time, and I was called in to operate on account of obstruction of the bowel, presumably from sarcoma. A diagnosis of sarcoma had been

made, although no tumor of any size could be found. In opening the abdomen we found enlargement of the lymph glands, which were supposed to be either sarcomatous or tubercular cheesy glands on their way to the peritoneal cavity. When we reached the abdominal cavity we found there was no peritoneal cavity at all; there was a complete obliteration of it. The intestines were matted together, and from the tubes upward all the way we could find no place where we could get into any cavity. We had a good deal of hæmorrhage. At the end of the operation we made a little peritoneal cavity there and drained it. I went home feeling rather discouraged. Some time afterward the patient's sister came into my office and said she was very glád to call and pay that bill. I asked her how her sister was, and she replied that she was doing very well. The patient came to see me, although I never expected to see her again. I was really embarrassed. She is now well, after four years, having been cured of an adhesive tubercular peritonitis. As previously remarked, we could not find any peritoneal cavity.

Dr. F. W. ENTRICKEN (of Findlay, Ohio): I happened to have a case of what was supposed to be tubercular peritonitis come under my observation years ago, which first occurred in the practice of a brother physician, although no microscopical examination was made of the fluid or of the contents of the abdomen. This physician became discouraged and dismissed the patient. I took charge of the case. Free drainage was established and purulent matter was discharging from the wound that had been made. The patient died. This discouraged me a little with regard to opening the abdomen for tuberculosis of the peritonæum, as I had formed a favorable idea of operations for this condition from the reports I had read in the medical journals from time to time. Shortly after this, probably about four years ago, another case fell into my hands. It was a child seven years of age, with tubercular peritonitis, and apparently of a highly tuberculous constitution, or, at least, with that tendency. In this case I used a trocar, and examined microscopically the fluid that was removed. The slides were made according to Klebs' modification of Koch's process, and tubercle bacilli were found. I called to see the case again a month afterward, and considered the patient in a hopeless condition, as the cavity had filled up again with—I will not say purulent material, but bad-looking serum. I opened the abdomen, drained it, and washed it out with hot boiled water. There was no return of the fluid in any considerable quantity—so the physician told me afterward. Still I thought the patient would die. Some three

weeks after this I was informed that she was still alive. I heard no more about the case for two years, and supposed the patient was dead, but the physician who had charge of the case told me that she was still living. This is the same case that I reported at the meeting of the National Association of Railway Surgeons, held in Chicago last May, when we were speaking in reference to injecting tuberculous joints. Whenever I have cases of this kind in the future, I shall open the abdomen and thoroughly drain it, giving it a chance for a beam of sunlight, if possible.

Dr. B. M. RICKETTS (of Cincinnati) : Within the last few months cases of tubercular peritonitis have been treated by a foreigner by simply opening the cavity and reflecting sunlight into the peritonæum. And so, in addition to the other remedies for its cure, we have the sunlight.

Dr. R. S. SUTTON (of Pittsburg) : The question is : What cures the tuberculosis? I maintain it is not the hot water. It is not the air ; it is not sunlight. What in the world does it? It is not drainage. I have had these cases cured without drainage. We can not put our fingers on any one thing that we can say kills tubercle in the peritonæum of a patient. You have a tubercular cavity in the lung : air is admitted freely into it ; you have drainage, and it is washed out. You do not always kill the tubercle bacilli when you tap the lung. But there is one point : Take a patient who has extensive adhesions in the pelvic cavity involving both the ovaries and tubes as well as the uterus. There is fixation of the uterus, and you make an attempt to remove the uterus and appendages through the vagina. You find it is more of a job than you expected, and you simply remove the uterus, leave the ovaries, tubes, and all the adhesions, and probably you have not opened the general cavity of the peritonæum at all. Examine the patient at the end of six months and what has happened? Every particle of adhesion in that wound is gone. What cured it? Was it drainage? It is doubtful. I think we have to look in this direction : The peritoneal sac is a great digestive sac, a great big stomach, so to speak ; it digests everything that goes into it except poisons.

Dr. DUNNING (closing the discussion) : I have very little more to say. I am very glad, indeed, that my paper has elicited such a free discussion. Regarding the matter of recurrence of the disease in patients who have been operated upon, I think Linder's observations are the most complete of any. He found very little tendency to recur in cases where the disease was primary and of the adhesive form ; but in

other forms of tubercular peritonitis, where the disease was secondary and of the adhesive form, there was a strong tendency to recurrence. My own experience has not been sufficiently extensive to furnish any definite data. A patient first operated upon in 1892 is well and strong now. Another in 1894 is also well and strong.

Regarding the use of catgut and silk. In the case in which I used silk in removing the tubes and ovaries I had trouble. The sutures came away afterward. In removing the appendages it is not necessary to make any pedicle. In tubercular peritonitis you can take out the appendages, tie the bleeding arteries, close in the raw surface, and do it without any fear whatever. I have done it repeatedly in cases that were not tubercular. I have seen several cases of secondary hæmorrhage following the use of silk. If we have good catgut we need not fear to use it in the abdominal cavity; if we have poor catgut we ought not to use it anywhere.

With reference to the adhesive form of the disease and the remarks made by Dr. Holmes concerning his case, I will say that it is a form which has a tendency to recur. That is the form which it takes when recovery is about to take place; so we need not be astonished that a case such as the doctor has mentioned should have recovered. I recently operated on a case of the adhesive form of tubercular peritonitis under a mistaken diagnosis. I operated for obstruction of the bowels. I thought it was due to adhesions, and then I thought there was peritonitis with adhesions and bending of some of the intestinal coils, and that we could overcome the obstruction by loosening the adhesions. When we opened the abdomen we found it difficult to find a peritoneal cavity at all; but finally we succeeded in separating the intestinal coils from the parietal peritonæum, loosened up the adhesions, overcame the obstruction, and the patient recovered and lived for some time. Unfortunately, there was a fæcal fistula which was a great distress to her and her family.

The question as to how tubercular peritonitis is cured is a burning one; we have not as yet reached a definite conclusion. You are all familiar—many of you at least—with the experiments which were made by a gentleman (whose name I can not at present recall) of injecting air into the abdominal cavity through a trocar, and who reported a large number of successful cases from simply doing that, exposing the cavity to sunlight, not draining even.

Dr. Robert T. Morris, of New York city, at a meeting of the American Association of Obstetricians and Gynæcologists, held last year in the city of Toronto, reported that he had been able to sepa-

rate in the laboratory saprophytes that would destroy the bacillus of tuberculosis. Whether he has conducted further experiments in this regard I am not able to say. We may have in that way an explanation of the method of cure. I hope in the future that we shall be able to locate the particular microbe and cultivate it, and thus determine its effects in the cure of this disease.

Abstract of a paper entitled

PUERPERAL SEPSIS: WHEN IS HYSTERECTOMY
INDICATED?

BY BAYARD HOLMES, M. D., CHICAGO, ILL.

The author, writing on this subject, reports four cases of puerperal sepsis, each of which was treated by a different method.

The first case was that of a multipara twenty-six years old. There was a history of pulmonary tuberculosis, and the circumstances surrounding the confinement were most unfavorable. There were several complications—namely, retained placenta, post-partum hæmorrhage and manual delivery, which was performed without anæsthesia.

Hæmorrhage was arrested, but gradual sepsis followed, and seven weeks after labor death ensued.

In the second case, that of a woman thirty-two years of age, confinement was normal, but on the fourth day a mild form of sepsis appeared which steadily increased for six weeks. The pulse and temperature indicated peritonitis with intestinal obstruction. A laparotomy was determined upon, and the right tube and ovary were removed, with part of the broad ligament of the same side. Vaginal drainage was established.

Eight days afterward she died from phlebitis and pulmonary embolism, but there was no peritonitis.

The third case, that of a multipara with a history of gonorrhœa, was one of abortion. Pelvic inflammation and peritonitis followed, and, after three weeks, symptoms of intestinal obstruction were observed. A laparotomy was performed, and both tubes were removed.

Drainage was by the abdomen. Death occurred in eight days from phlebitis and pulmonary embolism. In the fourth case the patient was delivered by a midwife, and there was a history of puerperal infection. Six weeks after confinement there were symptoms of intestinal obstruction and indications of fluid in the peritoneal cavity.

The uterus and annexa were removed by the abdominal method, and drainage through the wound was established. This case recovered. Microscopical examination of the structures removed showed the uterus and its lining membrane to be suppurating and necrotic. There was an abscess of the right ovarian ligament, and suppuration followed the lymphatics of both tubes. Blood-vessels in both broad ligaments showed infective thrombi.

The author thought that removal of the tubes and ovaries with drainage would have been ineffectual, as he held the theory that the infection advanced through infective thrombosis and suppurative lymphangitis beginning in the uterus.

The author then related the pathological conditions found in a number of puerperal women who had died of accidental causes without infection. The conditions found in these cases were compared with those found in the infective cases which had died at a corresponding time after confinement.

In a series quoted of 7,600 labor cases in the hands of one man, 101 had been treated by repeated curettage and drainage. Of these five died. The author believes that after the failure of curettage these cases might have been saved by hysterectomy.

An analysis was made of a series of 6,635 labor cases occurring in the Berlin Charity Hospital. Of these, seventy-nine deaths occurred, and thirty-three of these were from puerperal sepsis. The author considered that all but three of these thirty-three cases might have been saved by hysterectomy.

The following conclusions were deduced: 1. Puerperal sepsis proceeds from the uterus by the lymph channels, thrombotic vessels, or both. 2. It is still the cause of about one half the deaths which occur in the puerperal state. 3. In many cases curetting is ineffectual. 4. The removal of an infected broad ligament and the drainage of a pelvic abscess or peritonitis is often ineffectual. 5. Hysterectomy should be performed in those cases which do not yield to curettage and irrigation. 6. Hysterectomy should be performed whenever peritonitis is present in puerperal fever. 7. In cases of puerperal mania, where there is a history of endometritis without uræmia, hysterectomy should be performed. 8. In diphtheritic elytritis and endometritis hysterectomy may be of no use. 9. In cases of early and rapid infection, hysterectomy may be of no use. 10. In cases where septic phlebitis has extended beyond the pelvis, hysterectomy may be of no value.

DISCUSSION.

Dr. J. HENRY CARSTENS (of Detroit): This question of hysterectomy for cases of puerperal fever is a serious one, and I, for one, would not like to have this paper go out from this Association without a protest on my part. I was formerly an obstetrician. I saw a great many cases of puerperal fever in consultation, and I assure you that I can not indorse, from my experience, the views expressed by Dr. Holmes. I think the doctor made the statement that out of one hundred and one cases that were curetted, five of them died. The correct plan of treatment is to curette. First clean out your uterus. There are various forms of infection in puerperal fever such as he has stated. We have one case where the infection passes along the lymphatic system into the broad ligaments. There is a case where, if taken early, hysterectomy will do good and probably cure the patient. But if the disease or infection is along the lymphatics and becomes deposited in the lymphatics under the arm, you may remove the uterus and it will not save your patient from sepsis. If you have sepsis from unclean fingers, from gonorrhœa that travels along the uterus and involves the tubes, you can remove the uterus and possibly cure your case. If you have an ordinary case of infection due to dirty fingers, where the old disease is limited to shreds of membrane and particles of placenta which have remained in the uterus, if you clean them out, your patient will get well. Those of us who have had experience have seen many cases where the disease or infection was limited, where the *vis medicatrix naturæ* was at work, and where, after opening a large abscess in the groin, in the rectum, or vagina, the patient got well. Take a hundred cases, operate on every one of them, and see what mortality you have. You will have a greater mortality than if you trust to the *vis medicatrix naturæ* and curettement. I must protest against having it go out among the profession that the correct way is to perform hysterectomy in every case of puerperal fever. If we will let them alone a great many of them will recover. We should not operate on every one of them. I believe there is a limit to surgical interference in these cases.

Dr. MILES F. PORTER (of Fort Wayne, Ind.): Puerperal sepsis, like the mantle of charity, covers a multitude of sins. Puerperal sepsis may mean septic intoxication, pure and simple, which drainage of the uterus, etc., will cure within twenty-four hours. It may mean a localized abscess in one tube or the other, or in one or the other of the broad ligaments. It may be for a time confined to the perit-

næum, with the accompaniment of toxæmia or sapræmia, and not septicæmia or pyæmia. In these cases I can conceive of no good pathological reason for removing the uterus. Ordinarily, we seek in surgery to remove the source of some trouble. If you have a peritonitis as your pathological lesion, pray tell me how hysterectomy is going to do that case good save by the drainage it establishes?

In the main I was very much pleased with Dr. Holmes' paper, but I must confess that I am decidedly opposed to the advice that the uterus should be removed in cases of puerperal sepsis as a general thing.

Dr. HUMISTON: We have had an instructive and interesting paper, and personally I desire to thank Dr. Holmes. I think when the paper is published in full, and we have had the opportunity of reading it, the doctor's conclusions will be found correct in the majority of cases. Puerperal infection may be confined to the uterine cavity. If it is, drainage and curettement will promptly cure your case. If you have lymphatic infection, or if there is infection of the parturient canal and it reaches the lymphatics, your patient will not appear sick. The physician comes again in a day or two and finds a temperature of 104° F., pulse 125, and the patient says she is not sick. But she has a flat belly, with tenderness on pressure. In these cases you have lymphatic infection. I have seen two or three cases in the past year that were not recognized, although there was a temperature of 104° F., and pulse 140, the patient doing and feeling well, and upbraided the physician for calling another physician in consultation. We cleaned out the uterus in this case, and I told the physician that if the case was not better in twenty-four hours I would advise hysterectomy. Thirteen hours after curettement the patient had another chill with a temperature of 105° F. There was no tenderness; no peritonitis; the uterus was movable; no induration of the broad ligaments. I insisted on hysterectomy. My advice was not heeded. Other physicians recurettered and kept washing out the uterine cavity. In two weeks I was called back, and it was possible to save the life of that woman. But there was general infection. I have had two such cases in two years and have refused to operate when they were too far advanced. If I operate on a case of lymphatic infection it must be done early and promptly.

Dr. HENRY O. MARCY: I feel amply repaid for the time and trouble of coming from Boston to this meeting to hear this excellent paper. It is scientific. It clearly indicates what we should do in

these cases. I am sure that if my friend Dr. Carstens will take the pains to carefully read the paper after it has been published, he will retract some of the statements he has made. Dr. Holmes has pointed out the difference between lymphangeal infection and ordinary infection of the intra-uterine cavity, and there is a large number of men present here who can bear testimony to the difference between these cases. I have curetted the uterus over and over again in cases of puerperal sepsis, packed the cavity with iodoform gauze, and still the cases went on to lymphangeal infection. These are the cases that call for more radical measures. Curettement and applications to the uterine cavity afford only temporary relief. The paper teaches us an important and valuable lesson, and I for one thank Dr. Holmes for it.

Dr. R. S. SUTTON: If the deductions which have been drawn here by Dr. Holmes are not correct we have no right to interfere in a disease by any surgical means. We have no right to amputate a breast for cancer; no right to interfere and remove a gangrenous appendix if we condemn surgery founded upon Dr. Holmes' deductions. I have been an abdominal surgeon for many years and I am no coward, and yet I am as full of caution as any man living. But I would rather drown myself in Lake Michigan than denounce the deductions of this paper. Time is insufficient to enter into an extended discussion of this subject; but there is one thing I will say: that by this procrastinating doctrine of not interfering surgically by capable, skillful men, is what in the past has sent women like an avalanche to death. Are we going to stand by and see it go on, or are we going to follow the lead of science and stop it? I hope, after careful consideration, that you will apply the doctrines which have been laid down in this paper to-day.

Dr. EDWIN WALKER (of Evansville, Ind.): I think it is well for us, wherever we can do so, to determine upon what cases to operate and what cases to let alone. No one would advocate at this time that all uteri should be removed in cases of puerperal sepsis. But we all know there are cases that come on insidiously, such as Dr. Humiston has portrayed, and which go inevitably to death under the old treatment. What are we going to do? Are we going to let them go on, or shall we determine what class of cases should be operated upon? I have seen two that ought to have been operated on, but I could not get the consent of the family. I thank Dr. Holmes for his paper.

Dr. A. H. CORDIER: Dr. Holmes has given us an excellent paper,

but some of the members who have discussed it have not understood the doctor's position. Dr. Holmes intended to present to us the fact that each case of puerperal sepsis was an individual one and should be treated as such. Absorption of the poison may take place, not in the tube itself, but down in the vagina, the perinæum, the cervix, or from some other source—perhaps the uterine cavity itself. He does not recommend hysterectomy in cases of that kind. He would not recommend removal of the uterus before milder methods had been tried. I indorse the position he has taken in the matter.

Dr. HOLMES (closing the discussion): I actually feel overcome that I should receive such flattering commendation as I have in regard to this matter. In writing this paper I tried to be honest and fair, as I was prejudiced myself against hysterectomy for puerperal sepsis when I began, and I am indebted to some of my friends for opening my eyes with reference to this matter. I especially owe my thanks to Drs. Etheridge and Henrotin, of Chicago, and to Dr. Baldy, of Philadelphia, for calling my attention to the possibility of removing the uterus for infectious disease, or the puerperal infected uterus. It is not new at all; but the presentation of the topic alone and the study of these particular cases are points to which we should give careful thought. I would urge upon every medical man that he shall go to every case of puerperal infection with the determination to eliminate the factor of endometritis, and that when this has been done and the patient still remains in a septic condition, he shall then resort to hysterectomy; that the removal of the tubes, ovaries, and uterus shall be carried on according to such method as he may himself select in the case; whether it be hysterectomy by the vagina, as preferred by Henrotin, or hysterectomy by the abdominal method, as preferred by most American operators, is a matter of no particular moment. I hope the paper itself, when published, will receive half the attention that the reading of it did. I thank you.

Abstract of a paper entitled

A METHOD OF PREVENTING THIRST FOLLOWING
CÆLIOTOMY.

BY WILLIAM H. HUMISTON, M. D., CLEVELAND, OHIO.

His method of procedure is as follows :

“The patient should have the usual preparation for cœliotomy—*i. e.*, diet, daily baths, cathartics, etc. For three days prior to operation order the patient to drink one pint of hot water an hour before each meal and on retiring, thus drinking two quarts of water each twenty-four hours, *the last pint to be taken three hours before the time set for operating.* Do not omit to give the water the day previous to the operation, while the patient is restricted to a limited amount of liquid nourishment and the bowels are being unloaded. We thus restore to the system the large loss of fluid occasioned by the free catharsis, and we have the great satisfaction of seeing our patient pass through the trying ordeal of the first thirty-six hours after the operation in comparative comfort, with no thirst, a moist tongue, and an active renal function, represented by an excretion of from twenty-eight to fifty fluidounces of urine during the first twenty-four hours, catheterization being seldom necessary. This is in keeping with the full character of the pulse noted.

“The above detail I have recently carried out in twelve cases. To eleven chloroform was administered, to one ether. The time required to complete the operation varied from ten to fifty-five minutes. Whether the case was one of sclerotic ovaries or a pus case with universal adhesions of all the pelvic structures, the result has been uniform and highly satisfactory, thirst being allayed and excretion stimulated—a very essential condition to a prompt recovery.

“I believe this method will prove to be efficient in the hands of abdominal surgeons generally, and I publish it early with all confidence that the twelve cases that I have had will soon be fortified by the reports of many hundreds, and that by it we may avoid a condition that is and has been distressing alike to patient, surgeon, and nurse.”

DISCUSSION.

Dr. GILLIAM: I am very much pleased with the doctor's paper. It is certainly a very desirable thing to prevent thirst after abdominal section; but there is one point that I can hardly subscribe to, and

that is, I do not believe it is entirely safe to fill the blood-vessels in the manner the doctor recommends. I can readily see how harm might result from damming up the fluids from the abdominal cavity, preventing their accumulation there, which will act as a kind of menstruum or culture field for bacteria, and I think that unless we can be sure that we have perfect asepsis, it is better not to adopt this method, as advocated by the doctor.

Dr. HUMISTON (closing the discussion): At the last meeting of the American Gynæcological Association, Dr. Kelly reported the results of his examination of the urine after a cœliotomy, and he stated that the urine was reduced to one third in quantity in three days, and it did not resume its normal condition until the tenth day. If you get a normal amount of secretion and a normal specific gravity, or above normal, the first seventy-two hours, the chances for recovery of the patient are better. Next year we can all talk from practical experience.

CÆLIOTOMY IN PURULENT PERITONITIS, WITH REPORT OF CASES.

BY MILES F. PORTER, M. D., FORT WAYNE, IND.

(See page 368.)

Abstract of a paper entitled

PERITONEAL IRRIGATION AND DRAINAGE.

BY A. H. CORDIER, M. D., KANSAS CITY, MO.

The author said that the latest works on abdominal and pelvic surgery contained, like the older books, very short and misleading articles on the indications for peritoneal irrigation and drainage, and still less explicit were the directions how to use these agents for good intelligently and correctly. The diversity of opinion among authors left the inexperienced beginner in a position of perplexity and doubt as to the special course he was to pursue in his early work.

The same principles hold good in draining the peritoneal cavity that are applicable to other parts of the body. No surgeon with all the antiseptic precautions possible to be used in opening a diffuse abscess of the thigh or other part of the body would think of such a thing as at once closing the wound hermetically, leaving many broken-down shreds of diseased tissue dangling in the abscess cavity. He might have irrigated the cavity thoroughly with a 1-to-1,000 bichlo-

ride solution, yet he would not feel it safe to close the wound until after he had made counter openings and had introduced a drainage-tube, this being as near ideal surgery as it is possible to obtain in these cases.

Drs. Price and Wylie years ago called attention to the fact that many deaths from so-called shock were in reality deaths due to concealed fatal hæmorrhages, and advocated the introduction of the tube in those cases in which there was free oozing during or following an operation. The presence of the tube, by keeping the peritoneal cavity free from lymph, is a direct and most efficient hæmostatic. This fluid, normally present in small amount, is greatly augmented by the manipulation of the peritonæum during the performance of an abdominal section, and, like the moist fomentations over the scarified surface of any other part of the body, promotes bleeding and provokes the formation of firm clots in the mouths of the small blood-vessels torn across while breaking down adhesions.

Freshly boiled distilled or filtered water, cooled to 102° to 110°, F. should be used in irrigating. After the performance of the operation the cavity should be thoroughly washed by means of an irrigator, consisting of a rubber tube three feet long and three quarters of an inch in diameter, to one end of which is attached a funnel, to the other a hard-rubber nozzle about ten inches long with side perforations, the distal end being closed except for a small opening in the center. The patient is turned on her side toward the operator, who with two fingers of the left hand introduced near the lower angle of the abdominal incision and slightly separated, introduces the nozzle of the irrigator into the inferior angle, guiding it by the fingers to the lowest recesses of the pelvis and moving it about from one locality to another, while the water is being poured into the funnel from a pitcher held in readiness to be used for this purpose only.

The author drew the following deductions :

1. Drainage is a life-saving process when properly used.
2. To use it is not an admission on the part of the surgeon that his work during the operation was imperfect.
3. The use of the tube alone does not produce nor leave any condition that favors the development of hernia.
4. The omentum or other structures do not become entangled in the openings of the tube.
5. A small-sized flint-glass tube with small openings and open end should always be selected for pelvic drainage.
6. The tube does not produce fæcal fistula.

7. The tube should be used when in doubt as to the absence or presence of drainage indications.

8. To depend upon microscopic findings as to whether a given case should or should not be drained is seemingly scientific, but is neither necessary nor practicable.

9. Gauze drains should rarely be used, and should always be supplemented by a glass drain.

10. There is no danger of infecting a patient through a tube if the attendant is properly instructed.

DISCUSSION.

Dr. R. S. SUTTON: In order to take advantage of time, I will commence this debate. I will not dwell upon the first two papers at this time, but I ask permission to discuss only the paper last read. The doctor is in favor of abdominal section for pus-tubes, and I am too. Why? I maintain, *first* and foremost, that a uterus deprived of its appendages is of no use. I maintain, *secondly*, that it is an organ, when left, which is liable to tuberculosis, syphilis, gonorrhœa, nasty discharges, adhesions to other organs, etc. Now, I believe that if you leave the neck alone you leave a focus for the development of cancer, tuberculosis, etc. Therefore the proper thing to do in a case where you *must* remove the appendages is to take out the uterus. If there is no contra-indication in a very narrow vagina, or some other reason why you should not act in this particular direction, then, I say, vaginal hysterectomy is the proper thing. If you remove the pus-tubes of a patient by abdominal section you put her to bed for two weeks; you insert a drainage-tube, at which point there may subsequently develop ventral hernia or fæcal fistula. If you take out the pus-tubes by the vagina she is out of bed inside of six days, and she sits on a chair and does crocheting on the eighth day. She walks out of the hospital and goes home on the tenth day, if you let her.

Now, as to the question of difficulty in the two procedures, I admit that in the Trendelenburg position (with an incision that you can throw a cat through) you can clean out the pelvis. I admit that. But I also admit that you can go below these pus-tubes, rupture them, undermine them, and strip them out from below with greater safety to the patient and with greater ease to the operator than you can remove them from above with anything like an incision of reasonable length. As to time of operation, I think it was Mott who said that an operation done quickly would not be well done. I think that idea holds good to-day. It is slow work in some cases to clear out pus-tubes

from below, and sometimes it is quick work. I have taken out the uterus and appendages in six minutes by the watch, and I have been an hour in some cases ; but I have got out the uterus. I have opened up all cavities discharging pus or containing serum or seropus and cleaned out the whole pelvis, and seen the patient restored to health, yet the ovaries were left.

Dr. GILLIAM : I have been taking account of the vaginal work that is being done, and I have written a little on the subject, and I must say that I have come to the conclusion, after watching the cases, that it is a serious thing to take out the entire uterus by the vagina. It is not necessary at times in order to save life, and we must not do it. I find, as a result, shortening of the vagina, which is a serious objection to it. I have been trying to find out from patients who have had their uteri removed what the effect is on the sexual appetite, and I find it has been wanting. It is difficult to get at properly. I have been making inquiry of intelligent women upon whom I have operated, because it is not always reliable to interrogate unintelligent women. In some cases where the uterus has been removed *per vaginam* there were no effects whatever, except shortening of the vagina. This is a serious matter, particularly in the case of married women who have passed a certain period of life. In the case of those who do not expect to marry it is different.

As far as drainage is concerned, I think it is better when we operate through the vagina than by the abdominal method. There is no question but that we do better work, and there is a natural disposition for patients to get better if given the least chance. While we advocate early operation on these cases, we do not always practice it. We feel that when a patient comes to us and she will not get well, it is better to operate. But if we watch some of these cases carefully—give them time—they will get well without surgical interference. When we do operate, I think we should always save the neck of the uterus if possible ; but some of you may say it will prove a source of infection ; that it is liable to be the seat of carcinoma some time. I think it is better to leave the neck of the uterus.

Dr. B. M. RICKETS : I believe total extirpation of the uterus will be relegated. The dangers are cystocele, hernia, increased danger attending the prolongation of the operation, and shortening of the vagina. These factors, I believe, will have a great deal to do with doing away with the operation of total extirpation.

Dr. HENRY O. MARCY : I should not be true to myself if I allowed this paper to go by without making a few remarks. I think we may

say that it is the consensus of opinion that all septic cases should be operated upon. I think it is a great deal easier for the practiced surgeon to determine when cases are aseptic than when they are not. Granting that the case is clear to the operator that it is an aseptic one, then I would simply lay down as a rule, to which there are very few exceptions, that the case should be operated upon by the abdominal method and the incision closed without drainage. I have written a good deal upon this subject from time to time, and it is entirely too extensive to enter into a detailed discussion at this time; therefore you must excuse me if I shall seem a little dogmatic, because my experience warrants me in stating with some emphasis that we should not drain in these abdominal cases. I find that my position in this regard is fully sustained by some of the best American surgeons, and among them those of the Johns Hopkins Hospital—men who have discarded drainage, but who only a year ago were in favor of it; therefore, under the influence of such teachings, we are told that drainage should not be applied because of the danger of infection through the drainage-tube. I claim that the drainage-tube in an aseptic case is not alone unwarranted, but positively dangerous. It is dangerous for many reasons: (1) Infection. (2) The injury it does to the pelvic structures. (3) Injury to the abdominal wall. (4) The great trouble and dissatisfaction it causes the operator and assistants in the subsequent care of the case.

I am sorry that I must differ with my friend Dr. Sutton in reference to the removal of the uterus, especially in dealing with the larger tumors, leaving no cervix. I believe there are good reasons why the cervix, if healthy, should be retained. It helps materially in holding, as a sort of key, the vault of the vagina.

Dr. BAYARD HOLMES (of Chicago): In regard to drainage in cases of abdominal section, after studying the indications of wound treatment it seems to me that we can reduce them to about three: *First*, that we shall keep the wound clean; *second*, arrest hæmorrhage; and *third*, perfectly coaptate the wound. Drainage in abdominal cases seems to me to be a sort of vicarious redemption for poor surgery. Whenever it is impossible to make a wound clean we must drain, and sometimes we drain when a wound is clean, but we are not able to stop the blood. Now, I can conceive of no other indication for drainage, whether it is in the abdomen, in the brain, or in any other part of the body, except failure to meet the one great indication of wound treatment—to keep the wound clean. If for any cause you can not keep it clean, then you drain. If you drain, it is practically

an admission on your part that you have failed to meet this great indication of wound treatment.

Dr. CORDIER (closing the discussion) : I am a little surprised that Dr. Holmes should take such a position in regard to my paper on drainage. I do not advocate drainage in clean cases, but I close the abdomen in every case where it is clean, and where I know no septic material has invaded the field of operation during its performance, or where I do not have the fear of hæmorrhage from oozing surfaces. In regard to recovery, I will say that in patients where drainage has been instituted the convalescence is more rapid, the tongue is more moist, there is less thirst and less vomiting, and they are very much more comfortable.

Abstract of a paper entitled

VAGINAL CASTRATION.

BY E. E. TULL, M. D., NEW YORK.

Because so much had been written on this subject of late, the author hesitated to introduce it. He reported thirty nine cases where he had practiced this method of operating—twelve for cancer of the uterus (in these he removed both tubes and ovaries with uterus); eight for fibroma (these were of such size as to require *morcellement*); nine for suppurative disease of the uterus and appendages; eight for ovarian cysts (three of these were unilateral, and the uterus and healthy appendage were not removed); and two for procidentia. The adopted method appeals to him strongly on both a surgical and therapeutic basis. In attacking any diseased organ within the pelvis we are able to reach it more directly and with the least destruction of normal tissue by this route than by any other. Before beginning this operation the same precautions for cleanliness should be practiced as for laparotomy; with the patient on her back and legs flexed, the cervix should be exposed by retractors. He now introduces a sound to ascertain the direction of the fundus, after which he grasps the cervix with a strong volsella, and while making firm traction passes a knife around the cervix, just below the insertion of the bladder anteriorly and posteriorly, about one inch from the external os, sewing these tissues to the muscular coat of the uterus. If there is unilateral disease, the offending portion may be drawn down, tied off, and excised. If both sides are hopelessly diseased, we all agree that the uterus had better be out, except for the additional time and danger the patient is sub-

jected to. But in practicing the vaginal route he finds it easier and less dangerous to remove the uterus with the appendages.

In conclusion, the author claims for this method a lower mortality, a shorter convalescence, and a wider field of usefulness, as it may be practiced in cases too weak for abdominal section. Since he lays no claim to originality, he has refrained from referring to the many valuable contributions that have been written on this subject.

Abstract of a paper entitled

A NEW PHASE OF CÆLIOTOMY.

BY F. J. GRONER, M. D., GRAND RAPIDS, MICH.

The author related a suit for malpractice which had just been terminated in Grand Rapids. The suit was commenced against a doctor some time ago, and was for fifty thousand dollars. The defendant died, but the Court held that the cause of action survived, and that the suit could be brought against the estate. The jury returned a verdict for ten thousand dollars. The author claimed that he knew there was no malpractice, because he was interested in the case and knew just what was done in the operation. He found fault with the laws which permitted a suit against a doctor to survive his death and be a menace to the widow and children. The speaker thought that the next Legislature should remedy the law. He had the draft of a bill prepared which he thought would remedy the present law, and which he read.

Abstract of a paper entitled

RESULTS OF FIVE YEARS' EXPERIENCE WITH INTRA-
ABDOMINAL SHORTENING OF THE ROUND
LIGAMENTS.

BY JACOB FRANK, M. D., CHICAGO, ILL.

Since his last publication, in the *Chicago Medical Recorder*, November, 1889, he had had the opportunity of performing this operation seventeen times with only one failure and without any deaths. All of the seventeen cases operated upon were for retroversion, prolapsus, and retroversion with prolapsus of the uterus. All of these patients had undergone the usual routine treatment advised in these disorders—*i. e.*, pessaries, tamponing, electricity, and massage for an average length of time of seven months, the shortest period of treatment being two months, and the longest five years. Thirteen of the seventeen

cases were married and had given birth to one or more children. Two of them had a prolapsus uteri of the second degree, which was corrected by this operation. In two of the cases the uterus was so fixed by bands of adhesion that massage treatment had to be resorted to before the retroverted and fixed organ could be normally placed. One of these cases resulted in failure. In eight of the cases, upon opening the abdomen both ovaries were found cystic and were removed at the same time. In four of the cases only one ovary was removed, and in the remaining five cases the round ligaments alone were shortened. In eleven of the cases the ovaries and tubes were prolapsed into the *cul-de-sac*, and held there by adhesions, some of them slight, being easily broken up, and others quite firm. In one of the cases, after the round ligaments were shortened, a stitch was taken through the top of the loop of the round ligament and through the peritonæum, this being done on account of the prolapsus. This woman later on became pregnant and gave birth to a fully grown child.

The author then mentioned the anatomy of the round ligaments.

With reference to the technique of the operation, the median incision is made a trifle lower than for ordinary cœliotomy, the round ligament is caught up anteriorly with a sharp or blunt hook, and is then held taut by an assistant. A small, full-curved needle threaded with fine silk is then passed through the loop of the round ligament, and is brought back in the reverse manner through the other half of the loop. No portion of the broad ligament is included in any of the sutures. A cut was exhibited illustrating this point.

Too much stress can not be placed upon the particular procedure of passing the needle through a part of the cord and not around it, for in passing the needle around the cord there is danger of strangulation, as the blood and nerve supply would be entirely shut off by this faulty method of placing the sutures around the ligament.

No drainage was used in these cases, but should there be much oozing from the breaking up of adhesions a drain should be put in.

About fifty per cent. of the cases had been under observation since the time of operation, which in some instances had been as long as two years, and in all of these the uterus retains its corrected position.

In closing, the author stated that this operation should be performed in preference to any other in all cases where the uterus is prolapsed or immediately falls back upon replacing it with a uterine sound, and where pessaries and tampons give no relief, clearly showing that there must be some force which does not permit the uterus to remain in its normal position.

OBSTETRICS.

Puerperal Insanity.

Dr. N. H. BEEMER (*The Canadian Practitioner*, August, 1895) considers that puerperal insanity is not essentially different from other forms of mental disease, and should not be considered in itself a distinctive form, but it embraces other forms, and these are characterized by the leading characteristics of the disease; the event which determines the attack provides the name of the disease, puerperal insanity, and its chief subdivisions are puerperal mania, puerperal melancholia, and puerperal delusional insanity.

In the physical history of woman there are three crises, at which periods the strain upon the nervous system is exceptionally great—namely, puberty, the puerperal state, and the menopause. If the mental constitution be unstable in any way mental disease is peculiarly liable to develop in woman at one of these periods.

The mental alienations occurring during pregnancy and lactation are not strictly classed as puerperal insanity.

Technically speaking, puerperal insanity is the mental disease which occurs within the first six weeks after confinement; most of the cases occur within the first two weeks, while a few may be seen to develop after the technical limit. One of the most scientific and experienced alienists of our age finds that five per cent. of all the cases of mental diseases among women belong to this form, and that one in every four hundred labors is followed by it.

Causes.—The constitutional mental instability forms the prerequisite for this and other forms of mental aberration. Most mental constitutions are inherently so sturdy that insuperable mental strain or overpowering shock will kill the body before the mind will give way. In some persons there is, unfortunately, less power of resistance in their cerebral cells; that is to say, there is a greater susceptibility to depressing influences, and accompanying, or independent of, this condition there may also be found a diminished facility for recuperation, or even lessened cell nutrition. It is easy to see how such a person, when subject to the unusual functional activity succeeding childbirth, or the shame of illegitimate motherhood, or the concurrent lessened supply of nutrition and defective assimilation, or imperfect metabolism, may be, by such causes, at least temporarily disturbed. Given, then, a mental constitution with inherent defective resistive power of

the cerebral cells, and we shall find that all influences which attack and sap the stores of physical vitality will, in the puerperal state, operate toward the development of puerperal insanity.

This disease is twice as frequent when the children are born out of wedlock, because of the attending shame and humiliation, and also because of the insufficient care and nursing received by mothers in such circumstances. Shock resulting upon the receipt of bad news will sometimes usher in an attack ; want of care and proper food, and having to get out of bed too early, are often contributing causes. About one third of all the cases are primiparæ. But while other circumstances may appear to be the determining cause, as instrumental labor or post-partum hæmorrhage, the foundation is the puerperal condition.

Toxæmia is often observed to be a cause of mental disease independently of the puerperal state ; this being true, it is probable that many cases of puerperal disease may be ascribed to the same cause. It would seem highly probable that the defective assimilation and elimination may be caused by loss of nerve force which follows the unusual demands upon the nervous system, and thus toxæmia is favored. This view is supported by the clinical fact that about eighty per cent. of the cases occur within a fortnight after labor, the time when the greatest functional activity is demanded.

If the attending physician knows that his patient's nervous system is unstable, and the labor is in any way complicated, unusual care should be taken to guard against anything which might annoy or exhaust her. The more common clinical symptoms are the following : Generally the onset of the disease is sudden ; the patient does not sleep, but does not show the want of rest ; she does not take food, yet she has no hunger ; she will not converse, but is dull and apathetic, and seems preoccupied ; her joyous, happy condition of a few days previous passes away, and she appears to be absorbed by some subject to which she gives no expression. The product of her love becomes the object of her hatred, and her husband, and perhaps her doctor, become her worst enemies ; she thinks her food is poisoned and refuses it ; she thinks there is some one in the house, or under her bed, or at her window at night who has enmity in his breast and desires her destruction ; while she will fly from her imaginary pursuer's wrath, she may use the first instrument within her reach to accomplish her own self-destruction. She may fear that her child, if allowed to grow to maturity, will be wicked and abandoned, and to prevent this she will attempt, and sometimes succeed, in destroying it. Soon, if the attack be maniacal, she begins to chatter and talk to everybody, or to

herself, and without reference to coherence of subject or comment ; she exhibits no care for her own conduct or her own body, and she is quite insensible to the interest and solicitude of those about her. There is now no ground for the least experienced observer to doubt about her condition ; the change is sharp and sudden, and it sometimes apparently occupies no longer in point of time than the change from daylight to dark.

Having recognized the underlying causes, malnutrition and defective elimination, the rationale of the treatment becomes evident. Elimination must be promoted and the patient must be fed per force if necessary. Various artificial foods may be suggested, but the most reliable, as meats, eggs, milk, vegetables, and fruits, are the best. Custards rich in eggs, eggnogs, meats minced and broiled, are usually assimilable. Employment is of next importance. Depressants or hypnotics should be discarded.

It would be much more scientific to induce sleep by feeding the cerebral cell through frequent administration of nourishment to the patient. First, then, among the measures for the patient's restoration comes nourishment, and after it come bathing, massage, and employment, and all these can best be secured through the aid of a trained nurse. Every case of puerperal insanity should have the advantage of the services of a trained nurse from the first day of the disease. If this important measure be neglected or postponed it may be too late, for the patient meantime may take her own or child's life. The trained nurse is of value in another way than the advantage of her professional services ; her presence gives the friends assurance that the patient will be properly cared for, and saves the patient the annoyance and irritation of having her loved ones, whom she now hates, constantly in attendance upon her. Many of the puerperal cases may be advantageously treated at home, but great care must be exercised not only that ample nutrition is attended to, but also to make sure that the patient does not inflict some injury upon herself or upon her child. The patient may recover gradually or rapidly ; perhaps fifty per cent. recover in three months, and eighty-five or ninety per cent. of those who do recover do so within six months ; occasionally recoveries take place after a much longer duration.

I believe one of the first questions which the regular medical adviser strives to answer in these cases is whether his patient shall be treated at home or sent to a hospital for the insane.

In no case should the general practitioner fail to secure the advice of some one who has had extensive experience in the treatment of

mental diseases, for the question of treatment at home or removal to a hospital is one of great importance.

How to cure Puerperal Eclampsia.

DR. EMORY LANPHEAR (*Texas Medical Journal*, August, 1895) states that most of the recent contributions upon this subject are merely repetitions of the same old story of "Examine the urine of the patients many days before labor, and if albuminuria is found, cure it"; "Bleed"; "Use chloral hydrate, or chloroform, or ether, abundantly," etc. If the writers would tell the truth, most of them would confess they never examined the urine of a half dozen pregnant women in all their practice, except in hospital work; women do not go carrying bottles of urine around very often, and the first intimation most patients give of expected confinement is a message to the doctor to "Hurry, or you will be too late." So the first advice amounts to much—theoretically, but to very little practically. And as to the second: If those who give the advice so freely would be equally free in relating their death-rates, the details would be far more useful, if less satisfactory to the relator.

But life can be saved in puerperal eclampsia, if the patient be seen within a short time after the onset of the spasms, by the following methods:

In puerperal convulsions occurring prior to delivery the patient should be chloroformed, an assistant sent for, and the uterus emptied at once.

The prime object is immediate delivery of the fœtus—all authorities agree upon this. But the usual method of so doing is not satisfactory to the author. The practice which he follows is this: If the os be dilating and dilatable, rapidly enlarge the opening until the long forceps can be applied to the engaging head, or the hand can be introduced to perform version and speedy delivery. If this can not be done within half an hour, incise the cervix to the vaginal junction, and if the perinæum offers obstruction make a clean cut through it back to but not including the muscle near the anus. After the fœtus and placenta have been delivered, irrigate and sew up the incisions. If deformities exist, Cæsarean section may be justifiable, but craniotomy upon the living child is never so.

Where puerperal convulsions occur after delivery, the following is the plan of treatment:

Make a venous injection of from one to two pints of normal saline

solution. This dilutes the toxins and increases arterial tension to such an extent as to restore the secretion of urine.

Occasionally convulsions occur after the first intravenous injection; should this occur, a second should be made. In very few instances is a third injection necessary.

In order to carry this treatment out the following things are necessary: (1) A large hollow needle, (2) a piece of rubber tubing, (3) something to act as a funnel. Water that has been filtered is put in a clean pot and boiled, a teaspoonful of common salt being added to each quart, and allowed to cool to 103° F. The skin is next cleaned over some convenient superficial vein, and the vein laid bare by an incision of an inch or an inch and a half; it is temporarily covered with a piece of gauze or perfectly clean cloth. Then the funnel (preferably a small glass one, but it matters not) is attached to one end of the rubber tube, and the needle to the other end. This apparatus is scalded out thoroughly, and then the funnel is filled with the hot salt solution and the stream allowed to begin running. While the fluid is still running, the needle is inserted into the vein. The funnel is kept about three feet above the level of the patient, and *must be kept full* by constant pouring, so as not to admit any air, and the needle must be withdrawn while the stream is still flowing. About twelve ounces is the usual amount needed, from eight to sixteen being the rule, according to the size of the patient.

Hour-glass Contraction of the Uterus.

Dr. W. E. HUGHES (*Cincinnati Medical Journal*, September, 1895), writing of hour-glass contraction of the uterus, reports the following case: The patient is forty-one years of age, in good health and with a strong constitution. She was first seen on May 12th, when she was supposed to be in labor; however, after examination it was concluded that she was not in true labor but was suffering from an attack of diarrhœa, for which Dover's powder was administered. The physician was summoned on the 14th, when pains were occurring at regular intervals of about twenty minutes. Up to this time there was nothing apparently very unusual. Inquiries regarding her previous labors elicited the facts that on more than one occasion "the afterbirth had grown fast; that she once had severe flooding, but had always made a good recovery; that her last labor had terminated in an unusually short time, and her recovery had been very rapid." About an hour and a half after the author's arrival the child was born; everything up to this time had been satisfactory.

About ten minutes after the birth a pain came on, and the uterus was of large size and peculiar shape as felt from without. Slight traction on the cord was made which produced a little more pain. The belief that the placenta was adherent and the intention to at once deliver it was expressed; the woman was anxious to have the operation concluded as soon as possible. Keeping the left hand on the womb, which was quite firm, one of the women present was directed to take hold of the cord, and, without making any decided traction, to keep it somewhat tense. Following up the cord and reaching the os, gently but firmly, and with some difficulty, a finger was introduced, and after a time a second; the womb now slightly relaxing, gradually the whole hand was introduced and a quantity of clots were found, but no placenta. However, on following up the cord, a second orifice was entered and here the greatest difficulty was met with. By dint of patience, a couple of fingers were introduced and the placenta found. The stricture was gradually forced open and the hand introduced into the upper cavity. The author took hold of the cord and made slight traction, gently broke up the adhesions, which, of course, gave pain, and grasping the placenta, attempted to deliver. The womb again contracted strongly, but the hold was retained, and gently with some difficulty the placenta was withdrawn; on getting through the upper stricture no further trouble was encountered, save a slight hæmorrhage, and the uterus quickly assumed its proper shape.

Antiseptic Midwifery and the Care of the Puerperal Woman.

Dr. R. B. MAURY (*Columbus Medical Journal*, August 20, 1895) comments upon the great difference which exists between the mortality rates of labor in lying-in hospitals as compared with that of private practice. As a result of the adoption of the antiseptic system in all its details, in these institutions death from sepsis has almost disappeared. In 1873 one death from sepsis occurred in every thirty cases in the maternity hospitals, while during the past eight or nine years, in the New York Maternity, there occurred in three thousand one hundred and seventy deliveries a mortality of one fifth of one per cent., with a corresponding rate in other institutions. This wide difference is due to the lack of antiseptic precautions in private practice.

The following practical rules are suggested:

Antiseptic Technique.—When seen beforehand, it is easy to instruct the patient to cleanse her body from the waist to the knees with turpentine, soap and warm water as soon as labor begins. The

inner surfaces of the thighs, the external genitals, and the rectal orifice are to be very thoroughly scrubbed after the bowels have been moved by medicine or an enema. Then the vagina is to be washed out by a douche of warm water and soap, clean clothing is to be put on the patient, and the bed is to be covered with clean sheets. This can all be done in every case before the arrival of the physician, who will then administer the vaginal douche of bichloride of mercury (1 to 4,000). But before he touches the patient his hands and forearms should be washed for at least five minutes in strong soapsuds, and then immersed and cleansed in a bichloride solution (1 to 1,000).

Labor having begun, a careful examination is made to determine the presentation and position; and this being done, very few examinations should be made afterward, and none at all without previously immersing the examining hand in a 1-to-1,000 bichloride solution, which is kept by the bedside until the labor is completed.

All cloths, napkins, or towels which may be required in cleansing the genitals should be previously boiled, dried with care, and put away in a clean bag until the coming on of labor. In the cases to which the physician is called unexpectedly, and no instructions can be given beforehand, plain absorbent gauze (which should be carried in the obstetric bag) can be wrung out of a bichloride solution and used for this purpose.

The child being delivered, the placenta should be expressed by the method of Credé, and the fingers should not be passed into the vagina. The physician now makes pressure over the uterus long enough to satisfy himself that it is contracted and that there will be no hæmorrhage. He then administers a vaginal douche of bichloride of mercury (1 to 4,000), cleanses the external genitals with the same solution, puts on the obstetric binder, and applies the occlusion pad to the vulva to prevent the introduction of germs from without.

The Indications for and Technique of Forceps Delivery.

JOHN F. WINN (*Virginia Med. Monthly*, September, 1895) considers that the use of forceps at the proper time and in the proper manner, when indicated, is one of the most conservative procedures at the command of the obstetrician. Much of the injury which is charged to the use of forceps should be more properly ascribed to their injudicious use as to time and lack of dexterity on the part of the operator.

Notwithstanding the light which has been thrown upon the sub-

ject by the careful observations which have been made and the resulting rules which have been given, there are even yet men who take for their standard a fixed length of time as the indication for operation. Each case must constitute an individual study, and no hard-and-fast rules can be applied to it.

So long as the labor pains progress with rhythm, and there is an abundant supply of vaginal mucus, with an elastic perinæum, there is no need of forceps; but as soon as the pains lose their rhythmical, expulsive character, and, as a natural result, the head fails to make its usual progression or recession, thus creating the condition known as "fixed head," then there can be no doubt that the forceps should be applied at once.

If there be delay after this condition has appeared, the continued pressure of the non-receding head will result in venous stasis, œdema of the maternal tissues, hot, dry, and bruised vagina, which in turn will favor rigidity of the perinæum and its consequent laceration.

The forceps should be applied directly to the sides of the head, and not by the indirect method, with reference to the sides of the pelvis. The former method interferes less with the mechanism of labor and decreases the danger of injury to the child's head, for the biparietal diameter may be lessened by half an inch, through pressure, without danger.

In making traction, great force should be avoided, and by far the most important factor is the observation of the proper direction, which should be in the line of the pelvic axis.

Nature should be imitated by alternately drawing down and allowing the head to recede.

The forceps should be removed when the occiput is well under the pubic arch.

Creolin in a solution of two and a half drachms to the pint should be substituted for vaseline, and a rigid adherence to the laws of asepsis and antisepsis should be observed throughout.

An Obstetric Resource and Necessity.

J. R. IRWIN (*North Carolina Med. Jour.*, August 20, 1895) calls attention to the careless way in which enemata at the beginning of labor are recommended by writers on obstetrical subjects, only suggesting their employment "in case the bowels have not acted."

If the practitioner depends upon the statement of his patient he will rarely have need for them, for she almost invariably says that her bowels have acted previous to or since the beginning of labor.

Few women escape during the last weeks of labor from fæcal accumulation, which is sometimes enormous in quantity. Therefore he considers rectal injections as one of a series of attentions which should be uniformly bestowed upon a patient at the beginning of labor.

Not only is the thorough movement of the bowels before labor of importance in allowing more room, in facilitating the elimination of effete matters, thus preventing their absorption and favoring the healing of any wound which may occur, but also for another use, which has been mentioned only by the author—namely, to accelerate and increase the expulsive character of the uterine contractions, render them more efficient, and thus expedite the delivery of the child. The action of the abdominal muscles is a very important factor in parturition.

Women, especially primiparæ, at the beginning of the second stage of labor, frequently hesitate to exert the abdominal contraction, fearing that this may increase their suffering. This accessory force of the pains, the abdominal pressure, which acts upon the progress of the expulsion of the child, may be regulated by the will, and in the effort to evacuate the bowels sets in voluntarily. In such cases a most excellent effect was observed after the injections, the ecboic action beginning in from twenty to thirty minutes, and nearly always lasting until the birth of the child, the contractions being regular, strong, and free from any tetanic action.

The Nephritis of Pregnancy.

GOSSMANN, in the *Munch. med. Woch. (Epitome, Brit. Med. Jour., July 27, 1895)*, denies that this condition always ends in the chronic form. He refers to the case of one patient who had acute nephritis during eight pregnancies and yet was always free from kidney symptoms when not pregnant. He induced labor without difficulty by means of vaginal douches and used this means alone in two cases.

Extra-uterine Pregnancy diagnosed at Six Months and operated upon Near Term.

PINARD, in the *Bulletin de l'Acad. de méd. (Epitome, Brit. Med. Jour., August 31, 1895)*, reports the following case, which he considers an ideal one :

The patient was aged thirty-six, had had no illness, and had been regular from the age of fourteen till July, 1894. During August of that year she had nausea and vomiting; on the 22d and 23d she lost a fluid which was just pink. The symptoms continued during Septem-

ber, on the 22d and 23d of which month there was a similar loss. In October she was kept in bed for two days by abdominal pain, which reappeared in November, and was then associated with pain in micturition and defecation. From that time till February 26, 1895, when she came under Pinard's care, she was attended by several doctors, each of whom adopted a different diagnosis and treatment. One of them, thinking she had a fibroid, made her take in all about an ounce of savin powder, which did not, however, produce any ill effect. When admitted she looked ill and pinched. The left thigh and leg were painful and œdematous. The abdomen looked like that of the sixth month of pregnancy. The abdominal wall was tense, smooth, and without lineæ albicantes. Palpation revealed a cystic immobile tumor extending two inches above the umbilicus and apparently fixed by deep adhesions. The foetal parts could only be made out with difficulty by deep palpation, but the heart sounds were easily heard to the right of and below the umbilicus. By the right side of this tumor one could feel a small one, the size of a tangerine orange, which hardened and softened under examination. When contracted, the groove between it and the large tumor became evident. Vaginal examination showed that the cervix, which was slightly deflected forward and to the right, and softened, as in uterine gestation, was continuous with the small tumor. Cephalic ballotement was obtained in the large tumor. No sound was passed into the uterus for fear of setting up reflex action; the diagnosis of extra-uterine gestation at about six and a half months with a living child was established without requiring to be clinched by proving the uterus empty. The patient was kept absolutely at rest in bed, and the œdema of the left leg cured by position. On April 30th the fundus of the tumor was 35 cm. above the symphysis, and the uterus 11.5 cm.; the cervix was as soft as that of a primipara at term. Operation, May 2d: Uterus found empty, cavity 14.5 cm. long. Median incision in abdominal wall; cyst walls exposed; seen to be very slight and filled with enormous vessels, some greater than the little finger. On seizing the wall one of these vessels burst, and the hæmorrhage was only rendered greater on attempting to secure it, so great was the friability of the walls. The cyst was therefore rapidly opened and the child extracted by the foot. Hæmorrhage was restrained first by pressure of the hands, then by pressure forceps and ligatures. The walls of the cyst were sewn to the margins of the abdominal wound, the edge of the placenta being included in the suture. A wound was thus formed 10 cm. in diameter, with the placenta for its base; it was filled with

iodoform and salicylic gauze. The operation lasted an hour, and the child, a boy weighing five and a half pounds, after a brief period of respiratory difficulty, was perfectly vigorous. There was at first a slight facial asymmetry, and a depression on the left upper jaw caused by the point of the left shoulder, against which it had been pressed in the cyst; these soon disappeared, and on the ninetieth day the boy weighed twelve pounds. The maternal wound was not dressed till May 13th, when it was washed with biniodide (1 to 4,000). The placenta came away piecemeal between May 25th and June 2d. The wound healed up, and the patient got up on the forty-third day, having suckled her infant from the first day after its birth. Pinard comments on the rare occurrence of ectopic gestation in a primipara with no history of affection of the abdominal or genital organs. The symptomatology was, except for the absence of an expelled decidua, characteristic, the presence of two tumors having the characters described being pathognomonic. The fœtal members, contrary to what is stated in books, are harder to feel in ectopic than in uterine gestation. With regard to treatment, Pinard modifies Werth's dictum as follows: "Every diagnosed extra-uterine pregnancy calls for surgical interference." In the first half of pregnancy, or when a fœtus has been dead two months, the cyst should, as Werth suggests, be treated as a malignant growth. When the fœtus has been dead but a short time, Pinard prefers the remote risk of suppuration to the certain one of hæmorrhage; if any untoward symptoms come on he at once removes the fœtus. If the fœtus is alive and six months old, he delays operation till it is viable, which in extra-uterine fœtation is not till the ninth month, the risk to the mother from hæmorrhage being in no wise increased by waiting after the placenta is once fully formed. The cardinal point in the operation is not to touch the placenta or to extirpate the sac. The possibility of septicæmia from retention is slight, while the hæmorrhage in immediate extraction is enormous and often uncontrollable. He sums up the point in these words: "The removal of the cyst is, perhaps, more surgical, but certainly less prudent." He has not had one bad accident in sixteen cases in which the placenta was treated as in this one. Daily irrigation with 1 to 4,000 biniodide produces no toxic effect. With regard to the child, deformities are frequent in extra-uterine fœtuses, and are comparable to those in the children of primiparæ with little amniotic fluid and resistant uterine walls. The child is also likely, as in Cæsarean section, to suffer from a special kind of shock causing a temporary difficulty in respiration. The mother and child were shown to the Académie.

AMERICAN PÆDIATRICS.

The Bath Treatment in Pneumonia of Young Children.

THEODORE WATKINS (*Southern California Practitioner*, July, 1895), reports three cases of pneumonia in young children treated successfully by cold baths. While this recent establishment of hydrotherapy in an honorable position in medicine rests upon modern scientific study and research, yet we must not forget that it is, after all, only a restoration of an old time-honored remedy—not the invention or discovery of a new one—for hydrotherapy was intelligently used by regular physicians both here and in Europe before the days of Winternitz, Brand, and Baruch. Dr. Hiram Corson, of western Pennsylvania, is often quoted in this connection, for he used it for fifty years in a large general practice, with ever-increasing confidence.

There are two theories extant regarding the mode of action of cool baths in fevers—one based on speculation, the other on observation. The first ascribes whatever good effect the baths may produce to their antipyretic action. Those who hold this theory naturally consider a dose of antipyrine or phenacetine a more easily administered and convenient antipyretic and act accordingly. The second theory ascribes the good effect of the baths to their well-established power of stimulating respiration and circulation, refreshing and invigorating the nervous system, and of greatly increasing the elimination of noxious substances. Their antipyretic action is held to be of secondary importance, inseparable from them, but not the essential element upon which the good results depend.

In the experience of the author, baths have been found very beneficial when the temperature was not 100°. Those who hold the theory ascribing to baths great stimulating and eliminative power use them, for they know that no known medicine, no combination of medicines, can produce the same results.

The bath treatment in typhoid fever, while not universally or even generally applied, has at last become a recognized measure in therapeutics. Its value in the treatment of pneumonia is also becoming slowly accepted.

In the first case reported compresses only were used. In the other two cases baths were used, beginning at a temperature of 95° and reducing to about 82° in from ten to fifteen minutes, as a rule. When-

ever a bath was given the child was rubbed gently but firmly and continuously.

Obstructions within the Upper Respiratory Tract of Children: their Relation to General Health.

HENRY J. MULFORD (*Buffalo Medical Journal*, August, 1895), calls attention to the constant source of danger which lurks within the upper respiratory tract of the child. It is here tissue overgrowth does most harm: the harm of slow obstruction and of long-standing irritation. It gives no fear of sudden death; this blocking of life's gateway causes worse than death—stupidity. So familiar are these conditions of obstruction that we dismiss them as trivial. But to their presence is due the failure of many a life. In a situation easy of access they are recognized without difficulty; only carelessness avoids them. One glance is enough; the face itself tells the story. In long-standing obstruction it is the face of dull stupidity—the physiognomy of pressure. The commonest conditions giving danger to the child arise from overgrowth of tissue within the vault and hypertrophy of tonsils within the pharynx. They work harm in three ways: By obstructing respiratory currents, by directing respiratory currents into the wrong channel, and reflexly.

In tonsillar hypertrophy alone there is simple obstruction to inspired air, whether it comes through the nose or mouth. This means too little oxygen within the lungs; it means an arterial blood little better than the venous. Tissue hypertrophy within the vault diverts respiratory currents from nose to mouth. The mouth, fashioned for mastication, can not perform the function of the nose. We do not know all that occurs within the nose while the air is passing, but we do know that through the mouth the air reaches the lungs improperly prepared. In this condition there is also impairment of digestion. Mastication is performed hurriedly in a cavity to which fresh germ-laden air is admitted constantly. One can not masticate properly and breathe through the mouth at the same time. There is a nervous desire to empty the mouth quickly. Consequently the stomach suffers. Either of the above conditions alone is burden enough for a growing organism. When the two are combined in one individual the result is most pernicious. Added to the disturbances of nutrition there is profound nervous irritability. Irritated nerves fed by poor blood point to ruin.

The Treatment of the Acute Chorea of Childhood.

CHARLES W. BURR (*Philadelphia Polyclinic*, August 3d), considers the important element in the treatment of chorea to be physical and mental rest. He advises that the child be kept in bed in every case, or if the attack be very slight that he remain there for some hours at least every day. If such treatment is instituted at the beginning, recovery will be hastened. If the muscular spasm is not very violent, little children may be permitted to have their picture-books and toys to play with, but all mental and emotional excitement must be avoided. If the case is severe, use a large crib the sides of which have been well padded, or have the bed made upon the floor. The period of confinement to bed varies with the severity of the attack, three weeks being the time usually necessary. He should not be permitted to return to school or to take violent exercise until recovery is complete.

Diet should be restricted to milk, strong soups and eggs. Warm not hot baths, given daily, are of much benefit.

For the medical treatment: In rare cases there is serious sleeplessness. Chloral hydrate by the rectum in doses of from five to fifteen grains, or ten to fifteen grains of trional given by the mouth one or two hours before sleeping time, will act well. Potassium bromide is also useful. Avoid the use of morphine.

Ordinarily hypnotics are not needed at all. No known drug has a specific action in chorea. It is doubtful if there is any one specific cause of the disease, notwithstanding the discovery of the presence of micro-organisms in a few cases. Things as unlike as mental shock (fright) and the poison of rheumatism are equally powerful causes. Of all drugs supposed to exert a curative influence, arsenic is by far the most valuable, but as usually administered—three to five drops of Fowler's solution three times daily—it is useless. The proper method is to begin with say five drops after meals in some alkaline water, and to rapidly increase the dose to twenty to twenty-five drops. While giving it watch for œdema of the eyelids, nausea, and diarrhœa. If these symptoms appear, stop for two days and then begin again with the smallest dose. Be on guard, too, against arsenical neuritis. *Arsenic* is of use especially in those cases in which nutrition is poor and there is either an apparent or real anæmia. Most often there is little anæmia but only skin pallor or, as frequently happens, anæmia develops late—at a time when the movements have greatly decreased. The condition of the blood can only be determined by examination.

For the late anæmia give tincture of ferric chloride in doses of, say, fifteen drops after meals. The reflex causes of acute chorea of childhood are largely mythical. If the child needs glasses, put them on him; if he needs circumcision, circumcise him; or if he has worms, get rid of them; but with these procedures combine other and proper treatment.

Diarrhœa in Infancy.

ALLYN C. POOLE (*Cincinnati Lancet-Clinic*, August 3d), maintains that the study of the diarrhœal diseases of infancy is of pre-eminent importance. The infantile mortality from this class of diseases is very high—in England said to be forty-two per cent. The statistics of Cincinnati for the past five years shows a mortality of about twenty per cent. from this cause; but this he thinks is too low, many cases being classed as marasmus, inanition, etc. He adopts the classification of Emmet Holt: 1. Simple diarrhœa. 2. Acute mycotic diarrhœa. 3. Acute entero-colitis. 4. Chronic diarrhœa.

Under the first he includes cases of acute intestinal indigestion. No fever; not dangerous to life; occurs at all seasons.

The second class includes those commonly called *cholera infantum*; occurs in hot weather, and is characterized by frequent watery stools, fever, great prostration, etc.

The third class follows the preceding, and includes those cases which have gone on until an anatomical lesion has been produced. The colon is principally affected, producing tenesmus and the so-called dysenteric stools if the lower part is involved.

Under chronic diarrhœa are included cases of chronic intestinal indigestion and ileo-colitis of long standing. Under predisposing causes of diarrhœal diseases he considers *artificial foods and methods of feeding*. Only three or four per cent. of fatal cases occur in breast-fed infants, while the mortality among the bottle-fed is very high, particularly in cities where the milk is impure. Excessive amount and irregularity of feeding is also the cause of trouble. *Temperature* is also a factor, not as a direct cause but by favoring bacterial development; the relation between high temperature and cholera infantum is quite marked. *Age*: Children under two years are particularly liable to diarrhœal diseases, because it is a period of transition in diet and the digestive functions are more readily disturbed than later in life. *Teething* does not play an important rôle in the causation of diarrhœa, notwithstanding the prevalent idea among the laity. Bad hygienic conditions and enfeebled constitution are also causative fac-

tors. The intimate connection between bacteria and summer diarrhoea of children has been recognized in recent years, and while our knowledge is still incomplete, we believe that these diarrhoeas are produced by the absorption of ptomaines or other toxic products of bacteria. Escherich found the meconium at birth free from germs, but in a few hours invaded by two species of bacilli and one micrococcus. With the appearance of the milk fæces a number of other bacteria are found, the most important of which are the bacterium lactis aerogenes and bacterium coli communis. Booker has isolated forty varieties of intestinal bacteria in summer diarrhoea. No specific micro-organism found, though in severe cases of cholera infantum members of the proteus group are quite constant. In normal conditions the bacterial flora of the infant's intestine is quite limited, but in diseased conditions many varieties develop. They develop in cow's milk with great rapidity, both before and after ingestion into the body.

The nature of the products of this bacterial action is still undetermined. Vaughn isolated proteid poisons from cultures of three of the bacteria discovered by Booker.

Czerny and Moser, of Prague, in twelve out of fifteen cases of gastro-enteritis found micro-organisms in the blood, while only in two out of thirty normal cases were bacteria found. The varieties discovered were bacterium coli communis, bacterium lactis aerogenes, staphylococci, and bacillus pyocyaneus, all of which are found in the intestine. These microbic diarrhoeas are also believed to be contagious, Lesage stating that the admission of a case of *green* diarrhoea into a ward was followed by the development of eight similar cases in the ward in a few days.

Prophylaxis and Treatment.—The most important thing is proper food in proper amount at proper times. Mother's milk is best, but if, through physical incapacity, enforced absence by work, or simple disinclination, this is denied, cow's milk is the best substitute. This must be modified so that the proportion of casein, fat, and sugar may more closely resemble the human milk. The milk as ordinarily delivered in cities contains bacteria, and must be rendered sterile before it can be used. Subjecting it to steam heat for twenty to thirty minutes renders it sufficiently sterile, but, unfortunately, produces changes which impair its value as a food. Heating only to a temperature of 165° F., or Pasteurization, destroys or inhibits the development of bacteria sufficiently. Treatment will vary with the severity of the case. In simple cases castor oil or syrup of rhubarb will remove the offending material. Withholding food for from twelve to

twenty-four hours and giving bismuth subcarbonate or subnitrate will soon effect a cure. In microbic diarrhœa free irrigation of the stomach and colon is required. Salt solution or dilute boric acid may be used. Irrigation flushes out the large bowel, increases peristalsis, and favors a rapid passage of the contents of the small intestines.

Intestinal antiseptics are theoretically indicated, but a safe and efficient one is hard to find. Calomel is more useful, acting both as purgative and antifermentative. Astringents not in favor, except nitrate of silver and tannic acid used in solution by irrigation. Morphia sulphate, one one-hundredth grain by hypodermic injection useful in cholera infantum. Stimulation with brandy, tea, coffee, in cases of extreme prostration. Plenty of water necessary, and in extreme cases hypodermics of salt solution are indicated. Milk is prohibited in these cases, albumen, water, and broths being substituted.

Inanition Fever in the Newly Born.

L. EMMETT HOLT (*Archives of Pediatrics*, August, 1895) uses this term to describe a fever usually seen during the first four or five days of life which is independent, so far as has yet been determined, of any local or general disease, but apparently due to starvation. The term is not satisfactory, but seems to emphasize the connection of this temperature with the fact that the food is insufficient or is entirely wanting.

Dr. McLane, of New York, was the first to call attention to this condition. In 1890 he reported to one of the medical societies an extraordinary case of hyperpyrexia in a newly born infant which was entirely relieved when an abundance of milk was procured from a wet-nurse.

The following case was observed in the author's practice. It is a fairly typical one of the severe type of the disease: The patient was the second child, the first having died at the age of ten days, apparently from no disease but simple inanition. At birth the boy weighed eight and a quarter pounds and was apparently vigorous. During the first forty-eight hours his loss in weight was five and a half ounces and his condition good. During the next twelve hours, when seen by the author, he had lost since birth eight ounces in weight, and the temperature had gradually risen to 102.8° F.

The child was limp, entirely without resistance to examination. He cried with a feeble whine, and the restlessness of the early part of the day had given place to a complete apathy. The lips and skin

were very dry, the fontanelle sunken, pulse weak. Although he had been put to the breast regularly, the child had apparently got very little. It was impossible to press any milk from the mother's breasts. Water was given at once freely, and a wet-nurse secured in a few hours. The first milk was taken from the wet-nurse at 11 P. M. The temperature fell gradually during the night and the next morning was normal and did not rise again. During the succeeding four days the child gained eighteen ounces in weight and at the end of a week was as well as any ordinary infant of his age.

Observations made at the Sloane Maternity and the Nursery and Child's Hospitals have established the fact that it is not uncommon for newly born infants during the first five days to have a rise of temperature to 102° or even 104° F., which is accompanied by no evidence of local disease and ceases in nursing infants with the establishment of the free secretion of milk. It is also arrested by artificial feeding and very often by water if freely given. The fall in temperature is often quite rapid, frequently dropping to the normal in a few hours, after having lasted for three or four days.

At the Nursery and Child's Hospital, among two hundred infants taken successively, twenty had fever during the first five days, reaching 101° F. or over, which was not explained by ordinary causes and followed the course above described. In five hundred successive children born at the Sloane Maternity, there were one hundred and thirty-five with similar fever. The temperature usually touched the highest point upon the third or fourth day of life. In two thirds the temperature did not rise above 102° F. In nine of the above cases the temperature was 104° F. or over, the highest recorded being 106° F. Daily weighings made in these cases showed that the infants continued to lose weight while the fever lasted, and that the loss almost invariably exceeded by several ounces that of children who had no fever. The maximum loss was twenty-eight ounces. The average loss among healthy infants was ten ounces. As a rule, the infants began to gain in weight as soon as the temperature remained at the normal point, but not until then.

The symptoms were a hot and dry skin, marked restlessness, dry mouth and a disposition to suck vigorously anything within reach—everything indicating great thirst. With a very high temperature there was considerable prostration and weakened pulse. In the milder cases there was only unusual restlessness and crying. The symptoms disappeared with great rapidity when the children were nursed or fed.

The temperature of every newly born child should be taken during the first week. All the usual causes of fever are to be excluded by a physical examination. This fever can hardly be confounded with pyogenic infection, for that rarely begins before the fifth or sixth day. The treatment is simple—viz., to give water regularly every two hours, in quantities up to an ounce at a time, if required by the thirst of the child. This should be done in every case when the temperature reaches 101° F. In case the temperature does not at once begin to fall, the infant should be put upon another breast, or artificial feeding begun.

The Care of the Newborn.

H. E. SULEY (*Archives of Pædiatrics*, August, 1895) thinks that the care and management of the newborn has been too long relegated to ignorant mothers and nurses.

The consideration of a few practical points by medical men is opportune.

Umbilicus.—The dressing and care of the umbilical stump is usually considered of so little importance as to be left entirely to the care of old women and nurses. The danger of septicæmia threatens every newborn child through the medium of the cord. We know that tetanus, erysipelas and diphtheria occur in the young infant, the infecting organism gaining entrance through the cord. According to J. Lewis Smith, "septic diseases of the newborn can in every case be traced to carelessness or to dirty dressing of the cord." J. Mitchell Prudden found in a number of examinations of the bodies of children dying at the New York Infant Asylum that the microscopic examination of the umbilical stump showed great numbers of bacteria in the umbilical vein and in the surrounding tissues. The record of a hundred and seventy-six births kept by the author shows the average time for the separation of the cord to be six days. The treatment of these cases consisted in the application, after thorough cleansing, of a powder consisting of equal parts of boric acid and salicylic acid, applied to the stump upon sterilized absorbent cotton. At each bath the stump was cleansed and the powder reapplied on a fresh piece of cotton, the stump was laid upon the abdomen and a snug but not tight binder applied to hold it in position. Under this treatment the stump rapidly mummifies, and there is no moist or fungous navel left. At no other time is a binder of any use, and as soon as the cord separates it should be removed. Instead of preventing hernia, as it is taught, the binder is a frequent cause of it merely by mechanically forcing the abdominal contents down into the pelvis.

Eyes.—The fact that a number of States have passed laws with a view to decreasing the number of cases of blindness due to ophthalmia neonatorum shows in what a light this dreaded but preventable disease is held by progressive States. In the Credé method we have an efficient preventive remedy. As the infection generally occurs during the passage of the child's head through the vagina, and the period of incubation is rarely more than twenty-four hours, the instillation of one or two drops of a two-per-cent. solution of nitrate of silver in each eye immediately after birth will prevent this trouble.

Feeding.—Unless some physical condition precludes, all infants should be given Nature's food—mother's milk. It is during the first days of life that we must teach the child regularity of habits, and this can not be better begun than by adopting regular hours for nursing—namely, every two hours during the day, from 6 A. M. to 10 P. M., and every four hours during the night. By this means not only will the child be taught regularity, but the breasts will be more active at the regular nursing period. If there is a good flow of milk, the contents of one breast will suffice for a feeding; otherwise both breasts must be nursed from at each time, allowing twenty minutes for a feeding.

Weighing.—A valuable means of ascertaining the progress of a child is regular weighing. A child from birth to six months of age should be weighed weekly, as by this means, almost to the exclusion of all others, we can tell how the child is developing. During the first week there is generally loss in weight, but by the end of the second week the child should have regained its birth weight, and if there is gain of less than four ounces weekly, or a stationary weight, we know that there is some fault with its nutrition.

Mouth.—An important precaution to prevent thrush or sprue is the regular cleansing of the child's mouth before and after each nursing. This is done by means of a cotton swab on the finger wet with a saturated solution of boric acid.

Circumcision.—The author wishes to enter a protest against the custom of indiscriminate circumcision of male infants. It should be the duty of the physician to reflect the prepuce of all male children when they are a month old, relieve the corona glandis of the smegma present, anoint it with olive oil or vaseline, and replace the foreskin. This should be repeated two or three times a month by the mother and the parts cleansed. By this means there will be no pinhole openings and no reflex symptoms generally attributable to phimosis.

THE STATUS OF GYNÆCOLOGY ABROAD.

DENMARK.

Suprafascial Pelvic Hæmatomata occurring During Labor.

STADFELD (*Cent. f. Gyn.*, No. 28, 1895) describes this injury as rare though more frequent than is generally supposed. It is less frequently noticed partly because it is very often followed by no reactionary symptoms, and partly because, in the days previous to antiseptics, its tendency to a suppurative course was at that time generally overlooked and the condition ascribed to outside infection.

These tumors occur almost without exception in primiparæ. They are traceable most frequently to the bursting of a blood-vessel in the connective tissue surrounding the vagina, with which they may communicate secondarily through rupture of the vaginal wall. Less frequently is rupture of the vagina primary and the hæmatoma secondary, as in partial rupture of the uterus.

The symptoms are very often not clearly defined, and the author, on this account, gives us two conditions which may lead us to suspect the presence of these hæmatomata. The first is when a well-involuted uterus continues to remain high in the pelvis, without any other appreciable cause; the other condition is a long-standing, sanguineous lochiâ, which may probably be due to a continuous bleeding through a tear in the vaginal wall between the hæmatoma and the vagina. The prognosis is good and the treatment consists in incision, emptying of the sac and subsequent antiseptic tamponing so soon as the condition is recognized. In those hæmatomata due to incomplete rupture of the uterus the prognosis is less favorable; here the author recommends washing out and draining the cavity. Excluding this last kind of hæmatoma, Stadfeld reports eight cases of the disease out of five thousand obstetric cases in the Copenhagen Lying-in Asylum; of these, four were infrafascial and four suprafascial. He gives the histories of the latter cases at length.

Ovarian Pregnancy.

A. LARSEN (*ibid.*) gives the following history of a case: The patient was thirty-three years old and previously healthy. Her menses began at twenty and were regular except on one occasion, when one or two months were missed. A profuse flow was exceptional.

She last menstruated in the beginning of August, 1891. Immediately after this she was seized with cramps, vomiting and some pelvic pain. Three months later she had retention of urine, at which time, on examination, a uterine pregnancy at three months and enlargement of the right ovary were diagnosed. During the remainder of her pregnancy the patient's condition was good. Motion was felt by the middle of December, and on the tenth of the following April there were severe shooting pains accompanied by some hæmorrhage and the passing of a firm lump the size of a hen's egg. Motion ceased at the same time. A thin, light, sanguineous discharge continued from the vagina and, at every return of the menstrual epoch, this discharge acquired the appearance of the menstrual flow; otherwise the patient's general condition was good. On the 22d of September the diagnosis was made, under anæsthesia, of a dead fœtus retained in the uterus. Upon dilatation of the cervical canal, however, the body of the uterus, which on palpation could not be differentiated from the tumor, was found to be empty. On September 27th laparotomy was performed with extirpation of the tumor, which was attached by a single rectal adhesion, though otherwise freely movable in the abdominal cavity and united to the uterus by the right tube and broad ligament, which were also tied off. The right ovary could not be seen and the left tube and ovary were normal. Convalescence was uneventful.

Upon opening the fœtal sac a quart of chocolate-colored, thin and very flocculent fluid with a macerated, flattened and apparently fully-developed fœtus, placenta and cord were found. The placenta was attached to the posterior wall of the sac, while the anterior wall was adherent to the broad ligament, though this was easily separable except at the upper and outer part. At this place it was immediately continuous with the fœtal sac, and this in turn was firmly attached, for a distance of four and a half centimetres, especially thick at the under part, to the posterior surface of the tube. The inner and upper part of the sac, near the uterine end of the tube, was also firmly united to the posterior surface of the ligament by a small adhesion. The portion of the tube which was removed measured ten centimetres and was much dilated. In the broad ligament could be seen three branches of the internal spermatic artery, the middle branch going to the fœtal sac, which was also supplied with branches from the outer ones. The posterior surface of the sac was as thin as paper, while the anterior was fibrous in character and studded with the open mouths of the torn vessels; it was about eight millimetres in thickness.

The microscopic examination of the anterior wall showed here and there small groups of follicles with a distinct membrana granulosa, and in several of these appeared more or less well-preserved ovules with germinal vesicle and germinal spot.

RUSSIA.

Two Cases of Symphysiotomy in Country Practice.

W. LESIN (*St. Petersburg med. Wochensch.*) describes his *first case* as follows: The patient was a twenty-four-year-old primipara; intertrochanteric diameter, 25.5; interspinal, 21.5; between the crests, 23.5; external conjugate, 14.5; diagonal conjugate, 10. First vertex position, head fixed at the brim, promontory prominent, os dilated three fingers' breadth. The labor had lasted three days and the foetal heart sounds were heard. When the operation was performed and the interpubic distance became two centimetres, the head retracted spontaneously into the pelvis. Extraction of a living child was accomplished with forceps. The hæmorrhage was slight, the cavity was tamponed, no sutures were used and a compress was applied. The rise of post-partum temperature was slight. Forty days later the patient was able to go about, the two ends of the symphysis being in contact.

The *second case* was a patient thirty-two years old, who had borne five children—the first two without medical assistance. One dead child was delivered by extraction, two living children had been subjected to craniotomy and extracted. Distance between the crests, 26.5; interspinal, 24; intertrochanteric, 29; external conjugate, 17; diagonal conjugate, 11. The head was pressed against the right iliac fossa; the cervix was closed but easily dilatable. The operation, from which there was no bleeding, was immediately followed by version and the extraction of a living child. During the passage of the head the symphysis separated five centimetres. Slight rise of temperature owing to a puerperal endometritis. Three weeks later the patient was about. No sutures were used in this case.

A Foreign Body in the Vagina.

G. ROSTOWZEW (*ibid.*) reports a case of unusual ingenuity in a peasant woman who was suffering from the symptoms of partial prolapsus uteri, and who inserted into the vagina a pessary which she made by twisting a birch twig into the shape of a ring.

Prolapse of the Uterus: Its Treatment.

VOFF, in the *Wratschelenia Zapiski* (*Nouv. archiv. d'obstet. et de gyn.*, No. 8, 1895), after an experience with the non-surgical treatment for this condition, such as pessaries, Thure-Brandt's method, etc., as well as the surgical, arrives at the conclusion that there are certain cases in which total hysterectomy is necessary. After a review of the literature on this subject the author gives the following list of indications for this operation, which are those followed by Leopold at his clinic in Dresden: 1. When the suffering to the patient caused by the prolapse is very great and when other modes of treatment have failed. 2. In senile atrophy of the vaginal mucous membrane or, on the other hand, in excessive hypertrophy where plastic operations have failed. 3. In extreme relaxation of the ligamentary apparatus of the uterus, when replacement of that organ is followed immediately by a return of the prolapse, owing to the force of abdominal pressure. 4. In irreducible prolapses owing to hypertrophy of the uterus or of pelvic adhesions. 5. In the case of fibroma or cancer.

The author further advises anterior and posterior colporrhaphy at the same time that hysterectomy is performed.

[We publish the above abstract by way of warning for, alas! it is not in Europe only that the proverbial conditions exist, "where angels fear to tread." And indeed it is difficult to preserve the amenities of medical writing, even for an editor, when the names of well-known gynæcologists and teachers are coupled with such arrant balderdash as are the indications for hysterectomy which we have just quoted. We do not know whether Voff has practiced much plastic work, but he has given us indubitable evidence that he does not understand anything about it. The foundation of all his "*indications*," with the exception of that one referring to cancer and fibroma, is that "*plastic operations and efforts at reduction have failed*." It is hard to be patient in the face of such illogical reasoning. Is it possible that our author is not aware that the plastic operator who, at the same time, apprehends the essential principles of plastic work, is a very unusual combination?

It is not a question of belief but *one of fact*, that prolapsus uteri, as such, can invariably be cured—*i. e.*, the pelvic contents involved can be reduced to a condition practically normal both in appearance and, in symptomatic effect, *by proper plastic operations properly performed*. If, therefore, a surgeon fails to cure prolapsus uteri by plastic means, it is *always* the fault of the operator. He has not under-

stood the object to be attained or has applied improper means to attain this end; or else he has applied efficient means, possibly, at a time when they were incapable of attaining their object. Plastic surgery upon the vagina is a science, as well as an art, and needs very thorough and intelligent study. It is far more delicate and difficult work than the laparotomist has ever dreamed of. It is as wholly ridiculous for a surgeon who has not been especially trained in this work to express an opinion in regard to it as it would be for a veterinary to utter *dicta* on the subject of human ophthalmological surgery. One must have a clear appreciation of the mechanism of the pelvic contents and possess natural mechanical ability as well, before he is at all competent to understand the scope and meaning of gynæcological plastic work. We will hail the day, therefore, for the sake of suffering womankind, when laparotomists realize the fact that their special training peculiarly unfits them for becoming efficient plastic surgeons, and when, in consequence of this intelligent appreciation, the term "gynæcologist" will come to mean him who operates below the pelvic brim, while all laparotomy will devolve upon the general surgeon.—ED.]

FRANCE.

Bony Tumor of the Pelvis necessitating Pelviotripsy.

CHAMBRELENT, of Bordeaux (*Nouv. arch. d'obstet. et de gyn.*, No. 8, 1895), described at the Gynæcological, Obstetrical, and Pædiatric Congress at Bordeaux, last August, the case of a woman, twenty-one years old, who two years previously had a perfectly normal labor. The physician called in at her present confinement diagnosed the presence in the pelvic cavity of a tumor as large as a mandarin orange. When the author examined this patient after she had been in labor forty-eight hours he found a living fœtus with its vertex presentation entirely arrested by a very hard tumor. This new growth had reduced the diameter between the promontory and the pubis to five and a half centimetres. Application of the forceps, made as a forlorn hope, obtained no result. The labor could not be terminated except by pelviotripsy.

PASQUALI, in the discussion which followed, referred to a similar case which he had observed in Rome. A tumor having all the appearances of an enchondroma necessitated this operation. He asked if one would not be justified, after the labor, in attempting the removal of the tumor.

MERZ, of Algiers, asked why Chambreleut had applied the forceps

in so marked a case of contraction, as that referred to, and had not immediately resorted to the surgical operation.

BUDIN recalled the case of a woman he had examined, on whom the diagnosis of a tumor of the pelvis had been made, who really had a calcified fibroma of the uterus. Examination under chloroform ratified the diagnosis before labor which occurred spontaneously, the tumor having been reduced to a position above the superior strait.

Symphysiotomy.

TARNIER, of Paris (*ibid.*), in discussing the subject *Symphysiotomy at Marseilles* (Queirel), said that most surgeons who did this operation did not make sufficient effort to bring together and maintain in place the bones of the pubis. He reported the history of a woman where mobility persisted after the operation and was by no means corrected by wearing an apparatus designed by Tarnier and Panas, consisting of a spring which tended to draw together two plates which rested upon the iliac bones. The belt of Pinard also did not always fulfill the indications.

The author then presented an apparatus which consisted of a body bandage, to each end of which was attached a stick. From each stick came off a cord, which passed over a pulley suspended above the level of the bed but on the side opposite to the stick to which the cord was attached. The patient is therefore suspended, as it were, in a hammock the cords of which are meshed above. The free ends of the cords were attached to bags containing lead, by means of which the compression of the bandage upon the body might be increased or diminished.

Dermoid Cyst and Endothelioma of the Ovary.

LANNELONGUE and FAGUET, of Bordeaux (*ibid.*), report a case in which they made the diagnosis of complex tumor of the right ovary. The anatomical and pathological examination showed that this case was one of neoplasm consisting at the same time of a dermoid cyst and of an endothelioma. The latter is a variety of tumor rarely met with, and was described for the first time by Eckhardt and Pomorski, who named it endothelioma on account of its origin, which is the same wherever the endothelium may be situated.

The prognosis of these neoplasms is, for the most part, malignant, and operative interference is called for at the earliest moment.

*Supravaginal Abdominal Hysterectomy for Uterine Fibromyomata ;
Retroperitoneal Treatment of the Pedicle.*

LANNELONGUE and FAGUET, of Bordeaux (*ibid.*), also describe their method of treatment of these uterine tumors. The procedure, whose technique they describe in detail, consists especially in suturing the stump, which appears to them to be the method applicable to the largest number of cases. It at the same time confines the stump to the pelvic cavity and attains the ideal surgical aim in operations of this sort : 1, it insures hæmostasis completely and, 2, it disposes of the pedicle outside the peritoneal cavity, which is therefore protected against infection likely to enter from the vagina even at times when the most careful antiseptic precautions have been taken. They have employed this method in fourteen cases, with twelve recoveries and two deaths. The first death they believe to be properly attributable to the very unfavorable condition in which the patient was at the time of operation. She was an old woman with a very large, irreducible and painful umbilical hernia, and this was complicated by pulmonary emphysema, myocarditis, etc.; the second case died with uræmic symptoms.

[The method of these authors is hardly a novel one, and indeed so much has been done for many years past by the method described, and the whole subject has been so thrashed out, that it scarcely seems possible to say anything new or encouraging on the theme. It was practiced in this country long before the days of asepsis—when, in fact, hysterectomy was in a purely experimental stage. Perhaps to Carl Schröder, of Berlin, is due the credit of first carrying the extraperitoneal treatment of the stump to great perfection in technique, and he has had many followers and modifiers in all countries since that time.—ED.]

GERMANY.

A Contribution to the Study of Decidual Formation.

F. NORDMANN (*Centbl. für Gyn.*, No. 27, 1895) has given his conclusions, founded upon careful macroscopic and microscopic examinations of five gravid uteri, in regard to the oft-mooted question as to whether the lower segment of the womb contains uterine or cervical mucosa, and whether the cervical mucous membrane undergoes decidual changes.

He believes, 1, that the lower segment belongs, both in its muscular

structure and in the character of its mucosa, to the body of the uterus, its mucosa acting in the same manner as that of the body in the development of the decidua ; 2, the cervical mucous membrane takes part at no time during pregnancy in the formation of the decidua, the cervix itself normally remaining closed practically throughout this period ; 3, the internal os is situated where the muscular structure of the body suddenly diminishes in thickness. The latter sends out only single muscular fibers in and round about the fascia surrounding the cervix. At this spot the decidua ends and the unchanged cervical mucosa begins.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL
SOCIETY.

June 21, 1895.

The *President*, FRANKLIN H. MARTIN, M. D., in the Chair.

Abstract of a paper entitled

A NEW LARYNGEAL TUBE EXTRACTOR.*

BY W. W. WETHERLA, M. D., CHICAGO.

The author referred to the much greater difficulty experienced by physicians in extracting than in inserting the tube when this operation upon the larynx was practiced. This he ascribed to the fact that the tube was so much smaller than that organ. He had succeeded in devising an instrument for greater ease in extracting tubes—an electro-magnetic extractor—which he had found to fulfill all the indications. Ophthalmic surgeons had for many years been accustomed to use both permanent magnets and electro-magnets for the purpose of extracting particles of iron from the eyeball, and made use of an instrument which was an electro-magnet fitted with polar appliances of sufficient variety of form and length to allow of introduction into the wound of the eye until the iron could be attracted and withdrawn. The author believes that the electro-magnet was first applied for the purpose of removing laryngeal tubes by Dr. John Bartlett, of Chicago, about three years ago. He used an instrument similar to that in use by the ophthalmologists, of sufficient length for practical use in the

* Read by invitation.

larynx. Only the head of his tube, however, was of iron, the rest of the instrument being of brass. The lifting power of this instrument, excited by ten or twelve cautery cells, was only half a pound, which was not sufficient power; the instrument was therefore discarded by Dr. Bartlett as a failure.

"If Dr. Bartlett," the author says, "had discarded the long pole piece and had wound his wire to the end of the curved extractor, his instrument would have been a success. He failed to comprehend the physics of the magnet. His failure was due to the fact that the adding of a piece of iron to the front or working end of a magnet greatly diminishes the pull, while, on the other hand, putting the same mass of iron at the far end greatly increases the pull at the front end, or the end with which you work. The front end exerts a bigger pull when there is a mass of iron attached to the other end. The reason for this is that the whole iron core, including its front end, becomes more highly magnetized, because there is now a better way for the magnetic lines to emerge at the other end and come around to the front end. The iron is a better conductor for the magnetic lines than the air. The mass of iron diminishes the magnetic reluctance of the air part of the circuit, and the flow of magnetic lines in the whole magnetic circuit is thereby improved. The softer and purer the iron composing the core the more numerous will be the magnetic lines passing through it. When we attach a long pole piece to the front or working end of an electro-magnet, as was done in Dr. Bartlett's instrument, the magnetic lines will stream backward from its edges and few will be left in front to act upon the piece of iron to be lifted. Putting on a pole piece to the front end of a magnet diminishes both the pull in contact and the attraction at a distance; it simply promotes leakage and dissipates magnetic lines.

"The horseshoe is the best form of electro-magnet for lifting purposes, therefore the nearer we approach this form in the construction of a magnet the greater will be the pull, because everything that helps the magnetism to get from one end to the other increases the strength of the magnetic circuit. A typical two-pole or horseshoe electro-magnet can not be constructed to be introduced into the larynx. I have constructed and experimented with an ironclad or jacketed electro-magnet, but with negative results. This form differs from the simple bar magnet in having an iron shell or casing external to the coil and attached to the core at the far end. The shell or jacket provides a return path for the magnetic lines, which flow in one direction through the core and find an easy path back along the

outside of the coil. Such ironclad magnets produce less action at a distance across air than do the ordinary forms, but they give a greater pull in contact, because, as we have seen above, everything that helps the magnetism to get around to the other end increases the strength of the magnetic circuit. It is claimed by good authorities that jacketing an electro-magnet increases its pull sixteenfold. This applies only to straight magnets, for jacketing an electro-magnet which already has a return path, like a horseshoe magnet, is an absurdity. On account of the difficulties of jacketing a curved electro-magnet such as we are in need of for our purpose, I have not yet been able to give it a fair test, but am still experimenting in this line.

“The instrument which I exhibit is given the form of half a horseshoe, and therefore is stronger than a bar magnet. On account of its curved form, the magnetic lines that flow through the iron core do not encounter such a large air space as they would were the instrument a straight bar magnet. The distance from one pole to the other is shorter. It has practically no polar extension piece; the armature or tube to be lifted comes in immediate contact with the working end of the core of the magnet, and thus fulfills all the requirements for a perfect lifting instrument. The working end of the magnet, together with the covering of wire, is intended to be inserted into the larynx of the patient, and no force is lost. The greater mass of iron is at the far end to which the handle is attached. It is ten centimetres long, and has the same curve as the O’Dwyer extractor, the working end being three and a half centimetres in diameter and the far end four and a half centimetres in diameter. A metallic handle screws into the large end of the core. The length of the whole instrument is that of an ordinary extractor. The tubes are of the O’Dwyer or Waxham pattern, and made entirely of soft pure iron instead of brass or German silver, as are those at present in use. They are heavily nickel-plated, which in my opinion answers as well as gold plating, and is much cheaper. The iron-headed tube of Dr. Bartlett was retained in the larynx for a number of days without rusting, and one of my iron tubes remained four days in the larynx of a child, free from rust. If one wishes to use iron-headed tubes with brass body, I see no reason why they should not be just as readily lifted out with the magnet, since most of the magnetic lines will pass through that part of the armature, or, as in our case, the head of the tube, which is in contact with the working end of the magnet.

“The lifting power of the instrument, when excited by a storage

battery of six volts and applied to the head of the smallest-size iron tube, is two pounds, and when applied to the largest-size children's tube, is five pounds. Such force as this will seldom be needed in the removal of tubes from the larynx. Any plunge or cautery battery of six volts will answer instead of a storage battery. The first instrument constructed has a current breaker attached to the handle, which I have learned by trial on the living subject is not the best construction, since the operator, who is often excited at the moment, is liable to move the breaker and cut off the current, thereby allowing the tube to lose its hold from the extractor and fall back into the œsophagus of the patient. This accident has already happened to me. Therefore I would advise that the current breaker or contact spring be eliminated from the instrument. An assistant should turn on the current by inserting a cord tip into the binding post of the battery while you are introducing the instrument into the patient's mouth; when (provided your battery is well charged) you bring the small end of the magnet into contact with the tube in the larynx you are sure to bring out the tube, which will follow the instrument at any angle through the mouth. With this instrument the tube can not become detached while following the curves of the mouth, as has frequently happened with the old form of extractor.

"No extraordinary skill is required to use the magnet. The instrument and the battery may be left at the patient's house, and the nurse be instructed how to insert the magnet into the larynx should indications point to the urgent removal of the tube before the physician can arrive.

"Dr. Ochsner has wisely suggested that the gag in the patient's mouth should not be made of iron, but of some non-magnetic material, such as rubber or brass. Dr. O'Neil, of St. Joseph's Hospital, has devised a very good gag for this purpose. I use Dr. Henrotin's gag made of brass. An iron gag may be used, provided care be taken not to bring the magnet in contact with the iron gag while the current is on and the instrument is in the patient's mouth, otherwise the magnet will adhere firmly to the gag and fail to exert any pull on the tube in the larynx.

"A complete set of instruments such as I exhibit here, consisting of five nickel-plated iron tubes, one introducer, one electro-magnetic extractor, one mouth gag, one six-volt storage battery with conducting cords and a metal case, can be furnished for \$60. This case which I exhibit is imported from Germany and is of far better workmanship than you generally find in this country. It is made of an

alloy of nickel and copper called nickeline. A cheaper case can be made, making the set cost only \$50."

DISCUSSION.

Dr. A. J. OCHSNER (present by invitation) exhibited a patient and said: This patient is interesting because she is very small and would consequently offer greater difficulties in the removal of an intubation tube with an ordinary extractor, and because I removed an intubation tube with the magnetic extractor.

She is sixteen months old. Intubation was performed for relief of an obstruction caused by the inspiration of a raisin four weeks before she came under my care. Tracheotomy had been performed at the time of the accident, but the child was still unable to breathe without the use of a cannula, hence the substitution of an intubation for a tracheotomy tube.

The smallest tube of the usual set was first inserted, but this did not reach beyond the obstruction. Dr. Wetherla's magnet was applied in the manner described by him and the tube was withdrawn with perfect ease and without causing pain.

A larger tube was now inserted and the child breathed well until four days later, when she suddenly became asphyxiated from accumulation of mucus in the tube.

The magnet was again used, the mouth being held open by a steel gag.

In trying to withdraw the magnet I found that the traction was upon the gag, which it had accidentally touched, instead of being upon the tube. Not having anticipated this condition, the accident was at first quite puzzling.

The current was interrupted and the magnet applied more carefully, and now the tube was removed without difficulty and without in any way injuring the tissues.

The extractor is blunt, as you see, and it is practically impossible to injure the larynx with it.

Its form is very convenient, so that the end of the tube can be touched with it just as easily as with the finger.

The whole performance is so simple that I am certain a novice or a layman could remove the tube much more easily with this instrument than an expert with the ordinary extractor.

Dr. JOHN BARTLETT: I have just one thing to suggest in reference to this magnetic extractor. When we thought of extracting a tube in this way, the presumption was that there would be great diffi-

culty unless the facet of the extractor was placed parallel with the surface of the head of the tube and got in that way a good hold upon it. It seemed necessary that this exact relation of the tube and the surface of the extractor should be maintained, but fortunately in practice no such necessity is found to exist. At whatever angle you hold the extractor relatively to the tube, and whether the point of contact be great or small, the magnetic hold of the instrument upon the tubular armature appears to be the same, so that the promise is that even the uninitiated, with some instruction, may be able to use the instrument with success.

DR. HENRY T. BYFORD: I exhibit these specimens to illustrate methods of operating:

Suppurating Ovarian Cystoma.

The tumor was larger than a child's head, thin-walled, and contained a pint and a half of pus. What I want to illustrate by it is the method of vaginal drainage which was employed. After this tumor was enucleated there remained a cyst about the size of a hen's egg, which I could not completely enucleate. The intestines were adherent over it, as they are in nearly all cases of large suppurating cystomata, and the tumor filled, and was firmly adherent to, the pelvic walls. After I had got it out I found I would have to pack the pelvis with gauze in order check hæmorrhage and prevent infection of the general peritoneal cavity. I therefore punched a hole into the vagina through the *cul-de-sac* of Douglas and packed the *cul-de-sac* thoroughly with iodoform gauze. Before packing I attached a ligature to the upper part of the lacerated broad ligament and pulled the ligature down and out through the vagina and thus diminished the amount of raw surface. I closed the abdominal incision completely. Soon after the operation the temperature went up to 102° F. and a reaction, which was to be expected after an operation of this severity, but the temperature reaction quickly subsided and the temperature became normal. The case illustrates beautifully the advantage of vaginal drainage in cases of abdominal section.

Double Pyosalpinx.

I show these specimens because I removed them through the vagina and without removing the uterus. I was told by one of the most eminent operators in London, when I commenced to operate in this way, that I would run my head against a stone wall if I did not stop it. I have frequently removed pus sacs through the vagina

without removing the uterus, and have not yet lost any cases except one in which I at the same time removed the uterus, and which I am satisfied would have been successful had I let the uterus alone. This pus sac was quite large and firmly adherent. The patient has had practically no reaction whatever.

Fibroid Tumor.

This is a fibroid tumor that I removed through the vagina. I brought it merely to show how large masses can be easily removed through the vagina without trouble. I removed it by morcellement, but did not do it as the French do in this respect; I did not use forceps, but used only ligatures. It took a little while to get it down, as the broad ligament was somewhat rigid, but by tying a portion at a time it came down, and by cutting the uterus in pieces I succeeded in getting it out. I then pulled the ligatures down and attached the peritonæum to the vagina. There has been no oozing since to speak of—hardly enough to moisten the gauze in the vagina; there was a very small peritoneal opening which I left purposely to drain the peritoneal cavity. When forceps are used such adjustment can seldom be made. This tumor also illustrates a point bearing upon the necessity of removing fibroids. The patient was forty-eight years old. We have often been told that it is not necessary to remove a fibroid from a woman that old. She has been sick four years. Menstruation has been regular. There has been no dysmenorrhœa, amenorrhœa, or metrorrhagia, but of late the flow has lasted six days, increasing in amount. The last two years the uterine cavity has grown an inch in depth. For over a year she has taken half a drachm of the fluid extract of ergot three times a day. As the tumor was growing, the woman wanted to have it taken out before it got so large as to render it necessary to make an abdominal incision.

DISCUSSION.

Dr. T. J. WATKINS: I want to commend the method of drainage which Dr. Byford employed. The difference in recovery of the patient after vaginal operation and laparotomy is very marked, in that recovery is much smoother after vaginal than abdominal section, and the principal reason of this, it seems to me, is that better drainage is secured by vaginal than by abdominal section. Much has been said about the efficiency of capillary drainage; however, it is practically impossible to get as good drainage through the abdomen as through the vagina. Undoubtedly the incision made in cœliotomy does not

account for the symptoms being severer after abdominal than after vaginal section. The manipulation of the intestines incidental to the abdominal operation may, however, account in part for the severer symptoms. Of late I have used vaginal drainage after doing laparotomy in preference to abdominal drainage. In two or three instances I have opened into Douglas' pouch through the vagina, completed the operation through an abdominal incision, and then used the vaginal opening as a means of drainage. In one case, after removing a fibroid uterus complicated by diseased appendages, I incised from the vaginal side into Douglas' pouch and thus secured vaginal drainage. I am nearly convinced that abdominal drainage should never be employed when drainage through the vagina can be easily secured.

Dr. J. D. EMMET, of New York (present by invitation) : I am much interested in this subject, though my own experience in the vaginal route of operation is very limited—practically *nil*. The subject is certainly one which has interested the profession a great deal. At the recent meeting of the American Gynæcological Society it was the most interesting subject discussed, especially as brought out by Dr. Henrotin's paper. I do not think, however, that enough has been said about the extreme difficulty of doing the operation and of working through the *cul-de-sac* in certain cases. I have one case of my own in mind, of a large fibroid which filled the abdomen pretty well and also sank deep in the pelvis. I thought that, previous to taking it out by laparotomy, it would probably be easier to tie the uterine arteries from below. The woman was very stout, had a deep, narrow vagina, and in making my incision behind the cervix, and before I entered the *cul-de-sac*, I unfortunately cut the circular artery. It took ten or fifteen minutes to find and secure the ends of the vessel in the connective tissue. It took up so much time that I finally abandoned my purpose of tying the arteries from below and proceeded to open above. I think this is an important thing to remember. Almost all the men who spoke on the subject at the meeting in Baltimore spoke enthusiastically, but they did not tell us of the extreme difficulty of operating in certain cases.

Dr. H. P. NEWMAN : I think Dr. Byford has devised a method of packing after vaginal hysterectomy which the Society would be glad to know more about, as it is somewhat different from that used by others.

Dr. H. T. BYFORD : All I do that is peculiar is that I do not pack very much ; I simply pack to the peritoneal edges. If there have been adhesions I pack in the *cul-de-sac*, but never up among the in-

testines. All I want is to drain the bottom of the peritoneal cavity. If you have hæmorrhage you have got to pack to the place of hæmorrhage, which is always on the side or below. If you have forceps, pack up along the forceps, but do not allow the packing to project above or beyond.

In regard to iodoform gauze, I do not myself think it is a good drain. The efficiency is in having enough gauze to absorb about all the fluid which exudes; the pressure of the gauze will prevent much of it, and the gauze should absorb the rest.

Dr. J. D. EMMET: I am very much interested in what Dr. Byford has just told us in regard to drainage by gauze. I have noticed that after curetting, where the uterus has been packed tightly with gauze, which a number of men have recommended as being very important—in fact, necessary—the organ does not drain at all; but if the gauze is put in lightly it will drain. We have all probably noticed that in a uterus packed tightly, when we have taken out some of the gauze, then drainage begins and a lot of fluid which has been dammed up will come out.

Dr. FRANK A. STAHL: I would ask if any of the gentlemen have tried iodoform absorbent cotton as a drain. Several years ago, in performing tracheotomies and cœliotomies for appendicitis and for drainage of pelvic and mammary abscesses, I formerly used iodoform gauze, but some of the objections that Dr. Byford has called attention to presented. I then tried iodoform absorbent cotton for drainage, and with such success that I have continued its use. Strips of absorbent cotton drain more perfectly, are less irritating, and do not plug like the gauze; in the siphon test absorbent cotton is superior to either gauze or wicking. It has been my custom, especially in pelvic and mammary abscesses, to drain with iodoform absorbent cotton strips, and I have never found any accumulation after removing the cotton strips. An objection might be offered to the cotton by the ultra-germists that small filaments of cotton might become detached and form foci for germs, but this objection also is true of gauze. I have never been troubled with such a phenomenon, and I have never had cause to regret introducing iodoform absorbent cotton strips as drains in my surgical work.

Dr. F. H. MARTIN: I would like to ask Dr. Byford what drainage-tube he employs in conjunction with gauze drainage in the vagina. Dr. Watkins suggested the possibility that the slight shock following vaginal hysterectomy was due to more perfect drainage than obtains after abdominal section. It occurs to me that that statement may not

be strictly true. Is there really more shock from abdominal operation, if proper glass tubal drainage is employed, than from vaginal operation? When shock occurs after abdominal operation is it not because there is no drainage? When the glass drainage-tube is used after abdominal operations I believe that the patients are very much more comfortable, have less peritoneal irritation, less rise of pulse, and less nervousness than when no drainage is used. It is a question in my mind whether there is not less shock after abdominal operations than after vaginal operations. I believe that iodoform gauze makes a very poor drain, and unless used very loosely is simply a dam. In all vaginal work I invariably pack very loosely with gauze, but if I desire free drainage I use a glass tube. I use a glass drainage-tube in every case of abdominal section where there is the slightest reason to believe that half an ounce of fluid will accumulate in twelve hours; I use it in almost every case because it does absolutely no harm, and occasionally I use it where it really does not seem indicated, but where it appears very fortunate to have been employed on account of the large amount of drainage which occurs.

Dr. H. P. NEWMAN: I ask this question of Dr. Byford in regard to drainage because I think it a very important feature in hysterectomy *per vaginam*. I have recently had an opportunity of opening the abdominal cavity after vaginal hysterectomy, and noticed particularly that the forceps aperture was dangerously near the intestines. No plastic material had formed around the iodoform-gauze drain twenty-four hours after operation. This was probably due to the low state of the patient. I suspected possibly a slight hæmorrhage in the abdominal cavity, but I did not find this, and attributed the low condition to the shock alone. It impressed me with the great importance of properly placing a drain and of the material to be used. In vaginal hysterectomy, whether ligatures are used or forceps, the stumps of the broad ligaments and all abraded surfaces should be brought well down into the vagina, and the gauze packing carried beyond and above them so as both to drain the wounded surfaces and support the vaginal roof in such a way as to prevent hernia of intestines or omentum; but neither the packing nor the forceps should project into the peritoneal cavity. I believe iodoform gauze is not a suitable drain in certain cases. The cross fibers and longitudinal fibers will so mix up that they frequently do not answer the purpose of an outward drain from the abdominal cavity or from the uterus. Then, again, the quality of iodoform gauze, whether moist or dry, is extremely important. I have found iodoform wicking answers an admirable pur-

pose in the uterine and abdominal cavities; its fibers run in only one direction—longitudinally—and it is made of material that affords very excellent drainage. I believe one reason why better drainage is not accomplished in the uterine cavity is that the exit along the canal is too thoroughly packed with gauze. The upper and lateral surfaces of the uterine cavity can be pretty thoroughly packed with proper material, and if loosely packed about the internal os and from there downward good drainage will be assured, particularly if iodoform wicking is used. Another question arises, whether it is not possible to overdo drainage in this class of cases. In vaginal operations where an opening is left into the peritoneal cavity, and there is not only oozing from the abraded surfaces but also the escape of the peritoneal fluid, we may have this natural protection to the peritoneal surfaces entirely drained away.

Abstract of a paper entitled

A CASE OF FEMORAL HERNIA OF A CYST OF THE BROAD LIGAMENTS.

BY SAMUEL L. WEBER, M. D.

The author reports the case as follows: "April 26th last Mrs. D. consulted me about a swelling in the groin that came suddenly three days before. She is a small, slender woman, thirty-one years old; has been married eleven years; has had four children; the youngest is two years old. Forceps were used at first delivery; perinæum lacerated and sewed up after the second. Has had no trouble during any of her pregnancies, and no miscarriages. Children healthy and living. Menstruation regular since last baby two years ago. Has had no gynæcological troubles; no hernia. Has been thoroughly healthy in every way until present time.

"Three days before coming to see me she was washing, and while lifting an unusually heavy boiler containing the wash she felt something give way in her right groin with a sharp though not intense pain. She continued her work, and on undressing in the evening she saw the lump in her groin. Three days later the swelling had increased somewhat since its first appearance, but gave her very little annoyance.

"*Examination.*—She is a small, thin woman of wiry, muscular development, has very little subcutaneous fat, but is of healthy color and appearance. In the right groin is a movable, fluctuating tumor,

about five inches long and about two and a half inches wide, lying with its long axis parallel and just above Poupart's ligament. It is fairly movable under the skin and is attached below, apparently at the femoral opening. The tumor is not tender to manipulation, distinctly fluctuates, can not be diminished by pressure, and is not increased, nor is there any impulse on coughing or straining. The skin above it is natural."

He recognized it as an irreducible femoral hernia, but was at a loss as to its contents. Absence of pain, colic, and of interference with the movements of the bowel excluded gut or omentum. Vaginal examination was negative, except that the right broad ligament seemed a little fuller than the left. The uterus and both ovaries were in position and normal.

Everything was unchanged when he saw her again two weeks later. She consented to an operation to have the hernia removed.

Operation, May 5th.—"The usual incision was made. The sac was very thin, and the hernia was easily separated from the surrounding tissues until the pedicle was reached. The pedicle or neck of the sac was of denser tissue; its diameter was about that of a lady's little finger, and it entered the femoral canal, which was but little wider than normal. I incised the thin sac, which was very evidently not peritonæum, and about two thirds of a pint of thin, light yellow fluid escaped. I endeavored to pass my finger through the neck of the sac for exploration, but it was altogether too narrow, and, not deeming it good for the patient to forcibly dilate, I explored with a long thick probe, which to my surprise passed into a cavity to its full length. I thought for a moment that possibly I was in the abdominal cavity, but a moment's reflection showed me that its direction was not that of entering that cavity, but downward into the pelvis; besides, in manipulating the probe its movements were limited abdomenward. Holding the probe with my left hand, I inserted the index finger into the vagina, and then easily felt the probe in the right broad ligament. The cavity in which the probe was was a rather large one, judging by the freedom with which the probe could be moved about. It was just to the right of the uterus and close to that organ and to the vagina. There seemed to be hardly any tissue between the wall of the cavity and the lower part of the uterus. The tip of the probe could be felt close to the lateral wall of the vagina along its upper inch or inch and a half. The cavity was apparently empty. But little fluid could be pressed out through the external opening by pressing on the cavity bimanually.

"I tied the sac as high up in the femoral canal as I could, cut off the external portion, and finished the operation exactly as one for a femoral hernia. The wound healed by first intention and the woman was out of bed and without a bandage in two weeks. She has had no symptoms since and does her regular household work. Yesterday, about seven weeks after the operation, I examined her. The scar is normal; there is no indication of a recurrence. On vaginal examination, I could detect nothing except that the right broad ligament is a little fuller than the left. The uterus and both ovaries are in place and apparently normal.

"In the literature to which I have access I find no mention of a similar occurrence. This cyst of the broad ligament was either a parovarian cyst or one of the so-called duct of Gärtner. I am inclined to believe that it is one of the latter, on account of its closeness to the uterus and vagina, especially the latter, corresponding to the position of the remains of Gärtner's duct. This case can not accurately be called a femoral hernia of one of these cysts, for the femoral ring was not enlarged; it was rather a hernial growth of the cyst. The cyst wall must have grown or been forced into and partly through the femoral canal, and then the unusual exertion of the patient on the day of the occurrence must have forced the cystic fluid into this pouch, which, under the hydraulic pressure, stretched and thinned out so as to contain nearly all of the fluid of the internal cyst. The result was an hour-glass formation. The external portion was forced to rise upward, as nearly all femoral hernias do. In this way the narrow neck was bent on itself and the contents of the hernia became irreducible."

DISCUSSION.

Dr. M. L. HARRIS: I think there is some doubt about the diagnosis; it is unfortunate the doctor did not clear up this point. Of course this swelling may have been a parovarian cyst, but it seems to me more likely to have been a hydrosalpinx. The fact that the probe passed into the pelvis in an abdominal direction toward the uterus—I believe the doctor said up to the side of the uterus—is not diagnostic of a parovarian cyst. It may merely have passed into the Fallopian tube. Prolapse or hernia of the Fallopian tube is not rare, and several cases of cysts of herniated Fallopian tubes have been recorded. This tumor may have been simply a hydrosalpinx. There is a case reported by Lentz of a parovarian cyst in a hernial sac in a woman fifty-two years of age. She had no hernia during early life, nor until up to a year previously, when she noticed a small swelling in the in-

ginal region, and three months previous to the time she consulted the physician it had grown quite rapidly and become painful. When she consulted the surgeon it was about the size of a goose egg, fluctuating and movable, with no impulse on coughing, and irreducible. It was diagnosed probable hydrocele of a hernial sac. At the operation what was supposed to be the hernial sac was opened, disclosing a cyst. Just above the cyst and plugging the neck of the hernial sac was the end of a Fallopian tube. It was drawn out and ligated, and the entire mass removed. After its removal it was found to be a parovarian cyst, a small cyst in the broad ligament, the tube lying above it and blocking the hernial canal. The patient made a perfect recovery.

Dr. H. P. NEWMAN : The point raised by Dr. Harris is well taken. As he states, the condition is not uncommon, while the condition spoken of by Dr. Weber is very rare, if it ever occurs. I wish, for the purpose of diagnosis, the doctor had entered the abdominal cavity and cleared up the doubt upon this point.

Dr. FRANK A. STAHL : I would ask Dr. Weber the points upon which he bases his diagnosis in this extraordinary case. The diagnosis seems rather vague and does not appear to be substantiated by good evidence. The case appears to me to be an ordinary case of hydrocele.

TRANSACTIONS OF THE LONDON OBSTETRICAL SOCIETY.

December 5, 1894.

G. ERNEST HERMAN, M. B., *President*, in the Chair.

Curious Congenital Deformity. By C. H. ROBERTS, M. D.

Dr. Roberts showed a case of curious congenital deformity in a female child three months old, illustrating the so-called intra-uterine amputation of limbs.

The child, which seemed perfectly well otherwise, was the fifth child of a German woman ; she had no other children deformed. Her confinement was easy ; no instruments were used. No history of de-

iciency of the liquor amnii could be obtained. The cord was not round the limbs. The mother was "frightened" by a burglar when two months pregnant. The child exhibited most marked deformities of the limbs, particularly on the left side, especially the left lower extremity. There was no deformity of lips, palate, neck, arms, back, or genitals. No congenital heart disease nor any transposition of viscera.

The left forearm near the wrist exhibited a curious constriction. The three middle fingers of the left hand were stunted and webbed into one thick triangular finger.

The left lower extremity was natural to the knee, below which was a curious shapeless mass of flesh three inches long, with three definite constrictions, containing only bone at its upper part. Lowest of all on this fleshy mass were five tiny outgrowths like toes. The child could move this, and the knee joint was natural.

The right lower extremity was natural to the knee; the leg just above the ankle was markedly constricted, as if a cord had been tied tightly round it. The foot was natural, but two toes were curiously webbed.

Dr. Roberts thought it might interest some of the members of the Society as regards pathology and the question of congenital deformity caused by intra-uterine amniotic bands, or whether this was not a case simply of faulty development. He also wished for advice as to later treatment.

DISCUSSION.

The PRESIDENT (Dr. Herman) thought the case one of intra-uterine amputation by amniotic bands, and asked Dr. Roberts as to the amount of liquor amnii.

Dr. ROBERTS said that he rather leaned to the theory of faulty development. He was unable to inform Dr. Herman as to the question of deficient liquor amnii in this case.

The PRESIDENT thought that constriction by amniotic bands, from deficiency of amniotic fluid, was the most reasonable explanation of deformities such as those present in the infant exhibited by Dr. Roberts.

Dr. GRIFFITH said that Dr. Lancereaux in a clinical lecture (*Medical Weekly*, October 5, 1894, p. 481) had put forward an explanation of these cases which appeared to be much more probable than any former theory—namely, that the disease, which he described as "autocopic tropho-neurosis," was a disease of nerve trunks.

Ruptured Tubal Pregnancy. By W. ATKINSON STOTT, M. R. C. S.

The specimen is one of tubal pregnancy which ruptured during the thirteenth week.

It consists of Fallopian tube with ovary and part of the broad ligament. The tube is distended in the middle portion the size of a hen's egg, and the upper surface shows a T-shaped rent, and its cavity the contained gestation sac. A separate nipple-shaped portion of the latter occurred free. Both the abdominal and uterine extremities of the tube are patent.

It was removed a fortnight ago, twenty-seven hours after sudden onset of peritoneal hæmorrhage from the patient, who was almost moribund.

The peritonæum contained almost three pints of blood. The patient is now rapidly recovering.

Abstract of a paper entitled

HYDATIDS IN THE BONY PELVIS.

By J. H. TARGETT, F. R. C. S.

Mr. Targett gave a demonstration on hydatid disease of the pelvis, illustrating his remarks by a large number of lantern slides. The consideration was limited to examples of the disease as it affects the bones of the pelvis, and all cases of hydatids in the soft tissues of the pelvic cavity were excluded. After classifying the specimens as those of primary disease in the os innominatum or sacrum, and as those due to extension from the spinal column or femur, it was pointed out that the lesion was characterized by a widespread destruction of the interior of the os innominatum, and separation of its compact lamellæ. As the ilium was usually first affected, these morbid changes resulted in the formation of a large cavity with thin bony walls, in which were many perforations. The contents of the cavity comprised pus, hydatid cysts, and spongy sequestra derived from the necrosed cancellous tissue. By the apertures in the walls much of the contents of the cavity escaped beneath and among the muscles attached to the pelvis, thus forming large swellings in the groin, buttock, thigh, or iliac fossa. Such tumors had the clinical features of large chronic abscesses; they were generally painless, perhaps inconvenient on account of their size, and some had been found to be partially reducible. In the later stages of the disease the destruction involved all parts of the

bone, and in a large proportion of the cases the acetabulum was laid open and the upper end of the femur attacked.

Photographs were shown representing one half of the pelvis so completely destroyed that only irregular fragments of the os innominatum persisted, and in consequence the extremity of the femur had passed inward as far as the front of the sacrum, thus causing very marked shortening of the thigh. There was little or no evidence of compression of the pelvic viscera by the hydatid swellings, and no case of dystocia from this cause had been recorded. In this respect hydatids of the pelvic bones differed most markedly from those developed in the soft tissues of the pelvis. The very high rate of mortality which had attended the operative treatment of these swellings was mentioned. Out of fifteen cases, twelve died, and the cause of death in almost every instance was septic absorption. In conclusion, the mode in which disease extended from the spinal column on the one hand, or from the femur on the other, was fully described and illustrated.

The development of hydatids in the human skeleton is a very rare occurrence. Some seventy-six cases only have been placed on record, and these include examples from almost every part of the skeleton. Out of this small number of cases, however, the bony pelvis absorbs a comparatively large share, for there are twelve instances in which the os innominatum was the primary seat of the disease, and three which may be referred to the sacrum. Putting these together, it follows that in one fifth of the total number of cases of hydatids in the osseous system the bones forming the pelvis were the parts first affected. It must be clearly understood that hydatid cysts originating in the soft tissues of the pelvis are entirely excluded from the subject now under consideration, as they have a different life history and present totally different clinical symptoms. Beside the formation of hydatids in the os innominatum or sacrum, as the case may be, there are two other modes in which the bony pelvis may become affected—viz., by extension of the disease from the spinal column, or from the femur. The cases here recorded are, therefore, classified as (*a*) primary hydatid disease of os innominatum, (*b*) primary hydatid disease of sacrum, (*c*) hydatids of spine invading pelvis, (*d*) hydatids of femur invading pelvis. The phrase "hydatid disease," as here employed, denotes the changes wrought in the substance of the affected bone by the growth and reproduction of the hydatid cyst derived from the embryo of the *Tenia echinococcus*. A full account

of those changes as met with in the long bones of the extremities will be found elsewhere,* and need not be repeated. Suffice it that three stages of this disease are described—firstly, infiltration of the cancellous tissue with minute hydatids, which multiply by budding from the exterior of the cysts; secondly, excavation by gradual absorption of the osseous septa and consequent enlargement of the cancellous spaces; and thirdly, suppuration, which results in a more rapid destruction of the cancellous tissue, and in the formation of spongy sequestra and external swellings. When suppuration has supervened its effects overshadow those due to the growth of the hydatids, and to a large extent change the nature of the lesion; so that while the initial stages of the disease are insidious and of long duration, the formation of pus in the affected bone with its well-known burrowing tendencies is not slow to declare itself. As a matter of fact, the disease has usually come under observation in this suppurative stage, and in the following cases it will be noted that all those primary in the pelvic bones presented without exception some swelling external to the affected bone which was recognizable clinically. In short, the consideration of these clinical histories may be said to resolve itself into an account of the characters of certain chronic purulent swellings attached to the bones of the pelvis.

Before dealing with the morbid anatomy and symptoms of this disease, a few remarks on its ætiology will not be out of place. Neither sex nor age would seem to have any influence upon it. The youngest patient among the primary series was twenty-three and the oldest sixty-three. But hydatids in other parts of the skeleton have been met with in childhood, and in Case 19 the disease existed at the age of ten. How the echinococcus embryo is introduced into the body, whether by certain articles of diet, frequent contact with dogs, or uncleanly habits, is not definitely known. When once it has reached the circulation it is of interest to inquire what determines its deposition in the osseous system. Has injury anything to do with it? Of the fifteen cases, in only three was the disease attributed to a local injury, such as a bruise from a fall. In Case 9 the patient fell from his horse and received a severe contusion on the hip, from which he never completely recovered; and when seen two and a half years afterward he presented the symptoms of advanced hip disease on the injured side. In Case 5 the injury was received nineteen years before the patient came under observation; yet throughout that long period

* *Guy's Hospital Reports*, vol. 1, p. 309.

of time there had been pain and some swelling. It is stated that the prominent hip bones of the ox, exposed to blows and injuries of various kinds, are not uncommonly affected. A good example of the kind is preserved in the College of Surgeons Museum (No. 1,698).* Evidence of injury derived from the histories of cases in which the long bones were affected is equally inconclusive, though it may be truly said that those bones which are most exposed to traumatism have been most often affected. Hence it is probable that injury has some influence in determining the site at which the hydatid becomes deposited in the osseous system.

MORBID ANATOMY.—1. *The Changes in the Bones:* Among the twelve cases of primary disease in the os innominatum, the iliac portion of the bone was invaded in all but one, and in ten instances it was the chief seat of the affection. The large proportion of cancellous tissue here accounts for this frequency, and the same explanation would apply to the upper end of the tibia, the humerus, and the femur, which are the parts commonly selected from the bones of the extremities. By the destruction of its interior and the separation of the two lamellæ of compact tissue the ilium is converted into a thin-walled sac which bulges on both external and internal surfaces of the bone. The wall of this sac is composed of a thin layer of bone crepitating on pressure, or merely an imperfect capsule of bone having large irregular perforations in it; sometimes the osseous tissue entirely disappears, and the adjacent soft parts are thickened and form a limiting membrane. The contents of the hydatid cavity in the bone comprise a variable quantity of serous or purulent fluid, numerous hydatid cysts, and spongy sequestra the interstices of which are filled with budding cysts. From the ilium the process of excavation advances into the body of the ischium, lays open the acetabulum, and may eventually reach the horizontal ramus and body of the pubes. In Case 7 the os pubis was the original seat of the disease, and the ilium was not affected. In the pubes as well as in the ischium the growth of the hydatids produces irregular excavations with wide mouths facing toward the pelvic cavity. Owing to the structure of the bones they are not expanded into osseous sacs like the ilium. In no instance has the hydatid cavity been lined with a mother cyst wall; when a lining membrane has been observed there was good evidence to show that it was of a pyogenic nature and that the contents of the cavity were purulent.

* See *Guy's Hospital Reports*, vol. 1, p. 335.

2. *The Perforation of the Acetabulum*: One of the most striking anatomical facts connected with the occurrence of hydatids in the bony pelvis is the frequency with which the acetabulum is penetrated. It was met with in nine out of the twelve instances of primary disease of the hip bone. The degree of perforation varied from a small aperture in the iliac or pubic segment to a destruction so complete that the acetabulum formed part of a large sac replacing much of the hip bone, or was entirely unrecognizable. To this invasion of the acetabulum several of the important clinical symptoms may be referred. But though the acetabulum was severely affected, the changes in the head of the femur were much less marked. In Case 4 it was practically normal; in three other instances it was described as carious, while in Cases 10 and 11, where the destruction of the pelvis had reached its greatest limit, the head of the femur had disappeared, and the cervix femoris was infiltrated with hydatids. Where a wide perforation in the acetabulum existed, the upper end of the femur was subjected to a remarkable displacement. When the aperture occupied the floor of the acetabulum, the femur was thrust into the pelvic cavity as far as the small trochanter; and when it communicated with a large sac in the ilium, the extremity of the femur was inserted between the osseous lamellæ, and even reached the level of the first two anterior sacral foramina on that side. In consequence of this dislocation considerable shortening of the affected limb resulted.

3. *Extension to the Sacrum*: In four preparations disease was found in the sacrum as well as in the os innominatum, but in all of these the primary seat was undoubtedly in the latter. Two large excavations were found in the anterior surface of the sacrum in Case 4, and careful dissection showed the probable tracks by which disease had extended from the ilium to the sacrum. In doing so it appeared to have avoided the sacro-iliac synchondrosis after the manner in which cartilage is known to resist the invasion of new growths. Similarly in Case 1 the synchondrosis was exposed but not attacked. However, from the description of the preparation in Case 9, it would seem that this joint eventually succumbs, and the destruction of the sacrum with perhaps the adjacent lumbar vertebræ is then extensive. The possibility of a focus of disease in the sacrum which is entirely separate from that in the os innominatum must be borne in mind. Such a condition has been described in certain of the long bones, but the evidence in favor of this occurrence is not very satisfactory.

The peculiarities in the effects of hydatids upon the sacrum de-

pend for their importance on the relations of the bone. Being largely composed of cancellous tissue, the sacrum is readily excavated, and by means of its numerous foramina, disease extends without difficulty to the spinal canal, to the vertebral groove posteriorly, and toward the pelvic cavity in front. Through the posterior sacral foramina hydatids find their way into the erector spinæ muscles, or form a swelling on the back of the sacrum (Cases 4, 9, 13, 14, and 15). The effect of hydatids extending into the spinal canal and coming into relation with the cauda equina is less marked than might be expected, for in only one of the five cases just quoted was there evidence of compression of the nerves—viz., severe sciatica ending in paraplegia (Case 14). If the sacral swelling protrudes forward toward the pelvic cavity, its presence may be detected through the rectum or vagina, as in Cases 14 and 15. Under such circumstances the possibility of pressure being exerted upon the rectum or other of the pelvic viscera must not be overlooked.

4. *Formation of Swellings on the Bones*: As already pointed out, this is a very characteristic feature of the disease, for it was present in each of the fifteen cases now under consideration. Two points demand attention: firstly, the seat of the swelling, and secondly, its physical signs. It must be understood that this swelling, which is recognizable clinically, is the result of perforation of the wall of the hydatid cavity in the bone and extravasation of its contents; moreover, it is chiefly due to the occurrence of suppuration in the cavity. That some swelling of the ilium may be produced by the bulging outward of its compact lamellæ, either toward the buttock or the iliac fossa, is certainly true, and is described in some of the following cases. But this can hardly occur in other parts of the bony pelvis, and is not likely to be very conspicuous in any region. Since the iliac portion of the os innominatum is most commonly affected, it is natural to suppose that the external swelling will usually be related to that bone. In six instances it was found upon the buttock, the fluid having burrowed outward from the ilium beneath the glutæus maximus. Thence it extended over the back of the sacrum, or was conducted by the glutæus to the outer surface of the thigh. When the hydatid cysts and pus become effused among the muscles of such parts as the buttock and inner side of the thigh, the soft tissues soon become riddled with abscesses (see Cases 5 and 15). If extension from the ilium takes place inward, the swelling is either limited to the iliac fossa, or appears in the groin by following the course of the ilio-psoas muscle. The groin is therefore the next most frequent site of the swelling. In

the cases (7 and 10) where the pubes was much destroyed, the swelling occupied the inner end of the groin and the adjacent portion of the thigh; or was situated in the abdominal wall, having burrowed upward between the muscles and the peritonæum half way toward the umbilicus; or again, the abscess extended from behind the pubes through the obturator foramen to the upper third of the thigh. It will be observed that these modes of extension of the hydatid swelling are along lines which are familiar as the course taken by pus from hip disease and other suppurative infections of the pelvis. Protrusion of the swelling into the cavity of the true pelvis does not seem to be a frequent occurrence. In Case 8 a hard intrapelvic swelling was detected *per rectum* upon the inner surface of the acetabulum; and in Case 10, where the hip bone was extensively diseased, the pelvic cavity had become contracted in certain diameters. Yet, as a rule, hydatids in the bony pelvis cause little or no encroachment upon its cavity, hence they do not lead to visceral obstruction. Thus they may be sharply distinguished from hydatid cysts originating in the soft tissues of the pelvis.

The physical signs of the hydatid swelling most nearly resemble those of a cold abscess. They are usually painless, without redness or heat, distinctly fluctuating and exceedingly chronic. The outline of the swelling is not very distinct from the abundance of flesh about the pelvis, but in Case 4 the swelling is described as "globular and somewhat pendulous." Where two or more swellings existed at the same time it was noted that an inter-communication was present, for fluid could be forced from the one to the other. In like manner the swelling may be more or less reducible, the fluid being driven back into the cavity within the bone. By this means the outline of the expanded bone may be felt, and crepitus obtained by pressure on its thin osseous wall. A hydatid thrill has also been described. The fluid obtained by puncture of the swelling will vary in character according to the admixture with pus. If the latter is absent the material will resemble the typical hydatid fluid. In two respects, however, it differs from that obtained from a visceral hydatid cyst—viz., in the absence of hooklets, and in the presence of exogenously budding capsules. In Case 2 hooklets were found, and they have been described in a few specimens from other parts of the skeleton. But their occurrence must be regarded as exceptional.

SYMPTOMS AND TREATMENT.—In the earlier stages of the affection no definite symptoms are recognized. But where the osseous changes have been attributed to a preceding injury, the clinical history of the

case describes a prolonged weakness and deep-seated pain in the injured part. In one instance the pain is mentioned as tearing and boring in character. With the onset of the hydatid swelling upon the bone the existence of some disease is indicated, and it is in this stage that the case comes under observation. It is interesting to observe that out of the twelve cases of primary hydatid disease of the hip bone no less than six were diagnosed as chronic abscess probably due to disease of the hip joint, and in some of these cases the patients presented the deformity and position of limb commonly seen in hip disease. But in spite of this strong general resemblance there are certain features which are important for differential diagnosis. Shortening of the limb when present is excessive, because it is due to perforation of the acetabulum and protrusion of the femur into the pelvis. The painlessness in the later stages of the disease is noteworthy, and unlike coxitis; in several instances the patients were able to get about with no more inconvenience than what was caused mechanically by the presence of large hydatid swellings about the pelvis. A characteristic symptom of hydatid disease in a long bone is the occurrence of a spontaneous fracture followed by a swelling at the seat of injury—the order of events being the reverse of that met with in malignant disease. Obviously such a symptom can not apply to the pelvis, though in Case 11 a spontaneous fracture of the cervix femoris took place shortly before death. When a hard swelling is found upon the iliac fossa, typical eggshell crackling may be elicited, and the sign indicates a thin bony wall to the swelling. Externally it is less likely to be recognized, owing to the thick covering of soft tissues.

It will be seen, then, that there are no very characteristic indications of the existence of hydatids in the bones of the pelvis, apart from the results of an exploratory operation. The rarity of the disease likewise makes a correct diagnosis improbable. The most important indications may be thus summarized :

a. The presence of swellings in the buttock, groin, or thigh having the characters above detailed.

b. In the majority of the cases there is a general resemblance to disease of the hip joint; less frequently sacro-iliac disease or chronic periosteal abscess of the ilium is simulated.

c. No evidence of interference with the functions of the pelvic viscera; in advanced cases, however, the pelvic cavity is likely to become distorted in consequence of the extensive destruction of bone.

d. The nature of the fluid obtained by puncture of the swellings,

or spontaneous rupture ; especially as regards the presence of budding hydatids and sequestra of cancellous bone.

As regards treatment it is very necessary to point out the high mortality of this disease. With the exception of Cases 5 and 6 all the fifteen cases of hydatids primarily in the os innominatum and sacrum were submitted to surgical treatment, and twelve of the fifteen died, while three recovered. Without attempting an exact analysis of the cause of death in each instance, it may be said that the great majority died of pyæmia, or more rapidly from septic absorption. The importance of strict antisepsis in dealing with large hydatid swellings, such as we have described above, will be readily admitted. The line of treatment which led to a successful issue in Cases 2, 3, and 15 was free incision and thorough evacuation of the hydatid swellings ; and it is interesting to note that in Cases 2 and 3 operation was followed by definite symptoms of septic absorption, though recovery ensued. The difficulty which is experienced in the complete removal of the minute cysts from the cavities in the bones is shown by the necessity for a repetition of the operation in so many instances. When the cavity can be reached it should be thoroughly laid open, its interior well scraped, and adequate drainage provided. Large, deeply placed cavities or sacs attached to the inner surface of the hip bone might be treated by Bond's method, which consists in careful removal of the contents of the sac and application of iodoform to the interior, the opening in the sac being left unclosed. Complete enucleation of the sac from the soft parts, where it can be effected, offers the best chance of a speedy cure.

The author added in detail the reports of twenty cases, obtained from various sources.

ITEMS OF INTEREST.

OWING to his absence in the West, Dr. Joseph Price was unable to send us in time for publication in the October number any further correspondence in regard to *The Preston Retreat Controversy*. A letter from him, in answer to those which appeared in the September issue, will, therefore, be published next month.

AT a recent meeting of the trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL. D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

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A CASE OF SYMPHYSEOTOMY.*

BY CHARLES JEWETT, M. D., BROOKLYN.

S. A., a Swede, thirty-five years of age and pregnant for the eighth time, was admitted to the lying-in service of the Long Island College Hospital June 21, 1895, in labor. Her previous obstetric history was as follows: First labor at term, forceps; child, female, died at the age of four months of pemphigus. Second labor at term, forceps, Dr. Netzel, of Stockholm, attending; child, a male, stillborn. Third labor end of ninth calendar month; craniotomy performed by Dr. Netzel; child, a boy. Fourth labor at seventh month; long labor; forceps; child, female, stillborn. Fifth labor at seventh month, a midwife attending; child, male, lived two months and a half, dying of pemphigus. Sixth labor, delivered at term at the Brooklyn Hospital after being in labor a week; forceps; child, a boy, stillborn, though living at the beginning of labor. Seventh labor at the sixth month; breech presentation, midwife attending; child, a male, died a few minutes after birth.

At the time of my examination, a few hours after admission to the hospital, the woman had been in labor thirty-six hours. The cervix was little more than half dilated and dilatable; the membranes had ruptured. An old laceration of the pelvic floor extended nearly into the rectum. The diameter of Baudelocque measured nineteen centimetres (seven inches and a half), the diagonal conjugate 9.2 centimetres (three inches and five eighths), and the depth of the symphysis was 5.4 centimetres (two inches and an eighth). The deformity con-

* Reported before the New York Obstetrical Society, October 1, 1895.

sisted mainly in the jutting forward of the promontory. The pulse, which on admission was 150, had fallen to 136 after a hypodermic injection of three minims of fluid extract of digitalis and eight minims of Magendie's solution given by the mouth. The head was arrested at the brim in right occipito-anterior position. The foetal pulse, which could be heard distinctly, was counted at 200.

If the child was to be saved, consistently with the interests of the mother, the case was a typical one for symphyseotomy. No difficulty was found in locating and dividing the joint. Through the short incision of Morisani the symphysis was opened with a blunt-pointed bistoury. A profuse venous hæmorrhage was controlled by digital pressure and by gauze packing.

The separation of the bones was limited to about two inches by supporting the lateral halves of the pelvis. The child was extracted at once by forceps without difficulty and with no lacerations. The wound was closed with silkworm-gut sutures, which included only the prepubic skin and fat. The fibrous structures in front of the joint were not sutured. Two or three strands of silkworm gut were carried down behind the symphysis for drainage. The wound was dressed and the pelvis fixed in the usual manner with rubber adhesive straps and a firm muslin binder. The woman was put to bed with a pulse of 136, which an hour later had fallen to 116. The convalescence was free from complication, except for a small fistula through the center of the joint, which persisted till near the time of dismissal. There was slight rise of temperature for several days owing to infection before admission. The wound healed *per primam* except at the fistula, the infection here having occurred apparently from the lochia. The patient sat up on the 15th of July and began to walk on the 21st, at which time no motion could be detected at the symphysis. She left the hospital July 25th.

The child, a boy, pale and asphyxiated at birth, was resuscitated with little difficulty. It measured twenty-one inches in length and weighed eight pounds and a quarter. The biparietal diameter was 9.5 centimetres (three inches and three quarters), suboccipital circumference 36.2 centimetres (fourteen inches and a quarter). The child did perfectly well for a week or more, when it developed pemphigus and died July 3d. Syphilis was denied by the father and there were no signs of it in the mother.

It is of interest to note that in the course of the next month two other cases of pemphigus occurred among the infants in the wards, both ending fatally.

THE LIMITATION OF CRANIOTOMY.*

BY WILLIAM H. MYERS, M. D., FORT WAYNE, IND.

As this Society was established chiefly for the purpose of discussing subjects connected with obstetrics and gynæcology, I have considered it advisable to discuss and determine, if possible, the rule in regard to the class of cases in which the question of an operative procedure is to be considered, involving the life of the mother and her child.

In a paper read before this Society at its meeting in St. Louis in 1892 I used the following language: "It has always been a recognized rule in midwifery that no woman should be allowed to die without some attempt being made to save her and her offspring, or at least to save her at the expense of her child." Differences of opinion, due in some measure to religious beliefs, and likewise to the personal feeling of the husband, have entered into this question.

Napoleon, when appealed to by Dubois, said: "Treat the Empress as you would a shopkeeper's wife in the Rue St. Martin; but if one life *must* be lost, by all means save the mother." Henry VIII, when questioned thus before the birth of his son Edward, exclaimed, "Save the child by all means, for other wives can easily be found."

Of late years the happy results following Cæsarean section and Porro's operation have done much to efface the dreadful feeling that we must in such cases decide whether the life of the mother or that of the child is to have preference, seeing it is now quite possible to save both.

When we use the term the "limitations of craniotomy" we include all the procedures for reducing the bulk of the child. In our text-books the indications for craniotomy usually enumerated are a contracted pelvis, where the forceps and turning are of no avail, tumors, convulsions, hæmorrhage, great exhaustion, rupture of the uterus and impaction of the head.

I hope to present for your consideration procedures other than craniotomy which are equally safe to the mother without endangering the life of the child. We must indorse the language of the late Dr. Meadows, that "the whole tendency of modern midwifery prac-

* Read before the American Association of Obstetricians and Gynæcologists, September 25, 1895.

tice is setting in very decidedly in the direction of absolutely and entirely abolishing this most abominable, unscientific and brutal proceeding." The last utterance of Dr. Barnes is that "the cases in which the lives of the mother and child are supposed to stand in antagonism are vanishing before the light of modern science and skill." How different the above quotation from his teaching in 1885, when he declared embryology justified in obedience to a peremptory law which enjoins us to sacrifice, if need be, the child in order to save the mother! He speaks of "sacrificial midwifery," and adds: "We must lay aside the lever, forceps, and turning, and take up the perforator and craniotomy forceps, incompatible with the life of the child. A law of humanity, hallowed by every creed and obeyed by every school, tells us that our first and paramount duty is to preserve the mother, even if it involves the sacrifice of the child, and thus rescue the matter from Cæsarean section—that operation which the late Prof. Davis justly called the last extremity of our art, the forlorn hope of the patient."

In opposition to this we have the expressed opinion of Baudelocque, who says: "To mutilate a living child in order to avoid Cæsarean section is the offspring of ignorance and inhumanity." This could only have been written at a time when craniotomy was recognized and sanctioned by the British profession, and undertaken with the avowed intention of destroying life; but within a comparatively recent period the voice of the leading obstetricians is almost entirely for Cæsarean section. Conner says that, "looking at the results from Cæsarean section when done early, an *accoucheur* who performs craniotomy on the living child sacrifices a life which he is in duty bound to preserve. Surely an infant come to maturity is destined for something better than to have its glimmering life extinguished by an *accoucheur* skilled in the use of the dreadful perforator"—skilled like C. Rokitansky, Jr., who in 1871 performed fifty-two operations without the loss of a single mother.

The assertion of such facts is probable proof that the operations were hasty and unnecessary, the operator possibly influenced by an ambitious desire to gain additional success.

Statistics—comparing the relative value of Cæsarean section and craniotomy—are worse than useless, because they too frequently are made to suit the operator's convenience. Cæsarean section is not an alternative of craniotomy; it should supersede craniotomy in the case of all living children.

Cameron's experience was that with twenty-three cases, ninety-

two per cent. recovered, while the lives of all children were saved—the last an item that has no place in the statistics of craniotomy. In conclusion, he urges that Cæsarean section should be made one of choice and not resorted to after every other means have failed.

In view of the marvelous success that has attended abdominal surgery, it is but reasonable at this time to reconsider the whole question involved as to the relative merits of Cæsarean section, Porro-Cæsarean and craniotomy. Up to the middle of the year 1887 Dr. Harris and Dr. Sanger had collected reports of thirty-one operations known as the Sanger method. Of these thirty-one operations, there were twenty-three in Germany, four in Austria, two in France, and two in Italy. The result to the mothers was the saving of twenty-four, giving a maternal mortality of twenty-one per cent. Thirty children of the thirty-one were saved, giving a mortality of seven per cent.

From July, 1885, to July, 1886, we have record of twenty operations, resulting in the saving of eighteen of the mothers; maternal mortality ten per cent. Of the twenty children, nineteen were saved; mortality five per cent. Why has Cæsarean section been so fatal in the past? Not from the nature of the operation itself, but the fatality has been due to delay, to defective operations and methods of operating and to the teaching of the schools and text-books that the operation is almost necessarily fatal.

Prof. Meigs taught in his classes and in his books, in 1859, that "operations for the extirpation of diseased ovaries is not to be justified by any amount of success." The terrible deaths from cystic ovarian disease stirred the compassion of Keith, Wells, and Atlee. They operated in the midst of a hostile and even threatening profession and were assailed by authors in their books and by teachers in their classes. They at last attained the highest successes when they grasped the idea of the clean touch as taught by Lister. So I will assert that statistics which embrace operations performed ten or twelve years ago are of but little value under the application of the rules of modern aseptic surgery. The technique of the Cæsarean section and Porro operation has been so modified and perfected and that the percentage of recoveries and of children saved is so much higher that we dare not compare the mortality of a Cæsarean or Porro in 1871 with the same operation in 1895.

I think it proper to give here a few cases to illustrate the condition of some of the victims who submitted as a last resort to Cæsarean section and to see if we may not be able to discover the chief factors in the high death-rate constantly referred to in books and lectures.

CASE I.—Reported by Garrigues in the *American Journal of Obstetrics* of 1883. The patient had caries of the sacrum and lower vertebræ, hæmorrhage of the lungs, cystitis and ante-partum hæmorrhage; pulse 124, subnormal temperature. She lived forty-eight hours.

CASE II.—Cervical myoma, cystitis, nephritis; both kidneys nearly destroyed. Death occurred in thirty-six hours.

CASE III.—Reported by Krakenburgh in the *Gynæcological Archives*. The conjugate diameter was less than two and a half inches; twenty-five hours in labor; feeble at the time of operation. Death from collapse.

CASE IV.—Caries of the lower third lumbar vertebræ and the sacrum, scrofulous remnants of old pleuritis, ascites and cystitis, ante-partum hæmorrhage; Cæsarean section. Died fifty hours after the operation.

CASE V.—Pelvic tumor; after four days' labor was conveyed by rail to Königsberg, a journey of seven hours; operation twelve hours after rupture of the membranes. Death in four days.

CASE VI.—J. R. Wiest, in 1886. Operation four weeks after rupture of the membranes, and nine days after labor had begun. Death in twenty-four hours.

CASE VII.—Drysedale. Labor lasted fourteen days. Septic infection at the time of operation. Death in twenty-six hours.

CASE VIII.—Fleishman. In labor three days; septicæmia. Death twenty-eight hours after operation.

CASE IX.—Breisky. Seropurulent peritonitis at the time of operation. Death in two and a half hours.

CASE X.—Parrish. Patient in labor forty-two hours; after futile attempts to deliver by craniotomy, operation. Pulse, 124. Death in twenty-four hours.

CASE XI.—Fibroma. Labor began September 28th. Death in five days.

CASE XII.—Reported in *New York Medical Journal*. Patient had profuse hæmorrhage in latter part of pregnancy. Operation. Death from septic peritonitis in forty-four hours.

In all these cases the indications for Cæsarean section were indisputable at the onset, and the deaths resulted from preventable causes, except where antecedent disease was present.

For these statistics I am indebted to Garrigues of New York. Dufriellay's statistics may be cited to disprove that Cæsarean section is not necessarily so fatal as has been by many represented. He

has shown eighty-one per cent. of recoveries where the operation was performed before the mother became exhausted and where the labor had continued only a few hours.

This doctrine is in accord with the law that the liability to most morbid complications connected with labor increases in proportion as the labor is increased in its duration. In illustration I will give a few statistics from Collins, who had charge of the Lying-in Hospital during seven years. In 15,850 cases the duration of labor was published :

Within one hour, mortality 1 in 322 cases ; from two to three hours, 1 in 231 cases ; from four to six hours, 1 in 134 cases ; from seven to twelve hours, 1 in 80 cases ; from thirteen to twenty-four hours, 1 in 26 cases ; from twenty-five to thirty-six hours, 1 in 17 cases ; above thirty-six hours, 1 in 6 cases. Proving that, even in normal labor, the duration is a most serious element of danger. This same law will apply to craniotomy or Cæsarean section.

I have been able to obtain statistics of cases where the duration of labor before the operation was limited to a few hours :

Guinot, one case ; Simon, two cases ; Herbert, one case ; Zinke, one ; Palmer, one ; Brandt, one ; Studi, one ; Pisque, one ; Myers, one.

All of the above cases recovered. In these cases the operation quickly followed the onset of labor. In contrast with the above I will present seven fatal cases in which I was unable to obtain the duration of labor before operation :

One labor lasted four days ; one, nine days ; one, fourteen days ; one, three days ; one, six days ; one, two days ; one, twelve days. These were *all fatal*.

Let me here ask, Who is in great measure responsible for the mortality in Cæsarean section? Autho^rs and professors—they who teach us to wait until Cæsarean section becomes a case of necessity and ceases to be one of election. These teachings have often made the deathbed the field for surgical display. Why should we make Cæsarean section an operation of election and not one of necessity? Because by so doing we prevent that condition of exhaustion which inevitably leads to a fatal result. I am not aware that there is any operation in the whole range of surgery, which must be a matter of necessity sooner or later, in which it is considered advisable to await this contingency. It would not be considered good practice to wait until a woman is exhausted by fruitless pains of labor and the pelvic structures have suffered from the effects of prolonged and in-

jurious pressure, before having recourse to the forceps. It would be better to anticipate this impairment and not to wait until the vital forces are at their lowest ebb.

There can be no doubt that craniotomy still has a place in obstetric surgery and is indicated where the fœtus is dead or non-viable and the conjugate diameter above two inches and a half; also in obstructed labor due to monstrosity or hydrocephalus.

The choice of the patient must for the present be considered, her chances of recovery being stated by the physician for craniotomy as nine out of ten, the child being dead. The Cæsarean section chances for recovery now almost equal the above percentage, with the prospect of a living child. That craniotomy will be eliminated from obstetric surgery I do not believe but as a resource it should be, to the last degree possible, minimized. This can only be done by instructing the general practitioner that delay is dangerous and will be fatal to the mother and child; that their safety mainly depends upon the early recognition of the nature and extent of the obstruction. We must instruct them that the statement of the surgeon was false who said, with reference to Cæsarean section, that "if it is true that any woman has escaped, it was the work of a miracle and the expressed wish of God, who, if he wills it, is able to raise the dead, as he did Lazarus."

Teach the general profession that with the increased possibilities for saving the lives of both mother and child, the question of the greater value of one life over another is fast disappearing, and that the old landmarks have changed; that they can no longer sit at the bedside and draw deductions from the old data or guide their practice by the statistics of Cæsarean section accumulated prior to the Listerian era.

I will now briefly allude to the comparative mortality of craniotomy and Cæsarean section. The wide discrepancies between the statements of different authors is unaccountable except on the hypothesis that they have derived their information from statistics written at different periods. How else can we account for the fact that the maternal mortality for Cæsarean section is given as sixty-six and two thirds per cent. by one author, while another places it at less than eight per cent.?

According to Wathen, "De Soyn in his thesis gives fifty-two cases of embryotomy in pelves of less than 2.15 inches, with thirty-one recoveries and twenty-one deaths, a mortality of 41.38 per cent. In the thesis of Maygrier there are mentioned sixty-seven cases of embryotomy in pelves from 2.53 to 1.4 inches, with thirty-nine recoveries

and twenty-eight deaths, a mortality of 41.79 per cent. Of these cases there were thirty-one where the pelvis measured 2.34 at the highest, with seventeen recoveries and twenty-eight deaths, a mortality of 45.16 per cent. In the statistics of Rigaud and Stanesco the mortality in one hundred and twenty-two embryotomies is given at 38.52 per cent. These are probably the most accurate statistics available, and it will be observed that the conclusions are relatively uniform."

In alluding to large numbers of craniotomies, Dieterman, of Berlin, gives account of two hundred and thirty-nine craniotomies in twenty-two thousand and fifty-one deliveries, with a mortality of 12.8 per cent. From 1882 to 1887 his percentage is 9.4.

The statistics from Leipsic give the mortality as eight per cent.

In Guy's Lying-in Charity, in the last decennial period, twenty-four cases required perforation. Of these, four mothers died.

The high death-rate here alluded to after craniotomy must refer to the period preceding the introduction of asepsis and antisepsis. Here, as in other surgical procedures, cleanliness has entered as a factor; but the field of operation can not be rendered wholly aseptic—from the nature of the operation, being often attended by lacerations and followed by pelvic inflammations.

The fatality of Cæsarean section has radically changed owing to the modifications in the treatment of the uterine wound—a perfect technique; these have lowered approximately the death-rate to that which is claimed for difficult embryotomy, a mortality of ten per cent. with the saving of ninety-five per cent. of infantile life.

I would urge this with all the force that the strongest conviction imparts, that Cæsarean section should be performed as soon as we can be sure of the diagnosis.

In 1862 Sir James Paget uttered the following words of prophecy before the British Medical Association while speaking of the mortality after craniotomy:

"Some of the deaths after surgical operations are preventable, and the mortality *will be* reduced if the members of the Association will decide that it shall be."

To the above prophecy I will add another, from T. Gaillard Thomas, for Cæsarean section: "No physician who reads aright the signs of the times can for a moment doubt that the operation of Cæsarean section will in the future yield almost as good results as those now yielded by laparotomy performed for the removal of ovarian and uterine tumors; no progressive obstetrician will fail to

recognize that it is about to relegate to the desuetude which it deserves that sad and disgusting procedure, craniotomy, with its revolting details, its terrible responsibilities, and its confession of the poverty of obstetric resource."

INTRAPERITONEAL ADHESIONS.*

BY ERNEST T. TAPPEY, A. M., M. D.,

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Abdominal surgery as it has been so extensively practiced in the last few years has established, among other things, that many of the pains, vague, uncomfortable feelings, and so-called dyspepsias, are caused by adhesions of various organs in the abdominal and pelvic cavities. The organs in these cavities are particularly liable to become adherent to one another because they all have, as one part of their peripheral structure, the peritonæum, a membrane very vascular and prone to adhesions and fibrinous exudations; and when we say that organs in these cavities are adherent we mean that the peritonæum covering them is adherent. But though it is the peritonæum in each instance that is adherent, still the symptoms caused are those that pertain to the organ covered by the adherent peritonæum. In operating, for instance, to relieve ovarian pain, we not infrequently find the ovaries themselves not much changed but bound firmly by more or less extensive adhesions; the adhesions being broken up, the pain is relieved. Of course there was an inflammatory process at some time to cause these adhesions, but in the course of time the adhesions seem to be the principal if not the entire cause of pain. I have in mind a case I operated upon several years ago expecting to find gallstones. There were attacks of pain at intervals of two or three weeks, at which times there was jaundice, and there was every reason to suspect gallstone. I found the gall bladder of normal size, and, though I could not feel stones through the walls, I incised it and explored its interior carefully. There were no stones. I found, however, extensive adhesions binding the duodenum and

* Read before the American Association of Obstetricians and Gynæcologists, September 24, 1895.

stomach to the posterior abdominal wall; then passing a probe into the duct, I found it patulous to within a short distance from the intestine, the duodenum was bound fast in such a way as to bend the duct and obstruct it, the adhesions were broken up, the wound in the gall bladder was closed, and the patient recovered, and has been quite free from pain since. Operation was done November 25, 1892. I presume there had been gallstones in this case and that the adhesions had been caused by their presence, but when I operated it was the adhesion which caused the trouble. After narrating this case to a well-known surgeon, whose name I shall not mention, he said "the stone had ulcerated through the walls of the duct or bladder and was somewhere there, else how could the adhesions be there?" I think, however, that the frequent passage of gallstones, or even their presence, with the congestion they may cause, would be sufficient explanation of the adhesions. Another frequent location of adhesions is the neighborhood of the appendix. They may be caused by inflammation of the appendix or as the result of an operation for appendicitis. Every case of laparotomy is probably followed by some adhesion of peritoneal surfaces. For example, in a recent case the operation of oöphorectomy was followed by a very severe and persistent form of cystitis and great pain in the region of the stump of the left broad ligament. Two years after the first operation the abdomen was opened again March 22, 1895, and the colon found adherent to the bladder wall and to the stump of the broad ligament, the first adhesion accounting for the persistent nature of the cystitis, it having been caused and kept up, in all probability, by the transmigration of the colon bacillus through the walls of the intestine and bladder; the pain was caused by the tension at the point of adhesion to the stump of the broad ligament. The adhesions, formed from whatever cause, may be the occasion of pain and functional disturbance, not only by tension, as mentioned above, but by the formation of internal hernia, which may become strangulated—two loops of intestine may be joined by adhesions so as to cause obstruction or in such a manner as to favor volvulus. Pain in the female pelvis is not infrequently caused by adhesions alone, so far as we can judge by the look of the organs. It is frequently the experience of the surgeon that he opens the pelvis to see what may be the cause of pain in the region of the ovaries—for he has not been able to make a diagnosis otherwise—and he finds apparently healthy ovaries, except that they are adherent. He either removes the organs or breaks up the adhesions and relieves the pain. The uterus is fixed in some

abnormal position by adhesions; they are severed and the symptoms relieved.

Riedel, of Jena, in the forty-seventh volume of *Archiv für klinische Chirurgie*, presents an exhaustive paper on this subject. He has evidently, from the number of cases he cites, had an extensive experience, and he treats the subject in a most interesting manner. He begins by stating that during the past year a great number of laparotomies have been performed on account of adhesions of the viscera, the existence of inflammatory bands in the abdominal cavity, and the kinking and narrowing of the intestines due to them. He states that most of the operations undertaken to remedy these conditions have been successful, and that the good results have remained for months and years in a number of instances. In considering this subject, one of the most obvious objections to operation would be the likelihood of a formation of new adhesions. Riedel admits that new adhesions are sure to be formed, but maintains that the symptoms caused by the original adhesions are almost invariably relieved, and my own experience is the same, though it is quite limited as far as those cases are concerned in which only adhesions have been divided and no tissue or organ has been removed. The question of diagnosis is often perplexing, and in some instances impossible without abdominal section.

Riedel mentions the following causes of adhesion in the abdominal cavity. They suggest at once the approximate locality in which they exist, except in the instances of contusion of the abdomen and of detached lipomata :

- a. Contusion of the abdomen.
- b. Ulcer of the stomach.
- c. Inflammation about the gall bladder.
- d. Inflammations about the gall bladder and ascending colon.
- e. Inflammations of the gall bladder and vermiform appendix together.
- f. Inflammations of the vermiform appendix alone.
- g. Inflammatory processes in the colon.
- h. Lipomata that have become detached from their pedicles inside the peritoneal cavity.

Besides these there are adhesions found in the pelvic cavity caused by—

1. Inflammation of the ovaries or tubes, or both.
2. Inflammation of the uterus.
3. Inflammations of and about the rectum.
4. Inflammation of the bladder.

The question of diagnosis is often perplexing and in many instances impossible without abdominal section, but there are considerations which will aid materially. Wherever there is pain, and palpation does not reveal any tumor or other enlargement, adhesions is one of the probable causes. In obstruction of the intestines, for instance, if the cause be intussusception or the pressure of a tumor or of a fæcal mass, it will be possible, very likely, to feel a mass. If, then, no mass be felt, the cause may be paralysis of the bowel, stricture, or adhesions. If paralysis be the cause, no peristaltic action of the bowels can be seen through the abdominal walls, and it can be in the case of stricture or adhesions. It would probably be impossible to distinguish between these two conditions, though there might be a sensation of greater resistance on palpation in the case of adhesion. The localization of the adhesions is of course just as difficult as and no more so than that of stricture, and will often have to be done after the abdomen is open. I believe it to be eminently proper to subject cases of chronic dyspepsia, chronic and obstinate constipation, and cases of persistent pain which is caused by accumulation of flatus, to exploratory opening of the abdomen to determine whether there be adhesions and for the purpose of severing them.

PLACENTA PRÆVIA : ITS RATIONAL TREATMENT.*

BY S. MARX, M. D.,

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This paper is not merely suggestive, but the statements made are the result of three years' experience in the rational and radical treatment of placenta prævia. It is needless to state that pregnancy complicated by a low implantation of the placenta presents as grave a complication as the obstetrician has to deal with. Not only is the mother's life constantly in danger and her very existence threatened, but also, and infinitely more so, that of her unborn babe. Therefore it goes without saying that any measure, no matter how heroic or how radical, which is instituted to overcome this dreadful condition, can not possibly do

* Read before the New York Obstetrical Society, October 1, 1895.

the woman harm but good, since it removes at once and for always that danger which threatens her life. Obstetrics of to-day is very different from formerly. Methods which in the past had been condemned are now recognized as appropriate, especially because of the introduction of antiseptic and aseptic measures. Election holds as good to-day in midwifery as it does in any other branch of medicine. This will be the keynote of this article. In obstetric complications elective measures should be instituted in every case where at all possible and necessary ; but I can not agree with the so-called progressive modern obstetricians, who are, if anything, extremists, who would practice the elective accouchement in every normal case ; in other words, there are men to-day practicing this measure who elect the induction of labor in every case ; men who forestall the workings of Nature and do her work by manually dilating the os uteri at about full term in order to suit their own convenience and time ; men who make a surgical procedure out of what is usually a physiological process. To say the least, this is both pernicious and reprehensible. The induction of premature labor is, we still contend, a pretty serious operation, the element of sepsis one not to be lightly thought of, since even with the greatest care exercised it may creep in. It is not the object of the writer to burden you with theories, with statistical tables, etc., since the paper being entirely practical, practical views shall be aimed at. The varieties of abnormal placental attachments are, as generally given in the text-books, to my mind confusing and entirely unnecessary. To the general practitioner the different varieties are of no practical value ; to the student of medicine not only confusing but useless. Instead of recognizing the four varieties usually given—the complete, incomplete, lateral, and marginal—it would be wise to classify only two kinds, viz., the central or complete implantation, and the incomplete or partial placenta prævia, since the incomplete variety would of necessity include all other forms, viz., the partial, lateral, and marginal. Of the complete or central implantation it may be said that it is so called when the placenta presents centrally implanted in the os uteri. Of all the other varieties a true definition is still a moot point. In order to get a clear conception of the other varieties it would be well to remember that the pregnant uterus is for practical purposes divided into the fundal, equatorial, and cervical zones. Normally implanted, the placenta occupies the greater portion of the fundal zone and a smaller portion of the equatorial zone. Now therefore, clinically speaking, if the greater portion of the placenta is implanted in any other region of the uterus than the fundal zone, in the

equatorial or cervical—in other words, where a portion of the placenta involves the dilating zone of the uterus—it is certainly prævia. Anatomically this latter classification is wrong, since it is impossible, in some cases, to make out a low placental implantation until the os begins to dilate, but, nevertheless, clinically it is true. What plan of treatment, if any, should be instituted in cases of placenta prævia? It is just here that the opinions of operators differ. Procrastination means great and constant danger to the mother, carrying with it a death-rate that has been variously estimated ; at best a high mortality-rate. As to the child, palliative or expectant treatment means almost certain death to the child, the mortality-rate being estimated at from sixty to seventy per cent. One of the greatest advantages which modern obstetrics possesses over obstetrics of the past is that the interests of the mother and child do not antagonize one another, and, other things being equal, they stand on a par. It has been the constant rule of the writer that once the diagnosis of placenta prævia is made, the sooner the uterus is emptied the better.

As hæmorrhage, as a rule, occurs after the seventh month, the child is fairly viable, and its existence is very often, and should always, if possible, be taken into consideration ; and yet, whether there be a chance for the child's existence outside of the uterus or not, the accoucheur can not and does not do his full duty by the mother as long as he refrains from acting radically as well as rationally—in other words, empties the uterus at once. If only a presumptive diagnosis is made, where there be even the suspicion of the existence of the presence of the placenta prævia, the writer advises emptying the uterus, and has so counseled and taught. This may appear radical with a vengeance, but since, in quite a large personal experience, no bad results have occurred from such active interference, and a lethal case the result of non-interference in the practice of another, such heroic measures are certainly excusable. To me, instead of being radical they are ultraconservative. In the case just mentioned an exclusive diagnosis of placenta prævia had been made at the sixth month. No portion of the placenta could be felt nor were there any positive local symptoms to point to the presence of this complication. Yet by exclusion on account of the severe and frequent hæmorrhages and the absence of all other causes, a low implantation was diagnosed, active interference advised and refused. Two older and more conservative counselors now saw the case and agreed to temporize. Within twenty-four hours a profuse hæmorrhage, so severe as to exsanguinate the patient ; a rapid dilatation of the os undertaken. Re-

sult : While the arm of the operator is *in utero* attempting a version, the patient dies. No further explanation need be added to this sorrowful picture, except that palliation killed the patient. Radical means would almost certainly have saved her life. The diagnosis of complete placenta prævia is readily made, but much more difficult is the diagnosis in the true low implantation of the placenta. The only symptom present is the occurrence of irregular hæmorrhages. No bogginess, no fullness, no congestion of the lower uterine zone is to be made out. If in any case an abortive menstruation can be excluded—further local lesions situated on the cervix, such as varicose ulcer, carcinoma, specific lesions, polypi, varicosities of the vagina and vulva, etc.—it can be almost positively stated that we have to deal with a placenta that is prævia. Nor should the rectum be excluded in the examination in making a differential diagnosis, for the following case, seen in consultation, showed what a large varicose rectal ulcer will do to puzzle a good observer in making a diagnosis of placenta prævia : Mrs. C., aged eighteen, primipara. Pregnant about seven months. Diagnosis of low placental implantation made. The previous history is as follows : Hæmorrhages commenced about the fourth month of moderate severity ; the occurrence irregular. Quantity lost not known ; since the last two months the amount of blood lost is markedly on the increase. Examination reveals head presenting. Os admits tip of index finger. The lower uterine segment very thin, allowing thorough palpation. Nothing abnormal found by touch or sight on the cervix, vagina, and vulva. On making a rectal examination to more thoroughly explore the lower uterine zone, an area is touched just external to the internal sphincter which causes the woman excruciating pain, and simultaneously a gush of blood comes not only from the anus, but through a minute perforation anteriorly from the vagina. Local application to the rectal mucous membrane causes a speedy cure of this large varicose ulcer. It would be useless to go into detail in describing all the methods used for provoking labor ; but to my mind the most pernicious in many cases is the time-honored introduction of the bougie into the uterus for this purpose. In some uteri you can pass in a dozen bougies and yet no impression is made on this sometimes exasperatingly tolerant organ. The danger of inaction and the possibility of sepsis is too great to trust to this slow and uncertain method in placenta prævia. I am free to confess that my limited experience makes me inexpert in passing the catheter, yet I seldom failed to rupture the membranes, and that very early when it was attempted. The early rupture of the membranes is, to my mind, un-

fortunate, since the method to be recommended entails very frequently the necessity of internal version, for the successful performance of which the integrity of the membranes forms an essential factor for the success of this operation. Only a few weeks ago, in attempting to introduce a bougie much against my own wish, I promptly ruptured the membranes. At the end of thirty-six hours, instead of having a woman with active uterine pains, I had a very quiet one to deal with, plus a temperature of 103.5, in spite of all the care exercised in a well-regulated lying-in asylum. Certainly a woman threatened at any moment with a hæmorrhage from a placenta prævia can not be safely left with a catheter in her uterus until uterine action occurs, for before it begins to assert its action the patient might possibly be dead. The methods to be used must be of such a nature that, when once instituted, there is no letting up, no failure of action, but must be carried to completion. Those methods most frequently used are: (1) Braxton Hicks' method. Since this method takes only into consideration the life of the mother, it certainly can not be recommended. The fulfillment of this operation presupposes an os sufficiently dilated to admit of one or two fingers. This must be, in a large majority of cases, brought about by some method which dilates up to this caliber. The first steps of a manual dilatation are the most difficult, the most tiresome, and if one can dilate up to two fingers, the rest is readily accomplished, while with the Braxton Hicks method the os is dilated by the half breach through traction on one leg. The great objection to this method is the high mortality-rate which it carries with it; even the supporters of this operation admit a foetal death-rate of over sixty per cent. (2) Dilatation with rubber bags, the Barnes bags, or the De Ribes bags, the latter being purely intra-uterine dilating bags. These rubber dilating media are all objectionable for many reasons, the most objectionable being that they are not always at hand, and when at hand are usually not fit to be used; and, further, it is difficult to render them thoroughly clean—*i. e.*, aseptic. (3) Dührssen's incisions are generally not applicable in this class of cases, (*a*) since it simply dilates the os by incisions with checking the bleeding from the enormously dilated uterine sinuses in the lower uterine zone. The method most needed and essential in these cases is one that dilates the os, and by pressure or tamponade checks the hæmorrhage at one and the same time. (*b*) Further, since placenta prævia occurs most frequently in multiparæ, in whom it is known that the supravaginal portion is still present up to and during early labor, this operation can not be performed, or, in other words, is contra-indicated until

this portion has been made to disappear—*i. e.*, merged into the lower uterine zone by dilating instrumentally or manually. Dürrssen in his first paper enthusiastically gave this operation a very wide and almost limitless field; but since, in a second paper, the field of application for Dürrssen's incision, as stated by him, should be restricted to extreme emergencies threatening immediate death to mother or child. Yet in some cases, fortunately few, it is impossible to dilate the os by any mechanical means, as in the case of an os completely cicatrized from old cervical tears. Here Dürrssen's incision, or its alternate operation, the Cæsarean section, has distinct and proper worth. This occurred in one of my cases, seen in consultation with Dr. Ettinger, in the case of a multipara suffering from eclampsia plus a placenta prævia.

Mrs. K. M. Patient deeply comatose from uræmia. Child dead. Cervix not dilated. Small segment of vaginal portion present. Owing to dense cicatricial tissue, the os could not be dilated. Right lower uterine zone thick and boggy, the seat of a low placental implantation. All means to dilate this os made not the slightest impression. Since only a small part of the vaginal portion presented, the crucial incisions were made, one of which cut almost completely through the placenta. The hæmorrhage was very slight. Had the vaginal portion been present in its entirety, and especially had the fœtus been alive, the Cæsarean section would have been indicated. Cæsarean section, though advocated and performed for the relief of placenta prævia pure and simple, carries with it too high a death-rate to be taken into consideration. As already hinted, the operation to be recommended in this paper is the elective accouchement as performed by manually dilating the os at one sitting. Of the cases operated by this method, as near as I can reach them—numbering fifteen in all, including two of completely centrally implanted placentæ—we have the satisfaction of noting every mother alive, and all children, where viable, born alive. I am aware that the revival of the old *accouchement forcé* has met with considerable and persistent opposition; but when this modern operation is performed by the skilled hand it becomes as safe, as harmless, and as conservative a procedure as falls to the lot of the obstetrician. In the hands of the tyro, the inexperienced and the bungling operator, it is positively dangerous, even as any other obstetric operation. What are the objections to this method?

1. From too rapid emptying of the uterus, uterine atony with serious effect of a post-partum hæmorrhage. This, however, does not hold good in placenta prævia, since the hæmorrhage to be feared most is not post-partum, but ante- and intra-partum. Even though a post-

partum hæmorrhage occur, it is the bounden duty of the operator not to attempt to check the same by uncertain methods, but it has been the custom of the writer to tampon almost every case after a placenta-prævia delivery in order to save the parturient every drop of blood, and further to insure against a post-partum hæmorrhage. It is needless to dilate further on the value of the intra-uterine tamponade since it is now a recognized legitimate measure; not to be used when all other methods have been exhausted, but when one hot douche fails to check the hæmorrhage, instant tamponade of the entire utero-vaginal tract. 2. That the operation might injure the cervix. While this had occurred but once in over forty cases, yet the possibility of its occurrence ought not to deter us from resorting to this measure for obtaining a living child, not to speak of the mother. Besides, other methods involve about equal risks in this direction. A lacerated cervix in the light of modern experience means nothing, since it has been lately recommended by a fellow of this Society to sew up all lesions of the cervix at once. To place the woman on the back, to draw the injured organ down to and through the vulva and sew *in situ*, is as simple as it possibly can be. To operate on the side and through a Sims speculum makes the primary operation an extremely difficult and awkward one. Now as to the advantages. To my mind they are overwhelming and conclusive. I am so firm a believer in this operation that I must be pardoned if my words are both dogmatic and optimistic. The one great advantage is that it can be made a purely elective operation, thus simulating any other operation. The operator selects his time, his assistants, prepares his patient, and concentrates his bearings in one direction—the safety of the mother and child. Further, when the operation is once commenced there is no uncertainty or failure of action as sometimes occurs when other means are used. The uterus is dilated at one sitting and the child delivered. Again, the hand is the only instrument actually used in operating and for purposes of operating, it is not blind but sentient. Further, in placenta prævia, while dilating, the fingers or even one finger acts as a firm tampon while the rest of the hand is dilating. This is a measure I have lately tried, much to my own satisfaction. One finger is firmly pressed over that portion of the lower uterine zone corresponding to the placental attachment, thus absolutely checking all hæmorrhage while dilatation goes on with the other fingers. Lastly, the actual results obtained in over forty cases, operated on for all complications. No sepsis. No deaths as a maternal record. All children when alive and viable before operation, born alive. Now as

to the technique of the operation. The method described by me in a paper read before the Section on Obstetrics, New York Academy of Medicine, December 28, 1893, is still to my mind the ideal method. It shall be described word by word as done at that time.

The operation divides itself into two stages—the preparatory and the operative. The preparatory stage may in some cases be omitted. Such cases are where the cervix is dilatable and the vaginal portion already merged, or where the os is soft, non-resisting, and boggy, as occurs very often in placenta previa. Therefore it is especially in this complication that it is indicated and most easily done. The elective operation having been decided upon, the patient is placed on the back, no anæsthetic being necessary. After thorough asepticism of the vagina, cervical canal, and external genitals, a Sims speculum is introduced and the anterior or posterior lip is seized by bullet forceps. Iodoform gauze,* cut in strips the width of two fingers, is carried in the grasp of a Garrigues intra-uterine tampon forceps into the cervical canal, slowly and gently worming your way until the gauze is well in the canal or until it meets with a resistance, which is the presenting fœtal pole, and most frequently the head. The canal is then tamponed as completely as possible. The vaginal vault and vagina are tamponed in the ordinary way and the patient put to bed. This tampon is very important, and I lay especial stress upon this method of tamponing the cervix. It has for its object (1) that it mechanically separates the membranes without endangering their integrity; (2) it materially softens the os and causes a marked disappearance of the portio; (3) it provokes pains, and sometimes gives rise to sufficient uterine action to cause the woman to deliver herself, as occurred in one of my cases. In the cases I have done the preparatory tamponade upon, the patients have all complained of intermittent crampy pains indicative of uterine action. In from ten to fifteen hours the tampon is removed, the patient thoroughly douched, and an anæsthetic given, and the *second stage* commenced. The os is now found very soft and dilatable, so as to admit readily one or two fingers. The hand, introduced into the vagina, one finger after the other, is gently inserted until the open hand can be introduced. After the introduction of one finger the same is directed to that portion of the

* The occurrence in the last year of two cases of undoubted iodoform poisoning after the use of iodoform gauze, once as a uterine tampon and once when used as a cervical tampon in the practice of the writer, deters him from using or recommending it. Since then sterilized gauze was used in all cases.

uterus corresponding to the insertion of the placenta, and while exercising pressure in this region checks the hæmorrhage. The pressure further materially assists the tamponade by the finger, when this finger uses that portion of the pelvis corresponding to the placenta implantation as a fixed point. To make myself clear, if the placenta is implanted to the right, pressure is directed on that point against the right bony pelvic wall. If behind, pressure is made directly against the sacro-vertebral region, etc. The hand, then closed, is gently withdrawn. If rapidly withdrawn it is easy to imagine how readily the uterus might be ruptured. The closed hand acts similarly to the balloon bags of Tarnier, which are introduced empty into the uterus, inflated, and then gently withdrawn. After withdrawing the first several times (in different diameters of the os) and no resistance on the part of the cervix being encountered, the os is then dilated ten cubic metres (according to the width of my own hand) and dilated sufficiently for the passage of any ordinary child. The membranes having been preserved, a pure internal version should always be done and the labor terminated at once. The object in doing an internal version and immediate extraction is due to the fact that the cervix being artificially dilated, retraction is almost certain to occur, and that at a most inopportune moment; at that time when the neck of the fœtus is passing through the os it often retracts and tightly hugs the neck, where delay in extraction occurs at this time. The placenta is removed at once and the uterus tamponed tightly with gauze.

947 MADISON AVENUE.

RUPTURED INTERSTITIAL PREGNANCY.*

BY L. H. DUNNING, M. D., INDIANAPOLIS,

Professor of Diseases of Women in the Medical College of Indiana; Consultant
Gynecologist to the City Hospital and Dispensary.

It is my purpose to treat of ruptured interstitial pregnancy occurring before the fifth month. There are at most but three cases on record in which the rupture has taken place into the broad ligament. I shall speak only of those in which the rupture occurs into the peritoneal cavity.

* Read before the American Association of Obstetricians and Gynecologists, September 24, 1895.

Since my experience with a case last April I have read all the literature upon the subject within my reach, and it has become plain to me that this form of ruptured ectopic gestation* has not received the consideration the importance of the subject demands. In the vast experience of Mr. Tait up to the time of the publication of the first volume of his book upon *Diseases of Women and Abdominal Surgery*† he had not found a single case of rupture of this form of abnormal pregnancy upon the operating table. He had, however, examined a specimen removed on autopsy. From this case he drew his conclusions, which stand with one other made by Webster,‡ so far as I am able to learn, as the only suggestions of the proper mode of procedure in this class of cases. Mr. Tait's suggestions are: 1. If a case of interstitial pregnancy be diagnosed before rupture (which he thinks is not possible) he would dilate the cervical canal, divide the septum separating the uterine from the gestation cavity, and empty the cornual cavity of the products of gestation, delivering them by the natural way. 2. In case of rupture into the peritoneal cavity, Tait's suggestion is to perform abdominal hysterectomy promptly. He believes that in the case furnishing the specimen he examined this could have been easily effected. Webster's suggestion is: "If the gestation were early it might be possible to remove the ovum and close the cavity very thoroughly in the manner recommended by Martin for the closure of the cavity in the walls of a uterus after enucleation of an interstitial fibroid."

The following is a brief history containing the salient points of my case: In April, 1895, I was called by Dr. E. C. Reyer, of our city, to see Mrs. A., whom he stated had ectopic gestation. Upon my arrival at 9 A. M. Dr. Reyer gave me the following history: At 4.30 P. M. the preceding day the patient, who thought herself two months pregnant, was suddenly seized with intense pain through the uterus and became weak. Dr. Reyer was summoned at 8 P. M. He found the patient in bed, markedly prostrated, but not very anæmic. There was no bloody flow from the uterus, but there were intermittent pains. The uterus was enlarged and seemingly pregnant. No tumor could be felt in the pelvis. The patient was thought to be pregnant and fears were expressed by the physician to the friends that there was an abnormal gestation and that rupture had occurred. Quiet was en-

* Webster. *Ectopic Gestation*, p. 81.

† Tait's *Diseases of Women and Abdominal Surgery*, vol. i, pp. 481 to 486.

‡ Webster. *Ectopic Gestation*, p. 217.

joined and an opiate given. No alarm was felt by the family during the night. The following morning at 8 A. M. Dr. Reyer called and found the patient greatly prostrated and nearly pulseless. The abdomen was distended and a baggy feeling was elicited by digital examination *per vaginam*.

We made immediate preparations for abdominal section, as it was evident that death would supervene within a short time if the internal hæmorrhage was not arrested. We, however, feared the patient would die upon the table. We yet deemed it our duty to give her the slight chance of life an operation afforded. While preparations were being made, about eight ounces of the normal saline solution were transfused into the cellular tissue of the patient in the inframammary region. Strychnine and whisky were given hypodermically, and also nitroglycerin. The abdomen was opened by an incision about 9.45 A. M. A large amount of blood was found in the abdominal and pelvic cavities. A portion of it was quickly removed and the uterus drawn upward near the incision. The Fallopian tube was found free and seemingly normal. The uterus was seen to be much enlarged, and there was found a rent in its walls upon the upper and posterior portion. From the rent, a portion of placenta was protruding, a slight oozing of blood was observed, and a small lacerated artery in the torn wall of the uterus was bleeding feebly. The artery was secured by catch forceps, and we proceeded a moment or two to examine the case to determine the line of procedure, when Dr. Reyer, who had been administering the ether, announced to me he thought the patient was dead. He had administered in all but four or five inhalations of the ether, and none at all had been inhaled during the last two minutes, so that the total collapse of the patient could not be attributed to the anæsthetic. Artificial respiration was instituted, restoratives administered, and more salt water transfused, all to no purpose. The patient was dead. A rapid examination of the pelvic organs was made. A ruptured gestation sac was found in the uterine wall of the right side. The canal of the cornual end of the right Fallopian tube for a distance of half an inch was dilated and continuous with the gestation cavity within the uterine cornu. The walls of the cavity containing the ovum were uterine. There was an irregular rent in the upper posterior portion of these walls, from which there protruded a portion of the placenta. The membranes of the ovum and the decidua were within the cavity. The fœtus was not found. The walls of the gestation sac in the region of the rupture were very thin, as were they also around the dilated portion of the tube. The tube beyond the dilated

portion was normal in appearance and free. It seemed to me normal in length and but slightly, if any, increased in size. I inserted a finger into and through the rent into the cavity containing the ovum. It extended in toward the uterine cavity, but was separated from it by a thin partition. Here is clearly a case of tubo-ovarian or interstitial pregnancy. How is it to be treated? Shall the bleeding point be tied as is so often stated by the authors of journal articles? There is often not only one bleeding point but several, and a placental surface that bleeds. There is no pedicle to be secured as in tubal pregnancy. There is an excessive loss of blood, so that the patient is profoundly shocked. There is a cavity of greater or less size extending into one horn of the uterus and containing the ovum in whole or in part. After the ovum is removed this cavity must be treated in such a manner as to prevent an accumulation of the broken-down tissue and exuded blood. We have, then, to consider: 1. Such an operative procedure as will induce the smallest loss of blood and the least degree of shock. 2. Our method must be such as will secure the patient against a subsequent rupture and the retention of exuded blood and broken-down tissue. In some instances Tait's proposed method—viz., the removal of the uterus—will unquestionably meet all indications. Each operator will choose his favorite method. For myself I should employ Baer's, as it requires the least time in my hands and yields the best results.

Cæsarean section is attended by less shock and fewer deaths to the mother than Freund's or Porro's operations. I believe a method somewhat similar to Cæsarean section should be adopted as superior to extirpation or amputation of the uterus in cases of ruptured interstitial pregnancy. After opening the abdomen by incision and clearing away enough of the blood to give a good view of the field, the uterus may be pushed up from below with a finger in the vagina, or may be seized and drawn up with a tenaculum forceps. The rent will usually be found above and posterior to the insertion of the Fallopian tube. If the opening caused by the tear of the uterine walls be sufficiently large, let the ovum, including fœtus, placenta, and membranes, be quickly delivered. If the rent is not of sufficient size enlarge it. A sufficiently large opening connecting this gestation cavity with the uterine cavity should be made. Ordinarily this can be easily accomplished, as these two cavities are separated by a thin membrane only. This membrane may be lifted up by forceps or tenaculum, and incised or torn to a sufficient extent to make the cavities as one. A rubber drainage-tube and a strip of iodoform gauze

should be passed from above downward through the uterine cavity and cervical canal into the vagina, the upper ends being allowed to remain in the gestation cavity. The further steps of the operation will consist in closing the rent in the uterine wall. This may be done exactly as in case of Cæsarean section—viz., with deep and half deep interrupted sutures—or if the walls be very thin, as they were in my case, the rent may be closed, as in intestinal laceration, by Czerny or Lembert stitches. Another procedure might have been practiced in my case, and it would have been feasible—viz., the walls of the gestation sac surrounding the rent could have been stitched to the lower end of the abdominal incision and left open for drainage, and subsequently closed by deep sutures passed at the time of the operation.

This procedure I do not consider as of as great merit as the one previously described, for the reason that, if successful, the uterus would remain anchored to the abdominal wall, and there would be danger of a resultant fistula. Should the partition separating the uterine and gestation cavities be thick or illy defined, a sound may be introduced into the uterine cavity from below, so as to serve as a guide in the work of connecting the two cavities.

I wish to draw the following conclusions :

1. Ruptured tubo-uterine pregnancy is more frequently fatal than ruptured tubal pregnancies, for the reasons that in the latter case the rupture frequently takes place through the abdominal end of the tubes, in which case but slightly vascular adventitious tissue is torn, while in the former case vascular uterine tissue is torn ; and again in tubal pregnancy not infrequently the rupture is, through the inferior surface of the tube into the folds of the broad ligaments, and then is the amount of hæmorrhage limited, while in tubo-uterine pregnancy such a rupture is rare.

2. In ruptured tubo-uterine pregnancy before the fifth month, unless the abdominal section is done early the anæmia will be profound, so that the patient will be unable to withstand any operation involving prolonged anæsthesia or manipulation. The operation should be as free from shock as possible.

3. There is no pedicle to tie.

4. All actively bleeding points must be secured by ligature.

5. Mr. Tait proposes hysterectomy as a proper procedure in such a case. Unquestionably, if the patient is not too greatly shocked or anæmic, such a procedure would be clearly indicated.

6. As a measure attended by less risk of shock, the writer proposes the method above described—viz., the tying of bleeding arteries,

clearing the gestation cavity of the ovum, the establishment of free drainage by means of tube and gauze, and finally the closure of the rent in the uterine wall by deep and half-deep sutures, or by Czerny and Lembert stitches; or, instead of this method of closure, the stitching of the walls of the gestation cavity to the lower angle of the incision with drainage from above and through the uterine cavity, and final closure of the upper opening by tying deep sutures placed and left untied at the time of operation.

This latter method will probably be found applicable only to a limited number of cases—viz., in those where the uterus is freely movable and can be brought to the abdominal wall without tension.

Whether the methods proposed by the writer have ever been employed he does not know, and whether they will prove of value trial must demonstrate. His main object in writing this brief paper is to bring to the attention of the profession some means of relieving an alarmingly fatal accident, which has not as yet received the consideration the dangers of the accident and the difficulties of its remedy present.

EXCEPTIONAL LOCATION OF THE BLOOD CLOT IN A CASE OF RUPTURED ECTOPIC PREGNANCY.*

BY MARCUS ROSENWASSER, M. D., CLEVELAND.

Operating for free hæmorrhage after tubal rupture we find a mass of coagulated blood in the true and false pelvis, and a mixture of fluid blood and clots distending the abdominal cavity. Operating for circumscribed hæmorrhage we find the blood mass gathered in the pelvis or even extending high into the abdomen, but limited or shut in by lymph-agglutinated viscera or by the separated folds of the broad ligament. The ultimate recovery of the patient whose history is to follow leaves as matter of conjecture the causes that prevented the blood from gravitating into the pelvis but led to its accumulation in the side of the abdominal cavity from iliac fossa to posterior diaphragm. The extreme reluctance with which the record of this case is presented at this time is overcome by reason of my

* Read before the American Association of Obstetricians and Gynæcologists, September 24, 1895.

inability to find a parallel in the literature at my disposal, and because of the hope that the knowledge of such possibility may prevent future confusion of an otherwise clear diagnosis. Drs. J. H. Lowman, C. B. Parker, and A. P. Ohlmacher assisted at various periods in sharing the responsibilities of the case.

Mrs. R., aged thirty-seven; married seventeen years; four children; regular since birth of last child five years ago. Excepting a mild attack of typhoid fever four years ago, she has enjoyed excellent health. The last regular menstruation was on September 6, 1894. The next period was missed, but a "flow" began October 11th and continued almost daily during the following five weeks. The discharge was at times quite free, sometimes offensive, but not attended by pain, except an occasional sharp twinge attributed to the right ovary. There was much nausea and unusually severe vomiting. The uterus was slightly enlarged, cervix soft, patulous, easily dilatable. A rise of temperature on two previous days led to a curetting on November 16th, under the supposition that remnants of an early abortion required removal. This was done under chloroform. The uterus was four inches deep, the walls were soft and of a bluish hue. The curette brought away neither shreds nor granulation tissue. Suspecting an ectopic pregnancy, a careful pelvic examination was made but, perhaps owing to the very thick abdominal wall or exceptionally misplaced tube, no tumor was found. It was supposed, therefore, that the ovum and its envelope had been overlooked in the discharges that had preceded the operative interference.

The curetting was followed by a mild pelvic peritonitis. The temperature rose to 101° ; there was tenderness at the fundus, also pain in the rectum, even upon the passage of gas. At 2 P. M., November 21st, the temperature was only 99° , but there was an uncomfortable sensation in the lower bowel, for the relief of which mineral water had been given. This was not retained. While retching, the patient was suddenly seized with an agonizing pain in the abdomen, feeling as though she must die. Collapse rapidly followed—face drawn, eyes sunken, marked pallor, profuse sweat, cold surface and extremities, pulse almost imperceptible; she gradually rallied from the shock. The next morning the pulse was 100, temperature 100.5° . A tender and somewhat indefinite mass was to be felt in the abdomen to the right of the median line from the iliac fossa below to the hypochondrium above. The tenderness on the left was comparatively slight. Abdominal distention moderate. It was deemed best under the circumstances to postpone a pelvic examination until the following

morning, November 23d. The uterus was movable, enlarged, tender, in its normal position. Beginning at the right cornu and extending upward toward the iliac fossa was the ill-defined lower part of the mass which filled the right flank, losing itself under the border of the liver. There was no bulging, thickening or resistance in the recto-vaginal pouch, and none at the base of the broad ligament; nor did rectal touch reveal any contraction in the lumen of the bowel.

The unusual absence of a circumscribed pelvic tumor, the development of an inflammatory mass in the side of the abdomen and the fact that a mild peritonitis had preceded the collapse cast a doubt over the *a priori* conclusion that the collapse had been caused by rupture of a tubal pregnancy. Neither in my own experience nor in my reading was the pelvic tumor ever missing when the blood mass had become circumscribed. Assuming that a miscarriage had taken place, could not the collapse have had its origin in the rupture of some recent intestinal adhesions, inasmuch as a mild peritonitis was just subsiding and the collapse took place during a spell of retching and vomiting? Subsequent events furnish a most instructive and positive answer to this query.

As a result of the side-tracking of the diagnosis, surgical treatment was temporarily discarded and the case was treated as a localized peritonitis. The latter continued during the next two weeks without causing alarm. The pulse ranged from 96 to 108, and the temperature from 100.5° to 102°. A right pleuro-pneumonia now rapidly developed, beginning at the base and ascending to the apex. The infection had evidently entered by way of the diaphragm. For the next two weeks the pneumonia was the prominent feature on the bulletin board, with the peritonitis and its supposed exudate crowded into the background. Meanwhile the patient suffered intensely from a sharp, gnawing pain through the lower part of the right thorax and the entire right hypochondrium and loin. While the pneumonia was subsiding the pain continued and was supplemented by daily recurrence of distinct chills and profuse sweats. She had had five chills, with pulse ranging from 116 to 128, when finally an indistinct deep fluctuation was detected in the abdominal mass. This was thirty-one days from date of collapse. An aspirator, introduced at the level of the umbilicus on a line from crest of ilium to lower ribs, brought away a fœtid, fleshwater-like fluid containing colon bacilli and pus. A free incision through two and a half inches of abdominal wall followed aspiration, and gave vent to about three pints of most offensive decomposed blood and blood clots. No fœtal remnants were found

despite careful search. The abscess cavity extended from the iliac fossa upward and backward under the liver, and well toward the spinal column. It was drained by rubber tubes introduced in both directions. Convalescence was retarded and complicated by a fæcal fistula which made its presence known about ten days after opening of the abscess but fortunately closed within a month.

During the first three months after recovery the patient suffered considerable pain in the left side one week previous to menstruation. Within the last three months this pain has not recurred. The uterus is freely movable and in normal position; there is no palpable trace of previous disease. She has regained her normal weight and can run up and down stairs as well as she was wont to do in days before. Her recovery is complete.

HYSTERECTOMY FOR CANCER IN A PREGNANT UTERUS.*

BY E. P. BERNARDY, M. D., PHILADELPHIA.

The case which I report this evening I do so on account of its rarity—that is, not on account of its rarity in regard to cancer of the cervix complicating pregnancy, but to the early operation of hysterectomy (four and a half months of pregnancy), and that which led me to decide upon the operation at this early date.

History.—A. H., aged thirty-one, actress, called at my office in the latter part of July, 1895, to be examined in regard to the existence of pregnancy. Her last period had occurred in May, being sick twice during the month. In April, at the expected time, a few drops of blood showed themselves, and instead of a blood flow a free, leucorrhœal discharge occurred, which was arrested by injections of hot water.

On vaginal examination, the uterus was enlarged, extending up to the umbilicus. Ballottement was readily performed. Toward the right side could readily be detected the small head of the fœtus. The neck and cervix of the uterus seemed to be almost entirely destroyed. At the right side there was an irregular ulceration of the cervix, extending to the roof of the vagina. It felt as if the cervix had been

* Read before the Philadelphia Obstetrical Society, October 3, 1895.

lacerated (previous pregnancies were positively denied by the patient and her friend). At the left side the finger came in contact with a soft, friable, cauliflower-like mass. Slight discharge of blood followed the examination. The examining fingers and hand were covered with blood, having a very heavy, disagreeable odor. No speculum examination was made, as the patient had called in the evening. Diagnosis of pregnancy, complicated with, probably, cancer of the cervix.

The patient's limbs were soft and flabby and appeared wasted. She claimed not having been ill for nearly five years. Menstruation always irregular. Menses sometimes delayed two or three months at a time; sometimes came on freely with clots, at other times like the regular flow of menses.

On August 15, 1895, the patient again called to see me. Dr. Dorland being present, a more thorough examination, both by the fingers and speculum, was made. The cervix appeared as one mass of fungoid growth, bleeding readily on touch. The growth or mass was covered in places with a thick yellowish-green membrane, discharging large quantities of offensive fluid. Above the mass the tissue of the uterus felt hard and indurated.

Entered the Polyclinic Hospital as a private patient August 16, 1895.

The following history was obtained by Dr. Gans, resident:

Family History.—Mother living and well; father died at the age of sixty, cause unknown; one brother living and well; one died in infancy.

Personal History.—Had measles, chicken-pox, and scarlatina in childhood; the latter (scarlatina) left her with a purulent otitis, which lasted ten years; partially deaf in left ear. Arrived at puberty at sixteen; menses irregular, painless, and scanty. Some five years ago had an attack of inflammation of the bowels; was extremely ill at the time. Has had indigestion for years as result of indiscretions of diet. I will here state that the patient was an inordinate drinker of champagne.

Is now pregnant; has had no hæmorrhage or discharges of any kind from the vagina. Has a good appetite; formerly was very constipated, but now is regular and has no trouble.

The personal history gives no indication of the serious condition of the cervix—history we will often find in such cases. Many of us no doubt, on a vaginal examination, have detected malignant trouble when the patient had the appearance of apparent perfect health.

August 17, 1895.—Vaginal examination made and a small piece from the mass cut off for microscopical examination; the specimen was sent to Dr. George A. Muehleck. Report, malignant growth.

The patient from the time of her entering the hospital was prepared for operation—strychniæ sulph., 1-30, three times a day and daily baths.

20th.—Operation. Present Drs. George A. Muehleck, Reynold, Wilson, and residents of hospital. Dr. Dorland assisted me during the operation.

The vagina having been thoroughly cleansed, what was left of the cervix was firmly grasped by a volsella forceps, drawn down, and the vaginal mucous membrane separated from round the cervix. It was found at this examination that the upper third of the anterior wall of the vagina was involved in the disease. After separating thoroughly the mucous membrane from the uterus, the vagina was washed out with a bichloride solution and then packed with iodoform gauze, and the patient placed in the Trendelenburg posture for hysterectomy. The usual incision was made, carried up through the umbilicus. The incision was about six inches in length. The uterus appeared at once at the opening, and was easily brought out through the incision. No adhesions posteriorly; anteriorly, the parts were so infiltrated and œdematous that it was impossible to separate the different organs, more especially the bladder. The ovarian arteries on each side were tied, also the end toward the uterus, this to prevent unnecessary bleeding. Finding that the full uterus was somewhat in the way to reach and ligate the uterine arteries, I incised the uterus, while Dr. Dorland made firm circular pressure around the lower segment. The foetus, placenta, and bag of waters were delivered intact. After emptying the uterus the uterine arteries were easily reached and ligated.

In attempting to separate the bladder from the uterus, on account of the condition as above stated, the bladder was injured, but immediately stitched with catgut. The posterior wall of the bladder was found diseased; the division of the vagina from the uterus was easily and rapidly effected. On account of the injury to the bladder, I decided to drain through a glass tube and use the vagina at the same time as a drain. It was my intention, if the bladder had not been injured, to have closed the vaginal opening and stitched the peritonæum together.

Ought I to have closed the vagina and peritonæum under the circumstances? If the same should occur again I would undoubtedly not use an abdominal drainage, but drain entirely from the vagina.

The abdominal incision was closed with silkworm gut, a soft catheter placed in the bladder, and the usual abdominal dressing was made.

The patient when seen about six hours after the operation had rallied nicely. The following enema was given: Whisky, $\bar{3}$ j; valerian, f $\bar{3}$ ss.; water (hot), $\bar{3}$ v. She complained of pain over the incision, for which a hypodermic of an eighth of a grain of morphinæ sulphas was given. Throughout the treatment the stomach was saved by using the rectum as a medium of feeding.

The same evening of the operation the patient passed wind freely through the rectum. During the first twenty-four hours thirteen ounces of urine was passed; it was bloody. The condition of the patient was good.

21st.—The dressings, being soiled, were changed, a vaginal douche of hot boric water was given, and bloody serum drawn from tube, about half an ounce. Temperature, 99°; pulse, 140; respiration, 24. Complains of pain over pit of stomach, which is somewhat distended. Applied hot flaxseed poultice; abdomen made somewhat softer by its use. A high injection of mist. asafœtidæ was given, which caused a large quantity of flatus to be expelled through the rectal tube. Twenty-one ounces of urine were passed during the day; slightly bloody. Nutritive enema given every four hours. Patient seems bright. A quarter of a grain of calomel and one grain of bicarbonate of sodium every half hour for four hours, followed by purgative enema. Bowel movement through rectal tube. Temperature 99, pulse 150 early part of day; middle of day, temperature 99.3, pulse 140; evening, temperature 101.1, pulse 140.

22d.—Half a teaspoonful of liquid peptonoids rejected after the fourth dose. Vomited mucus and brownish liquid. At 1.15 P. M. had a chill, which lasted two minutes. Ordered champagne, which was not retained. Voided thirty-eight ounces of perfectly clear urine. Patient weaker. The abdomen across the stomach and transverse colon seems distended and very painful. Applied mustard plaster with some relief. Temperature during the day varied from 99.4° to 100.3°, while the pulse ranged from 108 to 120 beats.

23d.—Had a small brown liquid stool; another passage of the same character occurred later, but in it were cheesy particles. This was passed through the rectal tube. Stomach absolutely unretentive; no vomiting, but a sort of regurgitation. Patient very weak. Chloroform in ten-drop doses in hot water relieved the gastric distress.

24th.—Had a stool and passed some flatus. Urine clear, twenty-

seven ounces. Is sinking rapidly. Died at 2.15. Death seems to have been caused from exhaustion. Just prior to death temperature was 104.3°, pulse 180.

Throughout the treatment strychnine injections hypodermically were given. Tincture of digitalis and whisky toward the last were given hypodermically.

Autopsy.—Held by Dr. Sherer, resident physician. Abdominal incision united; no inflammation; little serous fluid in abdomen; no lymph; no pus. Blood-vessels of intestines slightly ingested. Bladder incision entirely united. No urine in abdomen or pelvis. Sigmoid lightly attached to stitch in bladder wall; opening in vagina for drainage; its upper part was closed; its lower portion patulous. Gall bladder greatly distended. Head of cæcum distended. The small intestines slightly distended with gas. At the middle third of the ascending colon there was a constricted portion of about three inches and a half in length admitting the finger; it contained some fæcal matter; above and below the constriction the colon was immensely distended with gas; the stomach lying above appeared as a large distended bag. There is considerable atrophy of the muscles of the calves of both legs and arms. No apparent cause of intestinal constriction.

The unfortunate termination of the case was a source of great disappointment. The first forty-eight hours led us all to hope that our efforts would be crowned with success, but the sudden and unexpected giving way of the stomach, without any perceptible cause, so exhausted the patient that, in spite of all our stimulants, the heart proved unable to continue its function.

The autopsy shows clearly that it was not through any inflammatory or septic troubles that the patient lost her life. It revealed a constriction in the ascending colon which was unexpected, and which, I believe, caused the immense collection of flatus in the intestines, especially in the colon. The stomach was most enormously distended, pushing upward what would prevent it from pressing against the heart. The constricted portion after being cut out was unfortunately mislaid and not examined.

Why I decided to operate so early was the existing condition of things. What would be the patient's condition four or five months hence no one could tell. The patient was giving signs of wasting in her muscular system; her arms and legs were wasted and showed decided signs of malnutrition.

Whether she would, with such a disease, be better able to stand

in the future an operation that would undoubtedly be more formidable I doubt very much, and believe it was the opinion of the gentlemen present that it was doubtful if the patient would live to the termination of her pregnancy. I gave her what I believe to have been the best chance.

SOME ANOMALIES FOUND IN ABDOMINAL SURGERY.*

BY T. J. MAXWELL, M. D., KEOKUK, IOWA.

When we received our medical and surgical education the peritonæum was looked upon as forbidden ground. Death brandished his dart and threatened destruction to every poor victim who by accident or otherwise should have this *terra incognita* invaded. Things since then have all changed; the world is turned upside down; the sacred precincts of the peritonæum have become—Joe Price says—"the fool's paradise."

It is an easy thing to remove an uncomplicated ovarian cyst, and the uninitiated looker-on concludes that this is the highway for a young man to travel to honor and distinction. I would warn the neophyte who thinks that way to pause, and ere he begins be prepared for any emergency. First study the various complications, make himself familiar with the best way to deal with them, and have at hand the instruments and appliances to carry out the various technique necessary for each.

It is to these byways and anomalies complicating abdominal work that we wish to call your attention.

CASE I.—Miss M. S., aged fifty-seven years, rather above medium height, spare habit, and blonde complexion, menstruated first at thirteen years of age; passed the menopause at fifty-four years of age; health began to fail about two years before cessation of menses.

History for six months previous to operation: Appetite poor, bowels constipated, nervous system irritable, sleep broken and unsatisfactory. Tumor in right iliac region gradually filling abdominal cavity. No clear signs indicating hydroperitonæum, but slight wave on succussion. Distressing, indescribable pain in region of right

* Read before the American Association of Obstetricians and Gynæcologists September 25, 1895.

ovary, reflected to the stomach, causing nausea and coming in periodical paroxysms. The above history was furnished by Dr. McKibbon, of Keosauqua, recently deceased.

I saw the case first in July, 1889, at the lady's home. There was fluctuation with dullness over upper and anterior part of abdomen that did not shift with change of position (inference—fluid in a sac). In the lower and central part of abdomen the tumor seemed to be firmer and fluctuation absent or obscured—might be multilocular. Os uteri slightly larger than normal, and sound could only be passed two inches and a half backward and to the right, a common condition in ovarian tumor.

A rather firm elastic tumor could be felt through the vaginal wall, with which, when pressed upward, the whole abdominal contents seemed to move.

Incision made along the linea alba discovered a reddish tumor quite unlike the pearl-colored ovarian cyst. This tumor was about seven inches in diameter and proved to be the uterus containing an interstitial fibroid. An incision about four inches in length through the anterior fundus was made, and a white fibrous tumor, of the dimensions of a cocoanut, was shelled out or enucleated with the fingers. The incision into the uterus was closed with buried catgut sutures, fortified with one silk suture in the center of the cut.

A large ovarian tumor was then brought into view attached by a very broad pedicle to the right broad ligament. The tumor was emptied of its contents, two and a half gallons, and proved to be a monocyst.

The operator of to-day would have performed a hysterectomy. It is the first case where an interstitial fibroid complicating a large ovarian tumor was enucleated, leaving the uterus intact.

I am seriously of the opinion that many uteri and their annexa might be preserved by a like procedure and the woman be left un-mutilated. The patient made a good recovery and is now, six years after the operation, in good health.

CASE II.—Mrs. D., aged thirty-three years, was a strong, healthy young woman, well developed, regular in her menstrual function, married ten years.

History.—About eleven years ago she began to have some irritability of the bladder, manifest by frequent calls to urinate, with tenesmus of bladder after each evacuation. There was no history of injury or inflammation of the bladder or uterus to account for the symptoms. The urine all this time remained normal.

This condition grew gradually worse, with but short periods of respite, until she became pregnant seven years since, which rather increased the trouble than otherwise. She gave birth in due time to a healthy girl baby, but found no relief during the puerperal or lactation periods. The poor woman was driven from society, church and any other public or social gatherings on account of the frequent and urgent demands to evacuate the bladder, suffering torture from the fierce tenesmus following each expulsion of the small amount of urine that the bladder would tolerate.

During the last twelve months this condition has grown worse, and she has experienced a feeling of increasing fullness and pressure in the pelvis. She told me that she had passed many nights on the commode with her head resting on the side of the bed, getting only fitful snatches of sleep between the oft-recurring spasms of the bladder, at which time she felt as though she would force the contents of the abdomen and pelvis through the perinæum. During these eleven years of suffering she has been treated by physicians at many places, eager to relieve her; but drugs, electricity, pessaries, douches, baths, massage and dilatation of the bladder three times under an anæsthetic, all failed even to give even temporary aid. This was her condition when she applied to me for relief on April 1, 1895.

I discovered that she had internal piles that sometimes bled; but this condition had only existed for three or four years and was probably the result and cause of tenesmus. On examination *per vaginam*, the uterus was less mobile than normal and, upon lifting it upward, pain and a desire to urinate were produced. The base and neck of bladder as palpated through the anterior wall of vagina were exquisitely sensitive. Bimanual pressure disclosed thickening in the right ovarian region and preternatural fullness of the pelvic cavity.

An exploratory operation was determined upon, first to complete the diagnosis and, secondly, to relieve the condition if possible. Under anæsthesia I divulsed the sphincter ani and ligated the piles; then, putting the patient in the Trendelenburg position, I opened the abdomen and found the omentum drawn tightly down over the front of bowels and a large section of it anchored to the bladder, uterus, broad ligament and abdominal wall on right side. I ligated it by sections and cut between the ligatures. I then carefully detached the stump from the bladder, uterus, etc., also separated the bladder from the uterus and broad ligament on the right side, to which it was held by rather feeble adhesions.

Further investigation disclosed a small ovarian tumor developing

from the left ovary; it was snugly stowed away in the pelvis behind the uterus; this tumor accounted for the increased pressure experienced during the last twelve months.

Patient recovered rapidly, the irritability of bladder gradually subsiding until the last few days of her stay in hospital; she could sleep quietly all night without being disturbed by the bladder, a pleasure not enjoyed in eleven years.

CASE III.—Mrs S., aged forty-two, married, multipara, had enjoyed good health until the last seven or eight years. She began to have spells of hepatic colic until the attacks were merged into a continuous pain in the right hypochondrium with development of a movable tumor which was variously diagnosed as cancer, floating kidney, —everything except its true character.

The distress became so urgent that an operation was purposed and performed by Dr. Sawyer, of Centreville, Iowa, who discovered a large gall cyst filled with gallstones. This he stitched to the abdominal wall and evacuated a large number of stones with inspissated bile and mucus. The operation gave no relief from pain and burning in the abdomen but rather grew worse, till finally the doctor concluded that there must be a calculus in the cystic duct—the common duct never having been obstructed, as she had always been free from jaundice. To relieve this supposed condition he made a median incision through which he could, by the finger, determine that the cystic duct was free; this incision healed kindly but brought no relief. Her intense suffering and hopeless condition unsettled her intellect and she had a term in the Mount Pleasant Asylum and finally returned to her home an unmitigated sufferer. This condition continued until I saw her.

She described her pain as an intolerable burning deep in the right hypochondriac region, with an indescribable pain radiating from this central point through chest and abdomen. On inspection of abdomen, I found three cicatrices; the third was from an operation to relieve a ventral hernia protruding through abdominal parietes at the site of the first operation. The original cicatrix was drawn deeply back, umbilicated like a depression in a mattress or cushion at the point where the button or tuft is drawn by its ligature. This was the site where the gall cyst had been stitched, that viscus being too short to permit the abdominal wall to come forward to its natural position, so the whole weight of the abdominal wall was sustained by this imprisoned gall bladder, the liver protesting against this hard tug by pain.

That was my diagnosis of the cause of the suffering; the proposed

operation was to cut out this cicatrix, ligate the cyst and excise it. This I did by making an elliptical incision, including all the scar tissue. There were extensive adhesions of omentum and bowel to the cicatrix, which required careful separation; this an operator must always look for in secondary operations upon the abdomen. I found the adherent cyst drawn as tense as a fiddle-string. I transfixed the cyst, now drawn out into a small cord less than the size of a little finger, ligated and dropped the stump into the abdomen. I closed the ventral opening—the borders of which had become widely separated by the long, protruding hernia—with plaited silk whipcord, endeavoring, if possible, to close the rent. This effort failed and has caused more or less pain, from which at last reports she was but little annoyed. The old burning, indescribable pain was at once relieved and has not returned to plague her.

This case illustrates the possible, I might say probable, complications liable to follow fixation of the gall cyst to the abdominal wall—namely, pain from tension and ventral hernia through the unclosed abdominal wall. Cholecyst-enterostomy, by means of the Murphy button, or cholecystectomy would have avoided the sequelæ that I failed in part to correct.

CASE IV.—Mr. T., a young man twenty-five years old, school-teacher and farmer; strong, robust, plethoric habit. About the 15th of December last began to have some uneasiness in abdomen and applied to his home physician for relief. Cathartics were administered, which were rejected by the stomach; for ten days repeated doses of cathartics, together with large injections of water, were faithfully tried but without avail. There was at no time offensive or stercoraceous vomiting and the bowels were absolutely quiescent. Finally elaterium was given in full doses but met with like success. Christmas day I was called to see him and found him in bed; pulse 100, temperature 102° F. Abdomen flat; no tympany, tenderness or tumor discoverable. I was not well satisfied as to sensation conveyed to my hand on deep pressure of fullness at point about halfway between the umbilicus and lower border of the ribs and two inches to the right of the median line. Now, here was a combination of symptoms which puzzled me—obstruction of bowels for eight or nine days, vomiting but not stercoraceous, no tympanites or tenderness. Large injections of water had repeatedly been administered, but no fecal deposits could be discovered. Abdomen flat and walls flaccid. At what point in the intestinal tract must the obstruction be located to produce this combination of symptoms?

Gallstone obstructions, cancer or stenosis of the pylorus were out of the question owing to the history of previous good health.

Fæcal deposits eliminated by large injections of water passing freely the entire length of large intestine, and no discoverable tumor. The bowel must be obstructed near the stomach, as we would have a great accumulation of gas were the obstruction low down.

There was no evidence of local or general peritonitis, no pain, tympany, or rise of temperature until last two days, when temperature rose to 102° F.

I opened the abdomen by a central median incision and found the omentum and peritonæum covering the bowels bright, smooth and healthy. Introducing the hand, I could feel an abnormal fullness back of the stomach; bowels, large and small, empty. I drew out the small bowel, coiling it in warm cloths wrung out of sterilized water. As the jejunum was being withdrawn there was some difficulty experienced, some resistance or clinging, and the bowel looked congested and its mesenteric veins engorged. The resistance and clinging continued, and increasing congestion of a dark-red color, until suddenly the bowel slipped from its imprisonment and the duodenum was reached. The congestion rapidly faded out, the bowel soon regained its normal color and fluid from the stomach and duodenum gurgled into it.

Digital examination failed to discover the former tumor back of the stomach. We came to the conclusion that the upper part of the jejunum had, in some unaccountable way, been forced through the foramen of Winslow. The imprisonment did not produce entire strangulation, its grip being sufficient to check but not to stop circulation; consequently there was but little pain. Vomited matter consisted of ingesta and that regurgitated from duodenum; no stercoraceous matter was vomited, and all fæcal matter had passed from the bowels soon after the first manifestations of obstruction. Gas had free passage from the entire intestinal tract below the upper two feet of the imprisoned jejunum. Hence the flat condition of the abdomen and empty state of the bowels.

CASE V.—Mrs. D., aged sixty-three, has suffered for years with hæmorrhoids, internal and external. Within the last eighteen months she noticed a growth in the vagina from the right wall, which, at the time she came to St. Joseph's Hospital for treatment, was protruding from the vaginal ostium. About the time she noticed the growth in the vagina a tumor began to develop in the lower abdomen. The last four months she suffered intense abdominal pains, with exquisite ten-

derness over the abdomen. This was attended by fever, anorexia and rapid emaciation. Operated May 30, 1895, first ligating the piles, then dissecting out the vaginal tumor, which was attached high up in the peivis to the cervix uteri and rectum and the cellular tissue between. Some large venous trunks were opened; hæmorrhage controlled by catch forceps left *in situ* thirty-six hours.

The abdominal tumor was about six inches in diameter and freely movable; manipulation of the tumor caused pain. On making the usual median incision a dark, dusky-red tumor presented, surrounded by and adhering to the omentum, which, too, was congested with large veins running over the surface of the tumor. There were some adhesions between tumor, intestines and mesentery, but not extensive. The omentum was adherent to the abdominal peritonæum over an area several inches square. The peritoneal surface in general was congested, of a dark-red color, having lost its smooth, glistening, normal appearance. On searching for the pedicle I could find nothing but a slim, white fibrous cord, not thicker than ordinary wrapping twine, six inches long, connecting the tumor with the broad ligament at the original site of the ovary. The adherent omentum was carefully tied off in sections, the fibrous string severed and the opening through the abdomen enlarged enough to deliver the tumor without tapping. This was done in order to avoid septic infection, which I feared from the dark color of the tumor and the difficulties attending leakage around the trocar. This is a representative case, illustrating what sometimes occurs to ovarian and other tumors of the abdomen with long, slim pedicles—to wit, twisting of the pedicle. The peristaltic action of the bowels, the movement of the abdominal muscles and of the body generally, all contribute something in the way of revolving the tumor on its pedicle. The twisting soon produces partial strangulation of the veins, obstructing the return of blood. Hyperæmia of the tumor, as a consequence, eventuates in plastic exudation.

A few more revolutions of the tumor complete the strangulation of the blood-vessels of the pedicle. The exudation of plastic lymph and embryonal cells become organized, and adhesions to the surrounding viscera complete the vitality of the tumor which, though of a very low order, is thus maintained, as a parasite is nourished by its new environments. The patient recovered from the multiple operations, and at this time, four months after, is enjoying good health.

LARGE HYDRONEPHROTIC CYST SIMULATING OVARIAN TUMOR; ABDOMINAL NEPHRECTOMY; RECOVERY.*

BY HERMAN E. HAYD, M. D., M. R. C. S. ENG.,
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It has been well said that the abdomen is the "*terra incognita*," and no doubt it will ever remain so—full of mystery, speculation, and uncertainty. Thanks, however, to the labors of Lawson Tait, doubt associated with danger need not long imperil the life and safety of the individual, since exploratory incision is now recognized as a scientific surgical procedure.

Cysts of the kidney, like benign growths of other organs, are often very insidious in their development and reach enormous proportions without causing any very great pain or distress. These cysts may either form in the kidney substance and a number of them coalesce, and thus make a cavity of considerable size, or, from mechanical obstruction in the ureter, the pelvis and calices of the kidney may be greatly distended with urine and pus, and form those well-known pathological conditions, hydronephrosis and pyonephrosis. The hydronephrotic kidney presents a very interesting appearance, as is beautifully demonstrated in the specimen I show you. It is lobulated from the numerous sacs on its surface. Its cortical substance has disappeared, and simply the capsule remains as the covering of the cyst wall. The medullary substance with its pyramids have been scooped out by the gradually distending calices, infundibula, and pelvis, and the several sacs or lobules are separated from one another by thin septa which are the remnants of the original cortical prolongations between the pyramids. The greatest distention has taken place in the hilum and pelvis, as this is the most elastic and distensible area.

In exceptional cases the organ becomes so dilated that it fills the abdominal cavity and makes it almost impossible to differentiate between it and an ovarian tumor. The urinary symptoms may be quite negative, as the other kidney, if healthy, supplements the func-

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tions of the diseased organ and is capable of secreting a large amount of healthy urine.

Even the microscope helps us but very little in many of these cases. In fact, the kidney disease is not suspected, and consequently the cystoscope, which could clear up the diagnosis, is not thought of. Of course, had our suspicions been called to this kidney, a cystoscopic examination would have shown us that through one ureteral opening urine entered the bladder and not through the other, and thus a diagnosis might have been established.

The case I beg to present has the following history :

Mrs. B., aged fifty-eight, a strong, thickset woman of Irish extraction. Married, and the mother of nine children, the youngest ten years of age.

I was called to see the patient on January 11, 1895, and found her suffering with pain in the right lumbar and iliac regions. Temperature, 101° ; pulse, 86. She had always been well and strong; in fact, had not been sick a day in years. A few weeks previous to this illness one of her sons was very sick with pleuropneumonia. She nursed him through the attack and made no complaint whatsoever.

Upon examination, I was surprised to find the abdomen very much distended by a large cystic tumor. She had herself noticed that she was getting very fat, but as this increase in size was not accompanied with pain, she gave the matter no further thought.

The tumor filled up the whole right side and extended some inches to the left of the umbilicus. The percussion wave was well marked, even into the left lumbar and iliac regions, and the dullness general, except in the left flank. The uterus was quite movable, and the right vaginal vault was flattened by the fluctuating mass. A diagnosis was made of right ovarian tumor with considerable adhesions to the abdominal wall. The urine was collected for twenty-four hours, and there were voided forty-two ounces of a pale straw-colored fluid, with a specific gravity of 1022, acid, no albumin, and no sugar.

The patient was taken to the Woman's Hospital, and on the morning of the 14th, after suitable preparation, the abdomen was opened. Dr. Frederick assisted me.

After entering the peritoneal cavity, it was evident that the tumor, which presented in the line of incision, was extraperitoneal. The incision was, however, enlarged and extended above the umbilicus, and the dimensions and bearings of the tumor carefully studied. It was decided that we were dealing with a huge kidney cyst, and instead of closing the front incision and attacking the kidney through the

loin, we should proceed to enucleate it at once. The omentum and bowels were pulled out of the wound and protected by hot towels, and a slit was made through the stretched transverse mesocolon. The cyst wall, which was as thin as tissue paper, broke upon the slightest manipulation and flooded the whole peritoneal cavity with a thin, yellowish fluid—I should say several quarts—with a decidedly urinous odor. It contained some yellowish flakes.

The fingers were then passed between the cyst wall and the abdominal parietes, and the tumor was with considerable difficulty separated and tied off. The stump was divided into three sections and tied with catgut. The hæmorrhage was very slight, and but few blood-vessels needed any special attention. The ureter was dilated and funnel-shaped, and pervious for some inches where an obstruction was felt. However, no stone or concretion of any kind was found. The peritoneal cavity and the excavation where the tumor existed were thoroughly flushed with several gallons of warm, sterilized water, and a counter opening in the loin was made and a rubber drainage-tube inserted.

The edges of the incised mesocolon were brought together with catgut, and thus the peritoneal cavity was closed; the future progress of the case was like any extraperitoneal operation. The abdominal incision was closed with silkworm gut, and a glass drainage-tube was well placed behind the uterus.

The glass tube was drained as often as there was any indication—at first every fifteen minutes, and then the intervals were prolonged—and on the following morning, at half past seven, it was removed. The patient rested comfortably between the intervals of drainage, had little or no nausea, and felt fairly comfortable.

Six hours after operation she was catheterized; eight ounces of urine was obtained, and in four hours (10.30 P.M.) eight ounces more were voided; at 1 A.M., three ounces; at 3 A.M., three ounces; and at 7 A.M., three ounces—making in all twenty-five ounces from eleven o'clock, the hour of operation, to 7 A.M. the following morning. Pulse, 100; temperature, 99.6°. Five grains of calomel and five grains of soda were given, and at 12.30 a Seidlitz powder, when the bowels moved off very satisfactorily.

On the fourth day the temperature ran up to 102°, but on the following morning it fell to 100°, and on the sixth day it was 98.5°. The stitches were removed on the eighth day, and the wound had healed kindly throughout. There was some oozing, although comparatively little came through the posterior opening—that is, through

the rubber drainage-tube, and the dressings were changed every four days.

All went well until the thirteenth day, when the temperature went up to 103.5° , and pus welled through the tube, evidently due to some infection in careless dressing. The cavity was then frequently irrigated, and after a couple of weeks the discharge ceased and the sinus closed.

The patient was removed to her home after having been in the hospital five weeks. The temperature had been normal night and morning for some days.

The second day after operation there was collected thirty two ounces of urine; specific gravity, 1022; acid; no albumin; no sugar. The bowels had moved a number of times and daily evacuations took place from now on, and the urine averaged from thirty-two to forty ounces *per diem*.

She did well at home for three weeks, was up and about, and ate heartily and slept well. On one of our bitterly cold February mornings she carelessly stood in the door, only half clad, and took cold. I was sent for in a few days, and found the chest full of bronchitic râles, with some fever and increased pulse. On the following day acute pulmonary œdema set in, and she died seven hours after my morning visit.

The case is interesting, first, on account of the huge size of the hydronephrotic cyst, as well as the absence of pain or distress in its formation; second, the obscurity of diagnosis, or, at all events, the simulation of this cyst with ovarian tumor; third, the increased functional activity of the one kidney—in fact, its ability to vicariously functionate for the other organ; fourth, the ease and facility with which the tumor was removed *per abdominem*, and the uninterrupted convalescence for thirteen days. I am satisfied that the patient would have been thoroughly well in three weeks had the posterior opening not been infected in some way, and I am inclined to believe the patient herself infected the wound by scratching it with her fingers, as she was very willful and unmanageable. Fifth, at no time was albumin found in the urine, and quantitatively and qualitatively the secretion of urine was above the average. At one testing she passed two hundred and eighty-seven grains of urea in twenty-four hours.

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EDITORIAL.

DOCTORS AND PROFESSIONAL CONFIDENCES.

This ever-present topic formed the basis of an excellent editorial in a recent number of the *British Medical Journal*. As the subject is, unfortunately, one of universal importance, it can scarcely come amiss if we consider it in relation to ourselves. The text of the editorial to which we have referred is as follows: "It is an old saying that a secret can be kept by three men if two of them are dead, but a woman conceals—what she does not know. A wise man will make it a rule never to speak to his wife of professional matters, never even to tell her the names of those who consult him."

It is undoubtedly true that wives are nearly always anxious, partly through curiosity, partly from the woman's desire to monopolize the man she loves, to know as much as possible of the professional life of their husbands; it is also true that doctors are generally more dependent upon their wives than are other men and they certainly do not possess a monopoly of wisdom in the marital relation—to say the least. And yet, it is not the wife who is the only bane of professional honor nor is the telling of actual secrets confided by a trusting patient of sufficient importance, through the frequency of its occurrence—at least in this country—to justify inveighing against the abuse. The case may be otherwise in England, where the combination of rank and wealth have made snobbishness almost a national trait and the temptation to gossip about "one's betters" almost irresistible, but in America it is still a deeply rooted belief among us that the physician

who would betray a secret affecting the honor of one of his patients is of the moral caliber of the popular type of bank president or cashier and that his career deserves the same effectual ending, which generally overtakes the latter.

But with us the social conditions are different. Here there is no "white light which beats upon a throne" and its human appendages; there is only the yellow glimmer which gold reflects upon its fortunate possessors. No cataclysm can occur to the social fabric by the telling of any secret and therefore the temptation to tell is not so great.

But there is a species of betrayal of confidence, which is common enough among us and which is the source of much harm. This is the practice of telling the names of our patients and the diseases for which we are treating them, not only to the partners of our bosoms but to medical friends. To say the least, there is a species of indelicacy in speaking of the personal affairs of others with strangers, when these affairs are known to us only in our professional capacity. Apply the Golden Rule to ourselves! But when the medical man, who tells the names of his patients in connection with their diseases, is a gynæcologist, he ceases to be merely indelicate and becomes dishonorable. For a woman resents nothing more, and with greater justice, than a discussion among strangers of the physical condition of those organs, which both instinct and conventional education have always enshrouded with the veil of modest silence. However unreasonable it may seem from the physician's point of view, a functional or organic abnormality of the genitalia is still, and probably always will be, a reproach to a woman; and to expose her infirmity to another woman, whose interest and sympathy can, at the best, be only a vicarious one, is a cruel betrayal of trust on the part of the gynæcologist.

And yet, as we have said, the doctor's wife is not his only confidant, perhaps not even his most frequent one. Many medical men who would not talk of the diseases of their patients with their wives or with any lay person, as a matter of principle, nevertheless consider themselves freed from the obligation of confidence when talking with a friend of the same profession. The motive in the latter case is usually that of vanity and a desire to boast, for the disclosures generally have the effect of increasing the listener's appreciation of the value of the narrator's practice from a social or monetary point of view.

From a human standpoint, there is far less excuse for the medical confidant than the marital one for, in the latter case, the motive though still a sordid one is, at least in one respect, a matter of mutual interest; but from the professional standpoint, which is the human

motive governed by an intelligent and particular self-restraint, the giving of such medical confidence, in either direction, is equally reprehensible.

Nor is it at all necessary. The fact of the advent of a rich patient or the particulars of an interesting case may nearly always be discussed with either wife or medical friend, without the mention of names and in such a way that the identity of the patient shall not be guessed. The desire to tell, as well as that to hear, the names connected with affairs of a private or personal character is at once the mark of vulgar curiosity and a contemptible nature. The man who tells the name of the woman from whom he has received favors of a certain kind is, by popular accord, considered a *cur*; is it more manly conduct in the gynæcologist, or less detrimental to the patient, to tell the name of a woman who may have cancer, or whose ovaries or uterus he has removed, or who may have some congenital malformation of her genital organs? Could a patient be expected to forgive her doctor if she knew that he had discussed such a condition, which to her is a matter of the most serious and sad importance, with any one, man or woman, who was not authorized to take a most intimate part in her personal affairs?

No, the vulgarity, the selfishness and the dishonor of such conduct in a medical man is without excuse. It is cruel to the patient, unworthy of himself and demoralizing both to the profession and to society at large.

CORRESPONDENCE.

THE PRESTON RETREAT CONTROVERSY.

Dr. Richard C. Norris versus The Preston Retreat.

To the Editor of the American Gynæcological and Obstetrical Journal:

SIR: This controversy with Dr. Richard C. Norris was not of my inviting, nor of my provoking, desire, or anticipation. And certainly I had no reason to anticipate a controversy of the character which he has of his own free volition, and without shadow of reason or excuse, and from motives not difficult of analysis, provoked. So far as Dr. Norris was concerned, I had special reason to feel secure from unjust criticism and false statements when I recalled the treatment I ex-

tended him when he entered the Retreat as my successor. I met him at the doors of the maternity and gave him sincere welcome, extended him every personal and professional courtesy and kindness ; my time was given and everything done to familiarize him with the details and duties of the position to which he had then but recently been appointed. I was passing out after years of experience in this maternity, and had wakeful memories of the anxieties, difficulties, and embarrassments I had experienced on my first entrance—the anxieties had kept close company with me all through my incumbency. Such anxiety is inseparable from the conscientious ministering at the bedside of mothers. There a man of the best and at his best is not too much. These facts came close home to me and I made willing and conscientious effort to remove or minimize for my successor all difficulties and embarrassments as far as my ability, experience, and time enabled me. This service was not grudgingly but most freely and heartily given. Now the hand that accepted the service with mock gratitude treacherously turns to distort, mutilate, and falsify the records of a maternity which has taken firm place among the most successful and noblest charities, not alone in America, but of the world ; of an institution that has grown to be referred to in highest terms of praise by the journals and distinguished obstetricians of two continents.

It is impossible for the unprejudiced to conceive that any important or useful end would be attained by an attack upon the records of the Retreat by its physician-in-charge, by one whose work and its issues must, in common with that of his predecessors and those who may follow him, become incorporate in the history of the institution. It will be difficult for any one to escape the conclusion that there was some ulterior and questionable motive prompting, nor will it be difficult for the average mind, lay or professional, to determine the motive.

What not much later on will amaze the average citizen will be that the managers of the Preston Retreat—the benevolent, broad-minded, representative business men they are—tolerate attacks that reflect upon the care and scrupulousness with which they direct the affairs and guard the integrity of the records of the Retreat ; does more : besmirches and blots the history of an institution with which they should feel proud to have their names associated. And what will excite yet greater amazement will be that this man, all impacted and potted to overflowing with egoism, jealousy, and venom, has not been retired to the shades of that obscurity from which the great charity of the Preston Retreat, guided by the hands of a few kindly old mothers and

matrons, in the exercise of a mistaken sense of missionary duty, took him.

There is an old East India fable which has its application to some men. It illustrates those men in whose make-up essential qualities of manhood have been left out.

A mouse that dwelt near the abode of a great magician was kept in such constant distress by its fears of a cat that the magician, taking pity on it, turned it into a cat itself. Immediately it began to suffer from fear of a dog, so the magician turned it into a dog. Then it began to suffer from fear of a tiger, and the magician in disgust said: "Be a mouse again. As you have only the heart of a mouse, it is impossible to help you by giving you the body of a noble animal." Public opinion is usually the great magician that finally says to such a person: "Go back to your obscurity again. You have only the heart of a mouse, and it is useless to try to make a lion out of you."

To give to Dr. Norris' communication a broad and merited characterization is to say that there is not in word or line, or in the much between the lines, the faintest suggestion of professional manliness. All through is the taint of bad motive. Long before his first communication appears he makes the boast to doctors of what he intends to do—even makes the boast to a layman residing at as remote a point as Birmingham, Ala.

To dwarf my record he makes the records of the Retreat the subject matter of his private gossip. For this we have credible witnesses. It would seem that this deformed, rickety creature of Dr. Norris' brain was in process of incubation for nineteen months. The good obstetrician would say that there was something about this abnormal. But there is no accounting for freaks of nature—human nature. Again we must quote the introductory sentences of his first letter to the editor of the AMERICAN GYNÆCOLOGICAL AND OBSTETRICAL JOURNAL: "I inclose a letter which I will ask you to publish in the next issue of your JOURNAL. The statements therein made are *absolutely correct* [Italics mine] and are capable of ready demonstration. I send the letter to you for publication by a desire *for accurate statistics*. Dr. Price has *at all times* treated me with *courtesy*, and I am therefore *not actuated by any other motive*." Take these sentences apart from the accusing and false statements of his communication and they sound like poetry. Certainly they are poetic—in what other way could so much lofty sentiment be expressed? Poet and obstetrician combined—what a unique subject for the psychologist! But I must avoid excess of enjoyment and deal with more serious statements.

In reply to my statement that, with Dr. Goodell's consent, I always included his statistics in my own, Dr. Norris says: "This statement, unfortunately, *can now* [Italics mine] *be neither corroborated nor denied*. I am glad, however, that even at *so late a day* Dr Goodell's last 275 cases without a death have been *credited where they belong*." We suggested in our previous communication that Dr. Norris read up a little on obstetrics. We now renew that suggestion, and recommend that he should not confine himself to a primer, or that compend of which he, in collaboration with Prof. Barton Cooke Hirst, is the reputed author, but extend his reading to the general literature upon subjects with which he is least familiar—read something that will leave a solid and healthy deposit and save him from further intellectual softening. Dr. Norris is a member of the Obstetrical Society of Philadelphia, and has sat on its benches, and evidently nodded, or he would have known something of the following report and what was said in connection with it; and had he been disposed to be fair, honest, and manly he would have hunted up the report and made due and honorable reference to it and avoided the false accusation above quoted. Certainly not so early as the date of this report had the fumes of conceit mounted up and saturated his brain.

The report was made February 7, 1889—more than six years ago—and published in the *Annals of Gynecology*, vol. ii, pp. 287-290. The report and discussion reads as follows:

"A Year's Work in a Maternity Hospital.

"Dr. Joseph Price: In making this report, I desire briefly to call attention to the amount of work done, the routine treatment of patients, and a few alterations which have taken place in the building. During the year 1888 there were one hundred and eighty four deliveries in the Retreat. Of these patients, sixty-nine were primiparæ. There were one hundred and eighty-six children born, including two sets of twins; nine of these infants were stillborn; one hundred and two were males, eighty-four were females. There were thirteen forceps deliveries. Labor was induced in two cases at the eighth month. In one case a contracted pelvis, and in one the presence of a large uterine tumor. There have been no deaths of *mothers* in the Retreat for a period of nearly five years, furnishing a series of *five hundred and forty deliveries without a death*, the last death being from puerperal convulsions in a patient suffering from chronic Bright's disease, and who had had convulsions in five previous labors. Since this death there has not been a case of puerperal septicæmia in the institution. The great

success attending the work of this maternity is due to the strict enforcement of the law of cleanliness. Everything and everybody in the house is clean, and jealously kept so. *This system was enforced by Dr. Goodell, and has been carried out on the lines laid down by him.*

"The routine treatment of patients is as follows: The patient on entering the house is given a hot soap bath, dressed in clean under-clothing, and given a clean bed in the waiting ward. If necessary, a laxative is given, and the bowels kept soluble during her waiting period.

"Thereafter, until her confinement, she is obliged to take at least two hot soap baths per week, and to wear clean clothes. She is allowed to do such light work about the house as the physician may deem advisable, and is encouraged to take as much open-air exercise as circumstances will permit. Every effort is made by the officers and employees of the institution to make it as cheerful and homelike as possible.

"When ready for the delivery room the patient is again given a hot soap bath and an enema, and a vaginal injection of one-to-two-thousand bichloride-of-mercury solution. She is clothed in clean night robe and drawers, and placed upon a new, clean delivery bed. Scrupulous cleanliness is observed in all manipulations of the patient, and after delivery a second vaginal injection is given, and a vaginal suppository of iodoform is introduced. The patient's person is carefully cleaned and all soiled clothing removed, the binder applied, a clean set of night clothes put on, and the patient placed in a new clean bed in the ward. All of the soiled articles are immediately removed from the delivery room, and a new bed made up for the next patient.

"The patients in the ward are carefully observed by the nurses, but no unnecessary handling or interference indulged in. The patients remain in the ward until they are able to be up, when they are removed to the convalescent ward. As the ward is emptied the straw beds are burned and all the bedding most carefully cleansed. No soiled linen (as draw-sheets, diapers, napkins, or other articles of clothing) is allowed to remain in the ward, but when soiled is immediately placed in a covered receptacle and removed from the ward and building. No sponges, wash rags, or absorbent cotton are used in the house. Corrosive jute supplies the place of these articles, being clean, soft, remarkably absorbent, and cheap. It is destroyed immediately after use. The pads used to absorb the lochia are also composed of jute, and are likewise destroyed after use. The beds in the ward are of new straw. All discharges from the delivery room

are immediately burned. All bedding, soiled beyond cleansing, or contaminated by purulent or specific discharges, is likewise burned. In short, every effort is made to keep the house perfectly pure and sweet. The arrangement of the house permits of rotation in the use of the wards, so that a ward once emptied is not again used until three others have been filled. In the meantime it is most carefully and scrupulously cleaned and thrown open to the atmosphere. A similar system is pursued in the convalescent wards and delivery room. A few alterations in the building have very markedly increased the effectiveness of the institution and the comfort of its inmates. In the first place, the bathroom and water-closets have been removed from the building proper and placed in the towers in the rear. The plumbing is as near perfect as modern sanitary science can make it. The verandas have been inclosed in glass, forming large, light, airy corridors about the rear of the building, and furnishing a distinct circulating atmosphere between the house proper and the wards and the water-closets. The ventilation of the entire building is simple and perfect. The capacity of the house at present is about fifty patients per month, and when a few contemplated changes are made the capacity will be doubled and the institution rendered as nearly a perfect maternity hospital as is practicable.

“Dr. William Goodell said it had always been a matter of great regret to him that he did not adopt this system a year or a year and a half before he did. He supposed it was partly due to the conservatism of old age, and partly to a series of some forty deaths from bichloride poisoning he had collected. Tarnier’s report of the results following the use of this agent so impressed him that he was led to make the change. Before he adopted the system which has just been detailed by Dr. Price he had once as many as five deaths in about one hundred and fifty cases—four of these due to septicæmia. Latterly hardly a year would elapse without the occurrence of one or two deaths. When he first started, everything about the institution was new and clean, and for several years he had the best record of any maternity hospital in the world. After the building and articles had become old deaths began to occur. He tried carbolic acid, but it proved of little value. After beginning the use of corrosive-sublimite injections, iodoform suppositories, and antiseptic pads, he did not have a death from septicæmia. The only death was from Bright’s disease of the kidneys. During this time he had been consulted, perhaps, a dozen times in the course of a year to see women dying from puerperal septicæmia. He thought that in private practice it

would not be needful to follow out so strictly the details of the method as it is practiced at the Preston Retreat. For instance, the antiseptic pad and the iodoform suppositories might be done away with. He believed, however, that every practitioner should syringe out the vagina, both before the birth of the child and after complete delivery, with a bichloride solution of one to two thousand. The hands should also be disinfected. He was called in consultation by a physician in the country who had had four or five deaths from sepsis in a short time. He found that this physician had been treating a case of phlegmonous erysipelas. He knew of another physician who had lost, he thought, seven cases—certainly five—from dressing a sloughing case of erysipelas. Antiseptic measures would probably have saved all these cases.

“Dr. Joseph Price said he was as anxious about a labor as he was about a section, when he read reports of maternity hospitals with a mortality of from two to twenty-seven per cent. This troubled him not a little, now that he controlled a large maternity hospital—one in which *Dr. Goodell had left a record of two hundred and seventy-five cases without a death.* He sees a case after labor as frequently as he does a drainage after abdominal section. When this hospital was new *Dr. Goodell had a run of two hundred and fifty cases without a death from any cause. This was the longest run of any institution at that time.* After this deaths began to occur. Later *Dr. Goodell adotted the gospel of cleanliness,* and with what result he has just told you. *The results are now precisely the same as he left them.* In regard to Dr. Hirst’s question as to whether the same results might not be obtained by simpler methods, Dr. Price said that they did not differ much in regard to the use of solutions and that portion of the treatment. The toilet of the house was perhaps just as systematically carried out at the Philadelphia Hospital as at other institutions. The pad that he had shown would hold a pint of fluid. It saved an immense amount of work. It was now coming into use as a menstrual pad and was very convenient for ladies traveling. In private practice the mortality was greater among the rich than the poor. Among the poor he had had seven hundred deliveries without a death. He thought the difference was in the water-closets which the better classes have in their houses. The mortality throughout the country was large. In a small town in Ohio, with a high elevation and beautifully located, he had recently known of two deaths from septicæmia. Last summer he had been called to see puerperal cases nine times and all died.”

This report was made at the end of my first year at the Retreat (February, 1889), and it will be noted how fully it proves the injustice and untruth of Dr. Norris' statement above quoted. The absolute unqualified falsehood of his statement is established beyond all question by the published Records of the proceedings of the Obstetrical Society of Philadelphia, and to the eyes of the profession especially, for which all his statements were written, must cloud all his other utterances. They are all of the same cloth and seamed with pompous self-conceit and falsehood.

He again refers and gives special prominence to the case dying in the Pennsylvania Hospital of suppurating appendicitis and general purulent peritonitis, as revealed by the autopsy. He says: "Had the records of the Retreat furnished me with evidence that this patient was discharged enjoying thorough, favorable, and aseptic convalescence, the case would not have been referred to." This is the only feeble semblance of honesty of statement he has shown, yet this showing is damaging—it clearly proves how willing and eager he was to draw the wildest inferences to serve his malignant purpose to falsify my record. Does Dr. Norris make such a note in every case discharged? Did Dr. Goodell? The entry was made after learning from one of the staff of the Pennsylvania Hospital of her admission and death. It was my practice where convalescence in any case was unsatisfactory to request the regular monthly committee to allow a longer stay in the Retreat, and this fact was noted on the minutes. If Dr. Norris will refer to Dr. Goodell's last book of minutes he will find an entry of this character in the case of Mrs. Green, who, when I took charge, was dying of puerperal sepsis due to acute gonorrhœal pyosalpinx. There being no provision in the will of Dr. Preston, the founder of the maternity, for cases requiring surgical treatment, this patient was removed and operated upon by me, making a perfect recovery. The treatment of the case of this patient was entirely at my own expense, costing out of my own earnings more than one hundred dollars. There was yet another case removed from the Retreat for suppurating dermoids.

The statement as to Annie McM., transferred to the Pennsylvania Hospital, is of the same distorted and unmanly character as others. I am glad, however, that the record was made complete in this case by her recovery at the Pennsylvania Hospital. If I sent her there it was because I thought it was typhoid fever, developing late in her convalescence, and while she was in the convalescent ward. If I recall correctly the facts associated with the case, she was examined at

the Retreat by one of the staff of the Pennsylvania Hospital, who made the diagnosis of intermittent or typhoid fever. At the time of her transfer there was no evidence of phlegmasia alba dolens. Could Dr. Norris scientifically attribute phlegmasia wholly to child-bearing with his own record of that trouble in the Retreat, extending, as it did, in puerperal cases to healthy nurses, who narrowly escaped with their lives? Again, as to the Cæsarean section. In a previous communication I fully explained all the facts relating to it. It was a case outside the Retreat and in no manner involved in its record. The one (I can not designate him by any term expressing honor) who made the autopsy told me at the time that the woman died of double pneumonia, and that everything in her abdominal cavity was healthy. Whether he lied then or is lying now to gratify personal malice and to aid Dr. Norris in an undertaking prompted by a like motive we will not here attempt to determine. We will only add that the woman died too early and too rapidly for purulent peritonitis. This outside case and the search of the records of the hospitals furnishes very strong evidence of Dr. Norris' animus and his eagerness to impeach my record. Behind Dr. Norris in this attempt can be seen peering faces, distinguishable by the deep lines of perfidy by which they are lined. Certainly there could be found better employment than poking around among vermin for inspiration. Before long Dr. Norris will have reason to exclaim with Job, "Have pity upon me, O ye, my friends!" These controversies have for me one healthy result, they keep me up on Scripture. I am not so sure Job said the above, but it is good and fits.

The witty Dean Swift is credited with saying that at birth the brain of each person is bitten by a willful little sinuous alligator, and that the form of his incision determines the future of the individual. If the bite be circular the result is science, if conical the person takes to politics, if triangular he becomes an agitator. The direction of the incision inflicted upon the infant brain of Dr. Norris we will leave to the profession to decide. It is to be hoped that the little alligator in this particular case did not survive the operation to inflict a similar incision on another infant. One of the kind is enough. Another assertion of Dr. Norris I will here quote: "Unfortunately, the records of the Retreat do not include the pulse and temperature charts of the patients of Dr. Price, all the charts having disappeared a few days before I assumed charge of the institution."

I valued these charts, and regarded them as sacred property of the maternity. They had been shown with some pride to hundreds

of physicians visiting the institution during my incumbency. I will say here with all the emphasis I can command that any man who, by innuendo or implication, directly or indirectly says that by any act or knowledge of mine these charts "disappeared" from the Retreat, that he is a willful, malicious, and deliberate liar and coward. All books, records, papers, charts, stores, and supplies, everything from cellar to attic, were most carefully placed in his hands in the presence of the regular monthly committee. These charts were known to be in the Retreat for one month after my finally leaving the Retreat. Why did he not allude to their "disappearance" in his first communication? Why did he remain silent as to their being missing from the Retreat for the long period of nineteen months, until his second communication in this controversy, when he had grown desperate for ammunition?

My nephew, Dr. George M. Hughes, being familiar with the work of keeping the records, at my request remained a month after my departure to *gratuitously* assist Dr. Norris until he could familiarize himself with the work. All through the time Dr. Hughes was in the Retreat the charts were there, and were there when he left. If they have disappeared, Dr. Norris is the only man who can account for their being missing.

Now brief reference to Dr. Norris' own work. As he writes of it he says: "I know of no case of imperfect convalescence, and of but one death after discharge from the institution." I will, as delicately as I can, make a few inquiries, not expecting answer, but to stimulate reflection. A nurse was hurried from the Retreat for an ambulance to take away the little Indian girl dying of sepsis. When she applied for admission she was healthy, had no cough, had sung two or more solos just before her admission at a concert given at Association Hall. At that time there was no evidence of phthisis. Whatever her trouble, it developed at the Retreat while under Dr. Norris.

We would further call Dr. Norris' attention to Mrs. B., of Ashton Court, discharged after two weeks in the Retreat and carried by two members of her family to her home, and from there to the Municipal Hospital, where she died of sepsis in less than five weeks from the date of her delivery, and in two days after her admission to the hospital. Why did Dr. Norris follow this woman to her home and have consultation with two other physicians? Was she not septic when she left the Retreat and doing badly? Did Dr. Norris ask the board to prolong the stay of these patients? Right here we will say that,

by the very statements by which Dr. Norris attempts to falsify my record, he would thrust the laurels of Dr. Goodell, for whom he professes so much veneration and adoration, in the mud. While there was no overflow of affection, personal or professional, between Dr. Goodell and myself, I always gave him due credit for his successes. Now that he is dead, common decency commands silence. He was generally on the benches of the societies, always taking an active interest in their proceedings when I made my reports, and was never given reason to complain and never did complain.

I hope I will always find more to instruct, cheer, and appreciate in the good than in the bad. Both Dr. Goodell and myself treated the records of the Retreat with great candor, as was our duty. We had no reason to be ashamed of them, and we further regarded them as the property of the institution, in which we had a pride; their integrity was scrupulously respected.

When Dr. Norris expresses the feeling and assured hope that his "own statistics at the Retreat and those of similar institutions will not suffer by contrast," he but expresses the hope that every honest and humane man must feel. A man would be a brute in every instinct and fiber of his being who would withhold due credit and honor from the man who mitigates the sufferings and saves the lives of mothers. To low estate indeed has that man fallen in all that is best of human attributes who from jealousy or some petty spite would make a quarrel "over the counterpane that covers a mother with her newborn infant at her breast."

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REVIEWS.

THE TREATMENT OF DIPHTHERIA BY ANTITOXINE. A Monograph by WILLIAM H. WELCH, M. D., Pathologist to the Johns Hopkins Hospital and Professor of Pathology, Johns Hopkins University. Reprinted from *The Johns Hopkins Bulletin*, July and August, 1895.

This monograph by Dr. Welch we consider the most valuable exposition of the subject that has appeared. The well-known reputation of the author for accuracy and careful and scientific observation makes his work of the greatest value to those conservative members

of the profession who wait for the truth to appear after the glamour and ultra-enthusiasm that always accompanies the introduction of an important innovation has subsided.

The treatise is based upon the study of over seven thousand cases, and we feel we need offer no apology to our pædiatric readers that we have made this review practically an abstract.

Dr. Welch introduces his subject with the statement that unless one denies absolutely the casual relation of the Löffler bacillus to diphtheria, it must be admitted that the treatment of this disease by antitoxine rests upon a sound experimental basis. There is but one notable opponent of the view that the Löffler bacillus is the cause of diphtheria, and his arguments are well answered and the evidence in favor of this theory are conclusive to the author. The laboratory does not furnish any more impressive experiments than those which demonstrate the power of antitoxic serum to prevent and to cure the disease caused in animals by inoculation with the diphtheria bacillus or its poison. The only question in this connection is to what extent the conditions in the treatment of experimental diphtheria by antitoxine are or can be made similar to those in the therapeutic application of the same agent to human diphtheria. It is conclusively demonstrated that in uncomplicated human diphtheria, no less than in experimental diphtheria, the local inflammation at the site of infection is caused by the growth of the Löffler bacillus, and the lesions of internal parts and the systemic symptoms are due to the absorption of a toxic substance or of substances formed by this bacillus. It would be difficult to understand why an agent with the specific property of neutralizing in the bodies of animals the effects of these toxic substances should be unable to neutralize in human beings similar effects of the same toxic substances, provided this agent can be administered in the proper dose and at the right time.

Dosage and timely administration are factors of prime importance in determining the efficacy of antitoxic treatment. It is our inability to conform to the demands of these factors which has rendered thus far the treatment of tetanus in human beings by antitoxine disappointing.

We have no certain knowledge as to the nature of the substances called antitoxines, nor as to their mode of action. There are two prominent theories as to the mode of action of diphtheria antitoxine—the one called the chemical, the other the vital theory. The experimental evidence is in favor of the latter.

One of the most important characters of antitoxine is that it re-

quires a definite quantity of this substance to neutralize the effect of a definite quantity of toxine. We have no precise method of determining how much and how virulent the poison may be in a given case of human diphtheria, nor how susceptible to the toxine the patient may be. The main factors in determining the dose are the age of the patient, the duration of the disease and the apparent severity.

Both experiments on animals and clinical experience demonstrate that the earlier the antitoxic serum is administered after the inception of the disease the better are the chances of recovery, as will appear from the statistics to be presented. The evidence is conclusive that the superiority of serum treatment over all other methods is most strikingly manifested in the results of the cases in which the antitoxine is given not later than the third day of the disease.

The evidence as to the efficacy of the antitoxine treatment is of two kinds: first, the general impressions of clinicians who have had opportunity to observe the effects of antitoxine administered in a number of cases of diphtheria and, secondly, the fatality statistics of cases treated with antitoxine.

Unquestionably great value attaches to the impressions and conclusions of careful clinical observers as to the merits of therapeutic agents. Baginsky has said that naked figures are so little the expression of the endless variations of clinical observation, of all those fortunate and unfortunate accidental circumstances which pertain to the constitution and nutrition of the patient, and the complications and difficulties which may bring danger in a mild attack or lead to a successful issue an apparently severe attack, that to the clinical observer such figures appear of little value in comparison with the treasure-house of his accumulated experience.

After a ten months' trial of antitoxine he has committed himself to a definite judgment in its favor. He says: "The reasons for this are to be found in the continual repetition of improvement and recovery of severe cases which previous experience indicates would have terminated fatally and, furthermore, in the outcome of an involuntary experiment with interruption of the use of the serum for a period on account of failure in its supply. During this period the mortality of our patients immediately rose again to its former height." The published testimony of those who have had the largest opportunity to study the therapeutic effects of antitoxine is overwhelmingly in its favor.

It is erroneous to say that the antitoxine statistics are not based upon the clinical diagnosis of diphtheria. The diagnosis is clinical

but, with subsequent bacteriological control, the cases are admitted to the hospital with the clinical diagnosis of diphtheria, and the healing serum is or should be at once administered without waiting for the result of the cultures from the throat.

Although only those statistics which are based upon the thorough bacteriological examination of the cases treated can lay claim to entire accuracy, the benefits of antitoxine treatment are clearly apparent in reports based upon the uncontrolled clinical diagnosis of diphtheria. In ordinary general practice it is not to be expected that the diagnosis will rest upon a bacteriological examination, but it should be understood that in the absence of such examination there must be occasional instances of apparent failure of antitoxine, which would be found explicable had a bacteriological examination been made.

In many reports the percentage of deaths in the cases treated with antitoxine is corrected by excluding cases evidently hopeless on admission or dying within twenty-four hours after commencement of the treatment. These corrected percentages are usually considerably lower than those based on all of the deaths. The author has not used these reduced percentages, although in many instances it might with propriety have been done.

The percentages in the column headed "Previous Fatality" are those given by the writers for diphtheria not treated with antitoxine.

It appears from Table I that of 7,166 patients with diphtheria treated with antitoxine, 1,239, or 17.3 per cent., died. The previous or simultaneous fatality of cases not treated with antitoxine is stated in 46 reports. These contain 5,406 cases treated with antitoxine with 1,008 deaths, a fatality of 18.6 per cent. Estimating the number of deaths in these cases upon the basis of the previous or simultaneous fatality of each group (taking the lowest figures given), there would have been 2,279 deaths, or 42.1 per cent. There was therefore an apparent reduction of case mortality by the use of antitoxine of 55.8 per cent.

A most important classification of diphtheria for estimating the curative value of antitoxic serum is that into cases *without and with laryngeal stenosis*, and especially with such degrees of stenosis as require operative interference by tracheotomy or intubation. No one can claim that laryngeal diphtheria requiring intubation or tracheotomy is anything but a severe disease.

In Table II are reports of 648 tracheotomies with 258 deaths, a fatality of 39.8 per cent.; 342 intubations with 99 deaths, a fatality

of 28.9 per cent. ; and 26 intubations followed by tracheotomy with 14 deaths, a fatality of 53.8 per cent.

There are 211 operated cases in which it is not stated how many are tracheotomy or intubation ; these give a fatality of 40.2 per cent.

The reports giving the previous or simultaneous fatality from tracheotomy contain 510 cases of tracheotomy with 217 deaths, or 42.5 per cent. If the fatality of these cases be reckoned on the basis of the preceding or simultaneous fatality, selecting the lowest figures given, there would have been 329 deaths or 64.5 per cent. There was therefore an apparent reduction in fatality of 34.1 per cent. by the serum treatment.

Making a similar estimate on the basis of previous fatality from intubation, there were 250 intubations with 79 deaths, or 31.6 per cent., instead of 156 deaths or 62.4 per cent.

There was therefore an apparent reduction in the fatality of intubated cases of 49.5 per cent. as the result of serum treatment.

The fatality of 3,127 non-operated cases was only 11.4 per cent.

Table III shows the importance of age as a factor in the prognosis of diphtheria. Thirty-five cases under one year had a fatality of 16 or 45.7 per cent. ; under two years, 291 cases with 97 deaths or 33.3 per cent. ; under three years, 304 cases with 93 deaths or 30.6 per cent. ; and under four years, 692 cases with 122 deaths or 17.6 per cent.

As is well known, the fatality from diphtheria by any approved method of treatment is smaller the earlier in the disease the treatment is begun. This is clearly shown in the fourth table, from which it has been computed that of 1,729 cases of diphtheria, with a fatality of 14.9 per cent., 1,115 cases treated with antitoxine during the first three days of the disease yielded a fatality of 8.5 per cent. ; whereas 545 cases in which antitoxine was first injected after the third day of the disease yielded a fatality of 27.8 per cent. Of 232 cases in which treatment was begun on the first day, 5 (2.15 per cent.) died ; of 492 cases in which treatment was begun on the second day, 38 (7.7 per cent.) died ; of 331 cases in which treatment was begun on the third day, 43 (11 per cent.) died.

The conclusion which the author draws from the study of the result of treatment of 7,000 cases of diphtheria by antitoxine is that it demonstrates beyond all reasonable doubt that anti-diphtheritic serum is a specific curative agent for diphtheria, surpassing in its efficacy all other known methods of treatment for this disease.

The discovery of the healing serum is entirely the result of labora-

tory work. It is the outcome of studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced and every step taken with a definite purpose and to solve a definite problem.

These studies and the resulting discoveries mark an epoch in the history of medicine. It should be forcibly brought home to those whose *philozoic* sentiments outweigh sentiments of true philanthropy that those discoveries which have led to the saving of untold thousands of human lives have been gained by the sacrifice of the lives of thousands of animals, and that by no possibility could they have been made without experimentation upon animals. G. H. M.

SOME PHYSIOLOGICAL FACTORS OF THE NEUROSES OF CHILDHOOD

By B. K. RACHFORD, M. D., Professor of Physiology in and Clinician to the Children's Clinic Medical College of Ohio, etc. Published by the Robert Clarke Company, Cincinnati.

The little volume before us is, for the most part, a republication of a series of papers first published in the *Archives of Pædiatrics*.

The term "Neuroses of Childhood" the author uses to cover all local and general nervous disorders which do not depend on known local pathological lesions of the nervous system. By this term he does not imply that these diseases have an entirely unknown pathology but only that they can not be morphologically classified.

The work is divided into nine chapters, arranged as follows: Normal Functions of Nerve Cells; Physiological Peculiarities of the Nervous System of Infancy and Childhood; Fever and the Variable Temperatures of Childhood; Heat-Dissipating Mechanism; Auto-genetic and Bacterial Toxines; Venous Condition of the Blood; An Impoverished Condition of the Blood; Reflex Irritation; and Excessive Nerve Activity.

The amount of labor that has been bestowed upon the study of the nervous system, in this and other works that have recently appeared, indicates the recognition of the importance of this branch of medical science. The author has succeeded in producing a very readable and interesting little volume. G. H. M.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL SOCIETY.

Stated meeting, October 1, 1895.

CHARLES JEWETT, M. D., Chairman *pro tem*.

Dr. ANDREW F. CURRIER presented specimens from three cases as follows :

Double Salpingo-oöphoritis, Complicated with Syphilis.

Mrs. G. S., aged thirty-nine, widow eight years, has suffered intense pain for the past two months in both iliac regions. Has had three children, the last one eighteen years ago, and has not menstruated for six months. Her general condition at the time of operation was good for one who seemed depraved and saturated with alcohol. Two pelvic tumors were removed September 12th with no more difficulty than is usually encountered from extensive adhesions. The tumors included the enlarged tube and ovary of each side and are probably full of pus.

The woman had an uneventful recovery and the sutures were removed from the abdominal wound on the ninth day. The tissues of the wound had a very unhealthy appearance and I predicted that there would be subsequent suppuration. I also made the diagnosis of syphilis, though the woman at first denied ever having seen any of the outward lesions. She subsequently admitted that she was syphilitic and improved promptly under appropriate treatment. An important question would seem to be the propriety in a suspicious case like this of adopting antisymphilitic treatment prior to operation, as a means of preparation for it.

Chronic Salpingitis, Ovarian Abscess, the Latter rupturing into the Abdominal Cavity.

Mrs. Y., aged thirty-seven, married fourteen years ; two children, no miscarriages. Hysterical and nervous for years, especially since the loss of a son a year ago. Menses always regular. Seen in consultation July 19th at 6 A. M., having gone into collapse a short time previously after experiencing severe abdominal pain. Her physician had been treating her for some weeks for pelvic disease, and had made

out a tumor in the pelvis which he advised her to have removed. This advice was not accepted, and at 4 A. M. of the day in question rupture took place. When I reached her house at 6 A. M. she had rallied somewhat. Chloroform was administered and I readily discovered a tumor, probably three or four inches in diameter, in the right iliac region. The uterus being pushed to the left of the median line, I made a diagnosis of ruptured tubal pregnancy and counseled immediate operation. This was declined. I saw the patient again at 2 P. M. and found the local condition unchanged. An immediate operation was urged, and later in the afternoon was performed. The omentum and peritonæum were thickened, and as soon as the omentum was drawn aside pus flowed freely from the abdominal cavity. The source of the abscess proved to be the right ovary, and the sac still contained an ounce or two of pus. The tube was enlarged and indurated, and firmly adherent to the ovary and the surrounding tissues. The diseased tissue was quickly removed, the abdominal cavity irrigated, the stump isolated by gauze packing from the surrounding structures, and all the ligatures drawn out through the abdominal wound for drainage. The patient was very feeble at the conclusion of the operation, but rallied and made an excellent recovery. The ligatures were all removed within two weeks, and this rather unusual form of drainage seemed to have served an excellent purpose.

Hysterectomy for Malignant Disease: Perforation of the Bladder, which healed spontaneously with the Aid of Drainage through the Urethra with a Sims Catheter.

Mrs. L., aged forty, Portuguese, married nineteen years; seven children, two miscarriages. On July 1, 1895, began to flow profusely, and flowed constantly until July 12th. Tissue removed with the curette was pronounced cancerous. On July 19th the uterus was removed *per vaginam*; hæmorrhage profuse. Secondary hæmorrhage to exsanguination soon after being placed in bed. The vagina was tamponed and a pint of salt solution injected hypodermically. Hæmorrhage again during the night and more gauze packed in the vagina. On the third day the urine flowed freely from the vagina, and when the tampon was removed the bladder was found to have been perforated at the posterior extremity of the base. A Sims catheter was introduced into the urethra and retained for drainage. The vagina was irrigated frequently with antiseptic solutions. Sloughs from the vagina and stumps of the broad ligaments came away during the fol-

lowing two weeks. The fistulæ gradually closed, and at the end of six weeks the patient was able to go several hours without leakage. In two months the patient was discharged, the fistulæ being almost entirely closed. Spontaneous closure of the vesical openings was believed preferable to an attempt at closure by operation. The fistulæ were so inaccessible that an operation for their closure would have been extremely difficult. In similar cases it is believed that it is better to trust to the reparative processes of Nature until it is manifest that such processes are unavailing.

A Case of Symphysiotomy. By CHARLES JEWETT, M. D.

(See page 477.)

DISCUSSION.

Dr. JEWETT, in reply to interrogatories by Dr. Edgar, said the case was one of high forceps operation after opening the joint, and that no new tear took place, but that there was an old deep laceration of the pelvic floor.

Dr. EDGAR thought this a very interesting fact—high forceps, with the head free above the brim, yet no tear of the vagina, and no hæmorrhage except that from the incision which was controlled by digital pressure. He had been thinking for some time that high forceps was not used often enough. The more we studied the forceps, and the more we used it, the more likely we were to employ it instead of version, as did the French. He felt convinced that in this case, with moderate contraction, Dr. Jewett would have had laceration had he performed version instead of using high forceps. In his own five cases he had resorted to version, and in all there was some laceration; in one the laceration in the anterior vaginal wall was quite serious, but this patient, as well as the others, recovered. In each case the contraction of the pelvis was only moderate. Since then, contrary to the teachings of a good many authorities, he had used forceps where the head was free above the brim in cases of moderate pelvic contraction not calling for symphyseotomy, and from this experience he felt certain that had he resorted to forceps instead of version in the symphyseotomy cases he would have avoided the lacerations which prolonged recovery.

Dr. SIMON MARX thought Dr. Edgar's position was not tenable for the reason that in this country pelvic contraction was usually in the antero-posterior diameter, which rendered oblique application of

the forceps almost impossible. Its use, therefore, when applied to the sides of pelves, was attended, from compression of the head, by the greatest increase of the width of the head in the narrowest portion of the brim, so that in his experience delivery by true high forceps in moderate pelvic contraction had been very difficult. He thought version was easier, was attended with less danger, and gave a smaller death-rate.

Dr. MARX asked Dr. Jewett whether it would not have been possible in his case, there being but minor pelvic contraction, to deliver a living child by version; also whether the same object could not have been attained by use of forceps in the Walcher position. In trying to apply forceps when the head was fixed, in a few cases he had found, on putting the patient in the Walcher position, that the contraction seemed to be less than with the patient in the ordinary obstetric position.

Dr. H. L. COLLYER said that, judging by the cases of symphyseotomy which he had seen, he would be inclined to attribute any laceration of the vagina more to the carelessness of the operator than to the method of extraction, whether by version or forceps. One important feature which most operators overlooked was the sharp edges of the separated bones. The soft tissues, being compressed against these, became bruised, if not torn. In doing version, if a man's hand was large it put the vagina on the stretch and thus caused rupture. On applying forceps after symphyseotomy, gauze should be packed behind the edges of the separated bones to prevent the soft parts from being compressed too firmly against them. He thought forceps would be preferable to version in some instances, but the choice of methods would depend upon the shape of the head, the amount of contraction, etc.

Dr. RALPH WALDO said he had resorted to version and also to forceps before the head was engaged in a good many cases, and his experience had convinced him that many lives had been lost because of the faulty application of these procedures. The indiscriminate use of version in cases of slight pelvic contraction was a mistake. Version was a valuable procedure under many circumstances, but in slight pelvic contraction, and after symphyseotomy for this condition, he thought high forceps many times offered the best chance for extracting a living child without injury to the soft parts. High forceps was resorted to in some parts of this country, but he thought it had been too much neglected in New York.

Dr. E. A. TUCKER queried whether, since it was easy to extract

with high forceps after symphyseotomy, it would not have been possible before. He had seen so many cases in which symphyseotomy seemed to have been indicated, but in which he succeeded in extracting a living child without it, that he had become skeptical as to the necessity for this procedure in slight degrees of pelvic deformity.

Dr. JEWETT said he did not try forceps as a tentative measure before resorting to symphyseotomy for the reason that the woman had been in labor thirty-six hours, was considerably exhausted, the membranes had been ruptured for some time, and there was a history of one previous craniotomy and use of forceps twice, with death of the child. The present child was a large one, weighing eight pounds and a quarter. He doubted, therefore, whether forceps alone would have succeeded, and in choosing between difficult forceps and symphyseotomy he would prefer the latter. There was little difficulty in preventing rupture of the vagina in this case because of an old free perineal tear, but where the vagina was small one should resort to preparatory dilatation by water bags.

Placenta Prævia ; its Rational Treatment. By SIMON MARX, M. D.

(See page 489.)

DISCUSSION.

Dr. J. CLIFTON EDGAR thought he could add but little to the discussion of the subject of placenta prævia because he was so completely in accord with the author. He would, however, try to impress the point that the whole treatment centered about the cervical barrier. If there were no cervix—that is, if the cervix would admit the ready passage of the hand—there would be no occasion for this discussion, for there would be no difference of opinion as to the methods of emptying the uterus after it had been decided to take that step. He supposed there were few who would deny that a woman's life was not safe as long as the placenta was implanted in the lower part of her uterus, and that the rational treatment was to empty the organ as soon as the diagnosis had been made. So far as he could learn, the profession was coming more and more to the belief that where the diagnosis of placenta prævia could be made before the seventh month it was dangerous to temporize in order to carry the children up to the so-called period of viability—the twenty-eighth week. The tendency was to at once elect an operation and empty the uterus without delay.

After disappearance of the supravaginal portion of the cervix

dilatation became a simple procedure, provided there was no cicatricial tissue. But there was some difference of opinion as to the best means for causing the disappearance of the supravaginal portion, and while he did not doubt but what Dr. Marx could succeed with iodoform gauze, personally he preferred to use Barnes' bags. He had found these still serviceable after boiling them several times, and by carrying a Davidson syringe in one's instrument bag they could be tested and new ones substituted in case of rupture. But it was a matter of less importance how the supravaginal portion of the cervix was made to disappear than that manual dilatation should not be undertaken beforehand. About two years ago, when manual dilatation was at the height of its popularity, a good deal of harm was done by persons resorting to it without the preparatory step. He knew of one case where rupture of the uterus was caused, a coil of intestine descended, and the patient died, simply because manual dilatation was begun before the vaginal portion of the cervix had been drawn up by the longitudinal fibers.

Dr. R. A. MURRAY congratulated the author on the excellence of his paper. He fully agreed with him and Dr. Edgar that when a physician was called to a woman with placenta prævia, the diagnosis being absolute or by exclusion, his duty was not fulfilled until he saw the uterus emptied. Four or five years ago the speaker had read a paper before the American Gynæcological Society in which he advocated immediate abortion in all cases of placenta prævia. He reported four or five cases, and Prof. Hoffmeier had reported a number with very brilliant results. He must take exception to the statement that placenta prævia could not be diagnosticated in early pregnancy. There were many cases in which it could be diagnosticated early, almost or quite positively. In proportion as obstetricians made themselves familiar with the early signs of ordinary pregnancy did they become facile in recognizing cases of placenta prævia. In placenta prævia the cervix was boggy at one side and more enlarged than in ordinary pregnancy, so that the uterus was more cylindrical than pear-shaped. While, as a rule, hæmorrhage did not begin before the fifth month, yet it not infrequently came on sooner, especially when the placenta was implanted low or centrally. He thought the author had made a mistake in not dividing his cases into those in which the placenta was central and those in which it was lateral. Lateral implantation was much less a bar to delivery than central implantation, although, as Dr. Isaac E. Taylor had pointed out some years ago, the attachment might be partially in the

cervix and such as to cause free hæmorrhage on the slightest dilatation of the cervix. The axiom to empty the uterus was perfectly applicable in lateral attachment, especially when it caused hæmorrhage, but in central implantation it was imperative. Here one could not temporize, because he knew not at what moment the patient might be carried off by hæmorrhage.

Dr. MURRAY was quite in accord with Dr. Edgar as to the value of Barnes' bags in cases of placenta prævia, especially of the central type, for they tended to stop the bleeding, and served a purpose which he could not conceive of gauze doing as well. He had used them in nine cases, saving all the women. Palliation should never be attempted after making the diagnosis; it was likely to result in exsanguination, and to be followed by septicæmia if not by immediate death.

In lateral implantation, he thought the author's practice of using a tampon to induce dilatation, followed by the use of the finger, was quite proper, yet it should be carried out with care. One should remember that he was handling material which was liable to tear, and that by bruising the cervix with the fingers, especially if they were not clean, he was likely to cause sepsis. It was best usually to empty the uterus before allowing the patient to come from under the influence of the anæsthetic lest the cervix should again contract after having been dilated. If there were necessity for it he would not hesitate to use Dührssen's incisions and repair immediately after delivery.

Dr. RALPH WALDO said he had met with three cases of central placenta prævia, and had managed all in the manner which he had been taught in 1880—by introducing a tampon until the cervix was thoroughly dilated or dilatable, then introducing the hand and delivering by podalic version. He did not believe that in such cases he would often elect Barnes' bags, yet he wished to repeat the statement which he had made before the Obstetrical Section of the Academy of Medicine about six months ago, and for which he was criticised—that he did find the bags useful occasionally for dilating the cervix. But in placenta prævia he regarded the method described by Dr. Marx as admirable. An effective, although primitive way of sterilizing the gauze was to put it into a hot oven for an hour or half an hour. He recalled an experience with tamponing for hæmorrhage in a case of cancer of the uterus at a time when he held the exalted position of junior assistant. The resident surgeon, who was very laconic, said: "Patient bleeding in ward nine; go and tampon." Half an hour after obeying instructions his superior said again: "Patient

bleeding; go and tampon." The same instructions being again repeated, the house surgeon added, "Did you wet the tampons?" Next time he did wet the tampons, wrung them out, and the bleeding was stopped. Wet tampons would check bleeding where dry gauze would not, a point which those not accustomed to tamponing should bear in mind.

Dr. WALDO thought it was important to grasp both feet and bring them down together in podalic version. He had had but three cases of placenta prævia; all the mothers and children had lived.

Dr. COLLYER agreed with Dr. Marx regarding Barnes' bags. He had found them valueless when the time arrived for their use. According to his observation, boiling rubber destroyed it. *Accouchement forcé* was the proper method in placenta prævia, using the fingers in the manner described by Dr. Grandin as soon as the cervix had begun to dilate under some mechanical means. Having accomplished sufficient dilatation, resort to version or forceps, as the indications best presented.

Dr. E. A. TUCKER thought the paper was an excellent one, yet there were two points which he regarded as too radical. The Braxton Hicks method had been thrown out altogether as unserviceable. He would like to know how tampons could be successfully applied if the woman was bleeding profusely, the cervix still thick, the supravaginal portion not having disappeared. Dr. Tucker thought that in this class of cases the Braxton Hicks method was valuable, and that it should not be discarded altogether in favor of the one method described in the paper.

The speaker also thought different varieties of placenta prævia should be recognized. For instance, he would recognize a marginal form in which the edge of the placenta just reached the internal os. Certainly this variety did not require as radical treatment as central implantation. There were some cases in which it was not necessary to employ manual dilatation, but simply rupture the membranes, and later use forceps if necessary.

The author would deliver all cases in the same way—by introducing the whole hand and making rapid extraction in order to save the child, whereas Dr. Tucker would recognize three methods—namely, (1) the Braxton Hicks, where it was urgent to stop hæmorrhage; (2) that described in the paper—introduction of the whole hand; lastly, (3) rupturing the membranes, possibly stretching the cervix if it were desired to hasten some, otherwise letting the case alone until forceps could be introduced and the child extracted.

Dr. H. N. VINEBERG queried whether it was possible in all cases to peel off the placenta from its uterine attachments, having heard recently of a case in which the operator had failed to do this, and had gone through the placenta in order to extract the child.

Dr. CHARLES JEWETT said, with regard to the skepticism expressed by some with reference to the diagnosis of placenta prævia, that he believed one could satisfy himself not only as to its existence, but often also as to the location of the placenta. He had been able in rare instances to locate it by the abdominal examination alone, and had verified the position after the birth of the child. Regarding the treatment of placenta prævia, he was in accord with the reader of the paper for the most part, but he thought the points made by Dr. Tucker were well founded. These cases could not be treated by rule. The method elected must differ in different cases. He believed most of them could go to viability without risk. He had within a month been compelled to deliver a case at the end of the sixth month, owing to profuse hæmorrhage. The necessity for so early interference, however, was exceedingly rare in his experience.

Accouchement forcé would be dangerous practice in a woman who had lost much blood. Every practitioner knows how easily such a patient may succumb to shock. In such cases it is better to stop the hæmorrhage and wait for the patient to rally. Precipitate delivery has caused many deaths in such conditions.

Perforation of the placenta is not generally good practice, yet in one instance of central implantation he had extracted the child rapidly through the placenta, saving both patients.

The author had said that the difficult part of dilatation was the first. Dr. Jewett thought he might have added that the latter part was the most dangerous. Laceration was more liable to occur after the cervix had expanded enough to admit three fingers or the whole hand than at the beginning of the process, and here extreme care was needed to avoid the use of too much force. The dangers of forced delivery should be emphasized as well as the advantages, especially for the general practitioner.

Dr. MURRAY wished to add a word with regard to the assertion which he had heard made a number of times in the city—that if a man knew how to tampon the vagina and the cervix he could arrest bleeding always. He could only say that the men with whom he had been associated in hospitals certainly knew how to tampon, and while, of course, they usually succeeded in arresting the hæmorrhage, yet he knew of one instance in which the tamponing was done properly and

the patient died, and two other patients very nearly lost their lives. No matter how the tampon was used, it would fail to stop hæmorrhage in some cases of placenta prævia. He had seen the tampon forced over the foot of the bed from the flooding and force of the uterine contraction. The success of the tampon in profuse bleeding was sometimes only apparent, the flow ceasing because there was no more blood to be lost by reason of the weakening effect on the circulation.

Dr. MARX closed the discussion. While the first part of dilatation was extremely tiresome as compared with the latter part, yet he recognized the fact emphasized by Dr. Jewett—that there was danger of rupturing the cervix during the latter stage if misdirected force were used. Having understood Dr. Murray to say that he could recognize placenta prævia very early, he inquired at what period. Dr. Murray having replied that he believed in the cases which he had reported the diagnosis was made at the fourth month, Dr. Marx said he had supposed a much earlier period was meant, in which event he thought the diagnosis would be extremely difficult in view of the modern theory regarding the nature of these cases.

The cases in which Dr. Edgar would use Barnes' bags were just those in which he maintained the fingers were the best dilating agents. Regarding the classification of the cases, he had spoken of a complete and an incomplete class. The former, of course, would include cases of central implantation; the latter, cases of lateral and marginal implantation. Regarding the statement that it was necessary to grab both feet, his own experience had taught him that it made no difference whether the left or right foot alone or both feet were caught in the hand. Regarding the Braxton Hicks method, it was generally admitted to be attended by a high foetal mortality-rate, whereas in the fifteen cases which he had to report as treated in the manner described in the paper the mother and child were saved in every instance. If hæmorrhage were not going on, he would tampon to cause disappearance of the portio vaginalis before using the fingers. If hæmorrhage were going on, he certainly would not tampon, but would proceed to dilate with the fingers, do version, and deliver as quickly as possible.

Official transactions.

ARTHUR M. JACOBUS, *Recording Secretary.*

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL
SOCIETY.

Stated Meeting, October 3, 1895.

The *Vice-President*, GEORGE M. BOYD, M. D., in the Chair.

Hysterectomy for Cancer in a Pregnant Uterus.

BY F. P. BERNARDY, M. D.

(See page 505.)

DISCUSSION.

Dr. BERNARDY, in reply to a query, stated that no bacteriological examination had been made. The patient did not live in this city, and during the post mortem an undertaker was waiting for the body. The post mortem was most carefully made, but no thought given to examining the secretions. Dr. Bernardy further stated that if he had thought of making a bacteriological examination of the fluid in the peritoneal cavity he could not have done so, and, moreover, at that time all the microscopists and pathologists were out of town taking a holiday.

Dr. BALDY: I did not hear the whole of Dr. Bernardy's paper, but as I listened to the latter portion the case struck me as illustrative of a large number of reported cases. I think the cause of death is very plain. It was unquestionably due to septicæmia. Nine tenths of the deaths reported after gynæcological operations I believe to be due to septicæmia. The case as reported presents a typical picture of true septicæmia. The picture drawn on the board of the condition of the bowel is also typical of the conditions we find on post-mortem examinations following these kinds of deaths. The stricture, which is purely functional, is due to the peristaltic action of the bowel and is a post-mortem condition. You will find frequently at post-mortem examinations two or three such strictures in the bowel. The symptoms throughout are those due to acute septicæmia. Who of us have not seen this picture in the past, which has been only too painfully impressed on our mind? All we find in the peritoneal cavity in these deaths is a little turbid fluid, no pus—just a little discolored turbid fluid—and this is the only sign found in this case.

I believe Dr. Bernardy spoke of the intestines being injected. Slight injection of the blood-vessels is common in these cases.

Dr. NOBLE: I would like also to say that my experience accords with what Dr. Baldy said in regard to the obstruction of the bowels. I have seen obstruction of the bowels only once in all my cases of abdominal section. In this case the obstruction was due to an organic stricture of the colon. I do not mean to say that I think obstruction never happens, but I think this must be extremely rare, and the cases which have been reported in the past as obstruction of the bowel were probably almost all cases of septicæmia.

Any one making a post mortem some years ago and finding apparently no inflammatory lymph or pus in the peritonæum would have excluded a diagnosis of septicæmia. But we are now told that a bacteriological examination of what fluid is in the peritoneal cavity frequently shows infection as the cause of death. So that unless the fluid was examined bacteriologically and found free from germs, I do not think the conditions reported at all exclude septic death. The case reported was quite characteristic clinically of septic trouble in the peritonæum.

Dr. PRICE: The progression of this case is a very beautiful argument of just what often occurs in the conjoined method of doing this operation. We have simply a fullness of all the symptoms here of septic progression from the very beginning—the rapid pulse, with the eructations and the tympany, with distention, with paresis and increased pulse, and finally death—is septic throughout. There is no question of it. In this case no doubt the operator used every possible aseptic precaution, and yet probably failed in the surgery of it. It only makes the argument that much stronger against the conjoint operations.

I scarcely know a careful operator—one who ever does, even on the morning of an ovariectomy, a vaginal examination, or an operation of any character. For instance, I arrange my office hours after twelve for this purpose. I do not even play with my children. I take baths and douches, beginning when I retire and when I arise in the morning, and I rejoice that I have resorted to just that painstaking toilet of myself.

I scarcely feel that any one of us is clean enough to operate without walking out of Turkish baths, and I think that operating rooms throughout the country should have connected with them a bath that all operators may be clean—strictly so. It is impossible for one to fool with a dirty diseased vagina and smelling cervix—it is impossible,

I repeat, to make the tissues clean. Disorganized tissues can not be made strictly aseptic. To do some dirty surgery first and then open the peritoneal cavity, is surely a serious mistake in peritoneal surgery. The same result has occurred in other parts of this country and abroad, and just precisely the same progression has ensued in the cases.

Wherein lies the advantage in the double method of doing these operations? It is a very simple matter to deal with the vaginal insertion of the cervix from above. Even though a certain amount of contamination is liable to occur in this procedure, the argument is more against the method offered by the so-called opening of Douglas' *cul-de-sac*. A method which has given me satisfaction consists in simply opening the *cul-de-sac*, then running the scissors through to the bladder on the two sides, and simply tying. Day before yesterday I repeated this operation.

Deaths from septicæmia in the past have undoubtedly occurred much more frequently than has been reported or recognized. I remember asking a prominent ovariologist of this city what he found in the peritonæum on post mortem. He said they found a pint or quart of serum. He stated his belief that in many of his cases which were septic it was nothing but the drainage—and the well-cared-for drainage—that saved many of his cases. Keith had the patients propped up with three or more pillows, and even squeezed the wind out of them. In many of them the distention was simply enormous. Obstructions unquestionably occurred. This obstruction is due to two causes. Many pathological sequelæ of conditions found antedate the operation. Many deaths are due to neglect of just such adhesions. Numbers of specimens are removed, and that is all that is done. The present method of doing vaginal operations is such that no thought is given to anything but the specimen. Sometimes they remove a healthy uterus and leave behind punctured pus tubes and say, "Drainage will do the rest." It is just as logical to amputate the penis for double buboes, just about as surgical; I see no difference.

The obstructions following bands of adhesions are not recognized at the time of the primary obstruction. For instance, I remember the first ten cases reported by Coe, two cases of bands of adhesions that were not post-operative adhesions but adhesions that antedated. I remember operating once for Hunter Maguire for removing a huge malignant fibroid complicating malignant uterus. After finishing, operation was thoroughly satisfactory, but there was left some adherent lymph, and in that much my operation is probably deficient, and

it is just so with many operations ; but acute septicæmia, sepsis, and peritonitis in about all the cases. What has been said in regard to this case and in regard to others is quite true in regard to sepsis.

Dr. BALDY : I think the whole discussion of the death from sepsis impresses upon us the duty of cleanliness. Dr. Price has referred to the number of cases in which obstruction has followed operation and death has resulted from these obstructions. He refers to Coe's cases. My impression is clearly that the deaths he reported from obstruction he acknowledged later to be deaths from sepsis. I simply rise to emphasize this, as so many are operating over the country and reporting deaths due to obstructions which are really septic deaths. I do not care in whose practice it occurs, the largest proportion of deaths are septic deaths.

Dr. PRICE : It is my impression that those cases of Coe's were not reported as simply bands of adhesions. I may be mistaken that they were regarded as obstructions due to adhesions. There is nothing in the primary report to lead one to that opinion. If Dr. Coe has reconsidered and re reported it it should hug closely his primary record. I am glad that the profession, and at least a few members, feel that all the deaths, or at least twenty-four out of twenty-five, are due to sepsis. While I scarcely feel that so many of the cases are due to sepsis, if so it would be easily remedied—very much easier than much of the bungling and incomplete and imperfect surgery that many of the deaths must be due to.

It reminds us that many of the operations done at present throughout the land are incomplete and imperfect. For instance, every now and then I hear of an operation upon one of my own patients. The patient recovered, and recovered nicely, from a serious operation. She goes home and suffers the common nervous phenomena of the induced or precipitated menopause. These women are asked almost daily, "Was your uterus taken out?" "No." "Well, then it must be removed." In many cases women who had made beautiful recoveries, who had been invalids for ten or more years, who had increased in flesh and strength, and recovered color in the cheeks, are railroaded into hysterectomy and lie on the table for two or more hours. These operations are simply ghastly, and many cases die in a few minutes, if they get off the table at all. Surely these cases are not due to sepsis.

Why should the results be precisely the same? They attempt secondarily to remove a little infantile uterus, shriveled up and atrophied. They open the bladder and open the head of the cæcum.

You can imagine how ghastly many of their operations must be. I insist that it is a mistake to say that all these cases are bad surgery. A large number are. I admit frankly, sir, that sepsis has a large fist in the deaths, but all the deaths are not to be assigned to sepsis; far from it. I wish it were so; we have means to correct it. If due to sepsis it would be overcome by attending clinics and drilling in ordinary methods of cleanliness.

Dr. BERNARDY (closing the discussion): So seldom seeing the inside of the abdominal cavity of patients on whom I operate may, perhaps, account for my failure to recognize the so-called septic condition which Dr. Baldy so positively thinks existed.

My first idea was sepsis, more particularly after the fourth day; but when at the post mortem the abdominal cavity was opened I was satisfied, and am still so, that the patient did not die of sepsis but of exhaustion.

The history of the patient gave me the right to believe that the constriction in the bowel could have occurred in the attack of peritonitis she had had five years previous. The attack, as far as could be ascertained, was a severe one, the patient almost losing her life.

I can not say whether or not the tissues around the stricture were hardened. Expecting to perform another hysterectomy, I felt I was not justified in doing anything that would jeopardize my patient's chances; I certainly was not doing the proper thing if I had handled the specimen.

The post mortem showed perfectly clean viscera; no inflammation, no lymph, no fluid of any kind. The right side of the pelvic cavity was clean and dry; on the left there was about half a drachm of reddish fluid; at the point where, during the operation, the ligature failed to take up all the blood-vessels, one jet of blood announced the fact, when the artery was immediately seized and ligated.

In regard to first separating the cervix from the vagina before performing the hysterectomy (doing the so-called double operation) Dr. Price is right; it is not perfectly clean surgery and it does not gain time, in fact I think the reverse. As for myself, I do not intend to ever again perform the operation in that way.

Drainage.—I did not intend to do drainage. My intention was to close both the vaginal and peritoneal openings; but the injury to the bladder made me fearful of a leakage, thus causing inflammation. I then decided to drain both from the vagina and by a tube placed in the abdominal incision. While having been taught drainage by Dr. Price (of whom I have a very high opinion), I think if this occurred

again I would drain from the vagina and close the abdominal incision.

No examination was made of any of the secretions in the abdominal cavity for several reasons: (1) I am not an enthusiastic believer in bacteriology; (2) the weather was extremely hot (August) and all the microscopists were on their vacation, and it was through the kindness of Dr. G. Mulheck that I had an examination made of the growth in the uterus. Dr. Joseph Price is also right in saying that an operator should go to the patient clean in every way. I never operate unless I have taken a Turkish bath. I make this a cardinal rule.

At the time of operation my hands and arms are thoroughly disinfected, first by bichloride solution, then with a solution of permanganate of potassium, washed off with a solution of oxalic acid, next with hot water, and then washed with alcohol.

In regard to making preparation for operation and getting the patient in proper condition, I would invite the members of the Society to come to the private operating room of the Polyclinic Hospital and they will there see asepticism carried to its highest perfection. I name the said hospital because it was there where I performed my major operation.

Dr. JOSEPH PRICE read a report of several instructive cases, as follows:

A Large Myoma.

Miss C., aged thirty-six years, patient of Dr. Lopez. The growth was recognized eighteen years ago. Pain in back, sides, and groins constant, becoming quite general as the growth increased in size.

When admitted to the hospital, July 27, 1895, the growth was very large and symmetrical. The distention and pressure symptoms were distressing.

Operation, July 3d. A large myoma, huge sinuses covering the anterior and posterior surface of the tumor. The leakage and shrinkage of the tumor after removal was very great.

Koeberlé nœud and extraperitoneal method of securing pedicle adopted. Not a hitch in her convalescence. Pulse slow, no elevation of temperature, and cheerful throughout.

Multinodular Fibroid with Deep Pelvic Fixation.

Mrs. B., aged forty-five years, no children, no miscarriages, patient of Dr. Miner Niles, Ohio. The tumor recognized more than six years

ago. Pressure symptoms marked, and rapid increase in size of growth in the last four months. Menstruation free and painful.

Palpation developed an enormous multinodular fibroid with deep pelvic fixation.

Operation, August 1, 1895. Delivery and enucleation of adherent pelvic portion of tumor. Pedicle reduced. Nœud applied, and external fixation.

This patient was emaciated and feeble from excessive hæmorrhage and long suffering. She is one of three sisters afflicted with fibroids. One died without operation from her growth. The third is now in my hospital doing well the third day after operation. Her recovery was rapid and healthy.

A Fibroid of Slow Development.

Miss H., colored, aged thirty-two years, complaining of a fibroid of slow development, recognized some six years ago. No history of pregnancy antedating her admission to the hospital. A week before admission an attack of sharp pelvic pain, paroxysmal in nature; her menses scant for the past few months; well-marked symptoms of pregnancy. Examination showed cervix soft and pushed high up and to one side by tumor. Small fibroids firmly fixed in pelvic cavity by universal adhesions.

She was admitted with a bad cough and a general peritonitis. Section, August 14, 1895. Freeing of omentum and bladder and general adhesions of viscera to tumor and pelvic walls required a prolonged dissection. Extraperitoneal management of pedicle. She did well for four days, except troubled by cough and developing of pneumonia, of which she died on the seventh day. No post-operative intraperitoneal trouble requiring attention.

Hard Multinodular Tumor.

Mrs. P., aged forty-five years, no children, no miscarriages. Recognized hard tumor, multinodular in nature, more than six years ago. Patient small and emaciated, well-marked mental disturbance, and a bad subject for surgery of any character. The large size of the growth, with firm fixation in pelvis extending well down toward the anus, complicated its removal greatly; the pelvic enucleation required strength and violence. About all the vessels broken in the pelvic enucleation bled freely. Pedicle fixed by nœud; glass drainage placed. A nice recovery followed.

The multiple pathological masses found here were unique—a

group of beautiful fibroids, a calcareous mass of the size of an orange, and one sarcoma, with disorganized center, offensive in nature.

Large Multinodular Tumor with Constant Uterine Hæmorrhage.

Mrs. S., colored, aged forty-one years, three children, no miscarriages, admitted on August 19, 1895. In bed and ill for four weeks. A general peritonitis; constant uterine hæmorrhage; a large multinodular tumor. Section; freeing of all adhesions; extraperitoneal treatment of pedicle; douche and drainage. A speedy recovery.

Secondary Laparotomy for Removal of Large Adherent Multinodular Uterus.

Miss B., aged thirty-eight years, admitted on September 28, 1895. This patient had had a section two years ago, an incomplete removal of tubes and ovaries. The left ovary completely removed, tube remaining. Right tube partially removed, and ovary remaining. A large ventral hernia, with adherent omentum and bowel, followed the operation.

Freeing of all adhesions and enucleation of pelvic fixed multinodular uterus required a careful dissection.

The operation was completed by a clean extirpation, irrigation, and glass drainage. The vaginal flaps above were matched carefully by suture.

She is in her fourth day and doing nicely. I report this case early to invite a discussion on the important subject of abandoned, incomplete, or imperfect operations; also to favor a discussion upon the relative merits of the upper or lower operation for pathological or post-operative complications.

All of this group of hysterectomies were done through the months of July and August, except the last. I had some doubt about the propriety of operating upon the colored woman with lung trouble. She was very ill, and I was rather inclined to consider her lung trouble septic in nature.

I did a large, mixed group of operations during the summer. The patients did well during the extreme hot weather. Hysterectomies have been much more numerous than ovariectomy for cystoma.

Operations for suppurative forms of tubal and ovarian disease are more complicated than a few years ago. Procrastination and tinkering has favored an unfavorable class of cases. A want of old-fash-

ioned confidence in simple and established surgical procedures has resulted in much confusion and an absence of uniform consensus of opinion, resulting in a higher mortality and more unsatisfactory results to the sufferers.

In concluding his reports Dr. Price stated his belief, after careful observation, that patients do better after operation in summer than in winter, citing Malgaigne in support of this opinion.

DISCUSSION.

Dr. NOBLE: Dr. Price states that he has presented these reports of operations for discussion of the methods employed. It must strike most of us that the most remarkable thing about the cases reported is the fact that he still continues to use the *serre-nœud*. Almost all operators now look upon that method as obsolescent, if not obsolete, because it offers no possible advantages over other methods, because it is more painful to the patient throughout her convalescence, and because it entails one, two, or three weeks' longer time for convalescence. Therefore it should be abandoned in favor of methods of hysterectomy which will enable the patient to recover as soon as after simple ovariectomy. There was a time some years ago when the use of the *serre-nœud* gave better results than dropping the pedicle. But Schröder's work was imperfect and was done in pre-antiseptic days. The mortality records of all experienced operators by the intraperitoneal method, so-called, is certainly as good if not better than those who use the *serre-nœud*. It can no longer be claimed that the *serre-nœud* in any way lessens the risks to the patient. So far as my experience goes, I have never seen death follow the intraperitoneal method for simple fibroid. I have had only two deaths after hysterectomy for fibroids. Both of these deaths were due to complications and not to the method of treating the stump. The method employed had no more relation to the death of these patients than had the *serre-nœud* to the death from pneumonia reported by Dr. Price. In other words, we can rule out the mortality record. We have only to consider which method will get the patient well with the greatest rapidity. With the *serre-nœud* it takes anywhere from ten days to two weeks to get the pedicle separated, it takes an indefinite number of weeks for the wound to heal up, and it is annoying by reason of the necessary dressings of a suppurating wound. In addition, there is greater risk of hernia. So these are positive disadvantages to the method used by Dr. Price. I feel sure that in a short time he will stand almost if not quite alone in clinging

to this method—once useful but now superseded by more successful and more surgical methods.

Dr. SHOEMAKER : One point excited a certain amount of discussion in my mind. That is the influence of hot weather on operations. Those who have seen a good deal of surgery of all kinds are willing to admit that the hot period of the year, in America at least, is favorable to operations, but I think we should be careful, in making that general statement, to except the periods of very great heat when we are all, even the well among us, greatly depressed. I feel confident that these periods of excess of temperature tend to weaken the patient and may turn the balance in a critical case, while it would have no influence, or very little, in an ordinary case.

I have had one death which I think was partially caused in that way. That was one of the elements which depressed that patient. I know of two other deaths in the hands of good operators where the men were unable to account for deaths ; it was too early for sepsis, and apparently the death was not caused by hæmorrhage. These men attributed death to excessive temperature. The operations occurred on very hot days. My observation has led me to defer operating in the summer time for two or three days until the period of extreme heat has passed.

Dr. BALDY : Dr. Shoemaker's remarks make me feel very much like giving the advice of a certain Priscilla to John Alden : "Speak for yourself, John !" Many surgeons have come to the conclusion that we may expect the best results from operating in hot weather. I have come to the exact opposite conclusion. I think Dr. Shoemaker's remarks which followed the preliminary discussion fully clinch this ; he excepts the extreme heated spells on account of their depressing action. But how are we to know in this wretched climate when we are going to have a hot day ? It is absolutely impossible. How are we to know that the night will be a reasonably cool night, or even the day a bearable one ? I speak feelingly on this subject because I operated during the past summer in an apparently moderate temperature (in the morning), but by night the thermometer stood at 98° and I thought I should lose both my patients by heat-stroke. I know of other cases in town, and, as Dr. Shoemaker excepts very hot days, then it must be admitted that the heat of July and August are not proper times for elective operations. My own habit is to postpone all the operations I can and only do those operations I am forced to do in summer—that is, those opera-

tions which the patients insist on, or such cases as extra-uterine pregnancy, cancer, etc.

I quite agree with Dr. Noble. I know of no one except the reader of the paper and a few minor satellites who employ the *serre-naud*. The men over the country who have been the strongest advocates of the *serre-naud* in the past two years or so have dropped it, and go about the removal of fibroid tumors in a surgical way. The clamp method is not only dirty and slovenly, but it is dangerous. Any method which will leave sloughing wounds can only be dubbed dirty and unsurgical. There is not a single feature in the use of the *serre-naud* which adds one iota to the safety of the patient; there is everything against the comfort of the patient, while the pain is infinitely greater. In the hands of the general operator, I say, it is dangerous, because it is the exceptional man who can use the *serre-naud* without suppuration; in fact, I never saw anybody use it without occasional suppuration and sepsis. None of these chances are present in the removal of a tumor by the "dropped-pedicle" method, and complete "tissue-to-tissue" approximation without drainage, convalescence in a week, out of bed in three weeks, or, if you choose, in less, if you are willing to risk your patient's life and future health as the vaginal hysterectomists risk theirs.

One of the greatest claims made by the vaginal hysterectomist for his method is the short period in bed. I think there is nothing so bad for the patient who comes to us sufficiently worn out by disease as to require a hysterectomy, as to let her out of bed in twelve or ten days. I think the patient is infinitely better off for three to four weeks in bed.

Dr. NOBLE: As to operating in summer. Like Dr. Price, I can say that my general mortality has invariably been as good, if not better, in hot as in cold weather. However, I must report that I have had two cases which died from heat-stroke—one this present summer and one a year or two ago. I forget the exact date. The first case has been reported to the Society. Dr. Baldy has referred to the day this summer when the second fatal case was operated upon. I must disagree with Dr. Baldy that it was a fine morning; it was one of the hottest days we have had this summer—that early hot weather in May when the thermometer, instead of being agreeably cool, was well up in the nineties. I did three operations on the morning in question. In the afternoon I called upon Dr. Baldy, and while there he received a message from the Gyneccean Hospital that one of his patients had a temperature of 104° . This made me anxious about my own cases, and

I immediately went to them and found one with a temperature of 104° F., the others not so high. Two patients recovered. The third, a highly neurotic woman, in spite of all that could be done with ice-packs, succumbed; so that I have two cases to report of death from heat-stroke. Both were highly neurotic women, and in both the operations were done on very hot days. I am inclined to think at this time (though it is only fair to say that heretofore I held the reverse opinion) that it is not well to operate on very hot days. My experience had been so uniformly satisfactory that I thought it made very little difference whether it was hot or not. In weak women any one would suppose that they would die from exhaustion, yet experience teaches they do as well in summer as in winter, though they must have special nurses to keep them sponged. Paying such extra attention to them, there have been no deaths from exhaustion in my practice.

Dr. PRICE: I feel very much like telling the Society about the fight between Mrs. Murphy and Mrs. McGloiry. However, we will leave that for some other time. I am frank to say that I agree to the statement that we have an enormous amount of material in Philadelphia; we have more gynæcology than the rest of the world and more obstetrics. I am glad that the profession largely hold together as to method. Some of the expressions this evening, some of the allusions to the "horrors" and the "filth and death" which resulted from the *serre-needle*, so that the physician was rejoiced to get such a patient out of his wards, only calls attention to what I have said here. Those who get such results do not know how to use the *needle*. In regard to the method of doing hysterectomy, my reports were not, as Dr. Noble intimated, made to advocate the *needle*; that instrument and the patients that I use it on, when compared with other methods, speak for themselves. While with the *needle* one can do a series of forty-three hysterectomies with one death and without a single complication in the series of forty-three, without a perceptible distention of the transverse colon or stomach, with scarcely any vomiting, with bright, cheerful patients who would joke with me every day, without a ripple in the convalescence, there is no other series on record that compares with them. The mortality on record is an error. I can begin in any State or town—take, for example, Chambersburg, where the supra-vaginal method has been discarded by a Philadelphia operator in favor of the dropped-pedicle—and we will find the operator loses his patients; they simply bleed to death and die of sepsis, and yet the man clings to a two- or one-per-cent. mortality and attributes the death to intercurrent diseases.

I want to allude very briefly and pointedly to what we can accomplish with the *nœud* and without it. I do not confine myself to the Koeberlé *nœud* in all hysterectomies; many here to-night have seen me do complete hysterectomies and supravaginal amputations, and I have done four consecutive operations for enormously large tumors which have been completely satisfactory to myself, all four getting well. I have had twelve hysterectomies at the same time, in my private hospital, all hugging each other closely. In a group of six or eight I used the *nœud*; in these eight the pulse was the slowest, the skin the coolest, the tongue the cleanest, and there was not the slightest perceptible distention. These are clinical facts, daily, hourly, and at night; at half past nine at night in turning the pillows, very few men are careful observers.

About method. By the dropped-pedicle they die at Bryn Mawr and at Chambersburg. Yet this operator is one of the most skillful operators. Intraperitoneal men will get but little quarter under an accurate and honest summing up of statistics. I believe the argument is directed to opposition of the Koeberlé. I have six hysterectomies on their backs now in which I have used the *nœud* with the usual satisfactory results. Take a large fibroid; it can be extirpated without hæmorrhage by this method. Some of the gentlemen here have alluded repeatedly to the difficulty of using the *nœud*, and some operators over this country have said that "Price is the only man who can use the *nœud*." You have to know how to use a Koeberlé *nœud* to use it well. One feature of the Koeberlé operation over all others is in the fact that you remove a huge tumor, healthy or otherwise, from the peritoneal cavity and leave nothing in the cavity—not a ligature, not a thread. If all manipulations have been thoroughly clean there is no reason why your patient should not get well. It matters little what you take out of the peritoneal cavity, but it matters much what you take in. If I had to do many of my operations as many of the hysterectomies are done, if you attempt to convince me that the methods practiced, the dropped-pedicle, or leaving pedicles like broom-handles with clusters of catgut, I say there must be suppuration. On the other hand, with a small pedicle secured with a little pure silk, as many do, approximating and carefully matching the walls, we ought to have perfect results. Suppose we have a huge, healthy fibroid, without a single adhesion; it may be necessary to make an incision, drop your bladder down a little from it, as the operation demands after the tumor is delivered. You have to stop for a view of the pedicle, and, fixing that pedicle into the lower angle of the incision, there is no rea-

son why that woman should not get well. You have removed from a healthy peritoneal cavity a healthy fibroid, and they do all get well. In no other operation have we the same ideal condition of affairs that we have in the suprapubic extra-peritoneal hysterectomy. Bear in mind that some four of the most successful operators on the face of the earth, beginning with Keith and Bantock, have had the most perfect results from the first, and when I make the statement "most perfect results" I mean these operations were done for huge tumors, not for a tiny uterus. These are the hysterectomies at present recorded in large numbers, with the result of twelve fistulæ, if you please, in a series of four hundred cases. The mortalities of hysterectomies by "dropped-pedicle" and the intraperitoneal method are not fair. Patients right in this city die on the table from hæmorrhage, literally bleed to death, under the intraperitoneal methods. They die also in good numbers from sepsis, virulent in its nature. Some of the hospitals have not even records. They can not tell you whether they have had one hysterectomy or one thousand.

Convalescence has been spoken of as varying from four to twelve weeks. That may be so with men who do not know how to make a pedicle. Just in that connection Dr. Noble alluded to the work of Shröder and Martin, and I may say that I would be chagrined to attempt to improve on Shröder and Martin, for they have attained the very acme of perfection in the surgical detail in everything they do. I would call attention to the boldness and dexterity of Martin. Martin, operating by the amputation method, had a high mortality and it remained high. Shröder did a series of one hundred or more with a mortality of twenty-five per cent. by varied methods; his mortality by the extraperitoneal method was the lowest. Keith lost only two cases out of forty-two; at the same time Bantock began with the dropped-pedicle, lost his patients; changing to the Koeberle, nothing but successes followed, and Thornton also made use of the same methods successfully. Very few operators at the present day equal these men in dexterity. I studied Martin and Shröder with great care; also, throughout, the work of all of the foreigners. Some years ago I saw Mr. Tait remove the uterus deliberately for ovarian disease, long before the date claimed in this country for the first hysterectomy; so some of the claims of priority are amusing, and only demonstrate that men have not done sufficient reading.

The mortality with good operators by the extraperitoneal method has been low. I recall some one returning from Europe some time back and discussing catgut in this room, and insisting upon its advan-

tages over other ligatures. That address has cost hundreds of women their lives. One of his audience was so impressed that he returned to Kansas City, employed catgut, and lost his patient from hæmorrhage, the ligature giving way. He wrote me afterward an apology.

In twelve operations I used the *nœud*, and they all got well. In reference to the mortality with the Koeberlé, I could name one hundred women operated on by it, and the women got well nicely. Some of the women have been back during the last ten days—rosy-cheeked, bright, healthy, happy women—to consult me in regard to operations on their mothers and sisters.

Dr. Noble alludes to two deaths by hysterectomy. He throws them out as deaths from heat-stroke. This is the way statistics are played with. You do an operation; the patient dies. Of course she doesn't die from the operation. Oh, no! It is always some complication, such as pneumonia, etc. I say the death was due to the operation. Dr. Noble also alludes to a hyperpyrexia in midsummer, going up to 104°. He insists that Dr. Bernardy's case died of sepsis; but when his own patients die it is not sepsis but just sunstroke. It would be interesting to know the figures—just two deaths in how many? He alluded to the deaths following catgut and to the deaths following the flap operation. These cases dying the first night or the first twenty-four hours, it is difficult to say of what they died. Twenty-four hours is too early to die from sepsis.

In the discussion which has followed the report of Dr. Jacobs the great skill and dexterity and fame of this operator have been remarked, but surely operations resulting in infection, sloughing, supuration, and a smell so dreadful as to cause the surgeon in the wards to hurry the patient from it as speedily as possible, not to speak of the filth and fistulæ which follow operations of that kind, to say nothing about what remains undone in these operations, are startling.

In conclusion, Dr. Price called attention to the importance of freeing the bowel in all operations for the removal of pus tubes and ovarian abscess, and emphasized the point that the vaginal operation is not only the simplest but the safest.

Dr. RUFUS STEWART presented his

Modification of Tarnier's Traction Forceps,

and discussed the traction principle as follows :

In this period of the world of the making of new instruments there is no end. The forceps I would like to exhibit to you to-night are

similar to a pair of forceps I had made several years after Tarnier's forceps were introduced. They were stolen. I then sent to Tiemann, of New York, and by drawings succeeded in getting the pair I show you to-night, which are exactly like those I had before. Those I had stood the test completely, and one case especially of a lady who had craniotomy in Boston demonstrated their value.

I was called to attend her, and thought I could certainly remove the child without any trouble. I placed the forceps in the proper position in every respect. I used a pair of forceps which I had made at one time, purposely to compress, and one which I thought would never disappoint me, and they never did until that occasion. Finally, after manœuvring some time with these without avail, I felt I must perform craniotomy. I decided, however, to give the Tarnier forceps a trial, and, applying them slowly, slowly pulling, delivered a very large child, but separated the symphysis, tore the urethra right straight up for an inch and a half. This shows what these forceps can do.

Perhaps it would be very well to ask the question wherein consists a good forceps? I would like to enumerate these features. Some will agree with me, and some will not. All will agree, however, that the forceps should be made to pass up into the center of the superior strait and with a curve almost identical with the pelvis, and that the curve shall be such as that when it passes up it shall come immediately on the head of the child and on a line corresponding to the occipito-mental diameter. If you do not have that curve, and the curve is too small, it will then, instead of going down, rest upon the cheek, and you will very likely have a mark on the cheek. If, on the contrary, you have it too large, as in the Bethel forceps, which some of you remember, and the patient lying on her back, the handles pressed down, the forceps may injure the bladder. Some years ago I was requested to perform craniotomy. When I entered the room I noticed a pair of Bethel forceps with a very big curve, and found that they belonged to a young man, and the thought came to my mind, Has it done some damage? I therefore suggested that I should draw off the water. I introduced the catheter; no water, but plenty of blood came out, showing that the bladder had been penetrated. The catheter passed straight into the vagina, through the bottom of the bladder. The pressure had been so great that the whole bottom of the bladder sloughed off.

Next we have the cranial curve which should correspond to the child's head. Then after we have the cranial curve we should have the fenestra of the proper width. If you do not, and have a very

difficult case, it will cut the side of the face or head, even if the forceps be properly applied. If you have it too narrow you will have trouble, as it will then increase the biparietal diameter of the child the thickness of the blades.

To that degree you are increasing your trouble. In addition to that, if the cranial curve should be too straight you will have a slipping forceps.

In the beginning of my practice I used the Hodge forceps. In one very difficult case I applied them and to my dismay felt them slipping, slipping, although I felt sure I had them in the right position. You may imagine my feelings on delivering to find one ear hanging by a little thread of skin.

Then we should have a forceps which is sufficiently short, where the distance from the shank is sufficient to be locked and nothing more. In addition, we should have a handle so that we can place the forceps in its proper position, but no more, for if we have a traction forceps, traction is not made with the handles. Suppose all this be so, what shall be the mode of delivery? Here comes the subject which above all others is interesting to us. The common mode of traction is one which of necessity demands a greater amount of power to be exerted than is really required to accomplish the results. If we have two forces represented by A B and A C, perpendicular to each other at the point A, then the resultant of these two forces acting at A will be represented by the diagonal of a parallelogram of which A B and A C are two of its sides. Or we can resolve the said resultant into the said two forces A B and A C. Let us apply this principle to the forceps as commonly used. I have here a diagram showing the head above the superior strait and the forceps applied to the head and the line A C being perpendicular to the superior strait at its center, showing the direction the head should descend. But our handles, by which we draw from the point A, are in a diagonal which is the resultant of two forces—one in a line perpendicular to the superior strait, the direction we want the head to go, the other almost perpendicular to it against the mother's pelvis, which we do not want. That is, we must exert more force than is really needed and, as we see by this diagram, about one third more than is really needed if the traction were in the right direction or in the perpendicular line A C. But this line you see passes through the blade of the forceps to one side of the fenestra. It is here that Tarnier has the power applied by means of movable bars applied at this point. That in the common forceps we are using force in a wrong direction we

all of us have been cognizant of, and we have endeavored to counteract it by pressing the forceps back toward the spine of the mother. With traction as by the Tarnier method we use no more, or at the least but little more, than is really required to bring the head through all the planes in a perpendicular direction. But more is required; for, if we were to pull with these traction rods and there was no way of permitting the head properly to revolve, we could show that again we are using more force than we should in thus resisting the revolution of the head. Therefore Tarnier has the handle, which is applied to the traction rods, made to permit the whole forceps with the inclosed head to revolve while the traction is being made. With this handle we can steadily make traction, exerting no unnecessary force. The whole power is accomplishing one result—namely, bringing the head through the pelvis. It appears to me that one who has ever used a Tarnier forceps will never use another kind, the introduction being as easy as the common ones, while the easy traction will be a delight to its owner.

Is this all that should be required in a forceps? You may say yes; all we ever want is to deliver the child. Let us see. Suppose I am called to a case where the uterus is fully dilated but the head can not be brought down. The question comes up whether, if I were to turn I could not deliver, as it is undoubtedly true that we can gain something by turning. How do I know that I will gain enough to warrant turning? There are two unknown quantities: one the conjugate diameter of the pelvis, the other the biparietal of the child's head. If I do not know both, how am I to decide? Only by measuring the biparietal diameter of the child's head *in utero*. This can be done by having a bar attached to one handle and crossing the other and divided off, so that when the handles are separated the divisions on the bar will represent the extent of the separation of the blades, when applied to the sides of the child's head. I use the screw bar of the Tarnier forceps for this purpose, having the upper side flattened and divided on its surface accurately. Having ascertained the conjugate diameter of the pelvis and by this craniometer knowing that of the child's head, we can judge whether it can probably be delivered by turning. I remember some fifteen years ago on being invited to see a lady in labor, in whose case the physicians were inclined to turn and rather urged me to do it, and I was myself actuated by this idea, I said: "I guess we had better find the different diameters and then decide." I found the conjugate to be scarcely three inches and a half. By the craniometer I found the biparietal four inches and five eighths. This

decided me at once. The head was unyielding in its contour and craniotomy was performed. After removing the head I had to cut off the shoulders and perforate the chest to deliver the body. Had I turned, what difficulty would I have made for myself!

Lastly, for ease of introduction, I prefer handles of hard rubber and turned at the ends to act as a lever in application. In addition, I can introduce these forceps up in the superior strait without bringing the woman to the edge of the bed, which I think should be relegated to the past. Why? Because of the tendency to place the forceps on wrongly. Suppose we have a case of labor that is progressing nicely, the uterus is fully dilated, and we think soon she will be delivered. The head stops; we wonder. The pains are forcible, the woman develops great power, but still the head moves not. There is something the matter. If we etherize that woman we find, ninety-nine times out of a hundred, that the head is either in a normal occipito-posterior position—that is, the belly of the child is toward the belly of the mother, and the head naturally assumes that position. We have then to leave it thus, unless we pass the hand up and turn the body. Otherwise, if we turn the head to the occipito-anterior and keep it thus, we will twist the neck and have a still-born child, or convulsions will develop soon after birth; or, secondly, and this the more common, we will find a kidney-shaped pelvis, with one side larger than the other. If the head is coming down, so that the vertex is on the side which is larger, then the promontory will turn it into an occipito-posterior position. This will right itself after passing the superior strait. But, which is too often the case, if the vertex is lying on the smaller side and we do not turn the vertex to the other side, we will have to exert a great amount of force to deliver or may not succeed at all. Suppose we have a case of this kind and that the presentation is the left occipito-anterior. The woman is brought to the edge of the bed on her back. We now introduce the left-hand blade which, if properly placed, will be on the side of the child's head and be oblique not perpendicular. But when we introduce the other blade, it will not pass to the side because of the promontory of the sacrum. We endeavor to lock them but can not. In endeavoring to make them lock, we inadvertently turn or revolve the left-hand blade from the side to the occiput and, though they lock, one blade is over the eye and forehead, the other on the side of the occiput. The forceps being now perpendicular instead of oblique, as they should be, we draw the head through in the oblique position instead of permitting it to revolve under the pubis. When

we have delivered we find the forehead cut, and the child carries a mark through life—a mark denoting our ignorance or negligence or a dire necessity. Well, you say, will a Tarnier forceps prevent the improper application? No, but it would permit the head to revolve and would save the amount of force improperly applied; thus saving that much injury to the child and that much pressure to the mother. If we must or will ignorantly apply the forceps improperly, at least let us use that instrument which will avoid some of the dangers. Knowing, as we now do, that with the common forceps we must exert a much greater force than is really requisite and that with the traction forceps we can avoid it, I would feel highly culpable and criminally negligent if I continued to use the former when I can obtain the latter.

DISCUSSION.

Dr. NOBLE: I think the members of the Society have all enjoyed listening to Dr. Stewart. The kernel of this paper is this, I take it, that Dr. Stewart, having had a large experience, extending over many years, has in his later years become a convert to the teaching of Tarnier. Every one admits the theoretical propositions which Dr. Stewart lays down. It is certainly a matter of practical importance that Dr. Stewart has become convinced of the superior merits of Tarnier's forceps, after the employment of others previously. The principal point which struck me is the method of measuring diameters of the foetal head. This very clever method offers very valuable suggestions. We have methods of estimating the maternal diameters, but the method of measuring the foetal diameters by using the forceps for this purpose with a graduated scale may solve one of our present difficulties, especially if applicable in cases of contracted pelvis. I am very glad indeed to have heard that suggestion from him.

Dr. HOFFMAN: I am also greatly gratified to hear of Dr. Stewart's approval of the forceps with the traction principle. In reference to the measurement of the foetal head it is very necessary here, in order to get any idea of the diameter by the forceps by any measurement across the handle, that the scale by which the diameter is proposed to be measured should be absolutely correct. For instance, if I separate the forceps four inches and a half the scale will not register four inches and a half unless there is a graduation or proportionate measurement between these two. In order to do that you have either to have a very long pair of handles or a proportionate measure. In reference to the traction principle. There is one thing which comes

out in all these stiff handles, especially in reference to the attachment of the axis handles—that is, that you can not pull directly on the axis, as you must try to do, and that the tension must be modified because your attachment is away from the center of the forceps.

There are a good many things to be discussed in regard to the special handle, but the time is late.

Dr. STEWART: The craniometer is divided proportionately to the separation of the blades. The scale is absolutely divided off by an accurate measurement. It is precisely measured. Suppose we begin with two and a half and screw it down, we get the same between the blades; suppose we turn to four, it measures exactly four between the blades. Therefore it does state exactly what it means and is correct.

Dr. NOBLE: Is the craniometer of this forceps original with Dr. Stewart?

Dr. STEWART: Yes. I introduced this craniometer some twenty years ago and have used it over twenty-five years on my forceps.

Dr. RICHARD C. NORRIS: Theoretically the plan suggested for ascertaining the measurements of the child's head seems a very good one, but practically there must be several difficulties in its application that makes the method of very limited value. In the first place, the application of the blades to the sides of the head presupposes a dilated or dilatable os. With the head delayed above the pelvic inlet of a contracted pelvis, many hours must pass before a sufficient dilatation of the cervix has occurred for the introduction of the forceps, and any method available so late or requiring a preliminary forcible dilatation of the cervix loses its value as a practical method. In the second place this method requires the application of the blades in the conjugate diameter above the pelvic inlet, a very difficult and a very dangerous procedure and one that is almost or wholly impossible with the pattern of instrument the doctor presents. You will observe that this instrument has very little pelvic curve, the latter being replaced by an upward curve between the blades and the shoulders of the handles, which curve not only can not be utilized but offers obstruction when the blades occupy the conjugate diameter.

The latest pattern of Tarnier's instrument has discarded this curve as a distinct disadvantage. Furthermore, were it possible to adjust this instrument to the sides of the child's head above the pelvic inlet I would scarcely rely upon its accuracy in determining the bitemporal diameter of the head. What assurance could you have that the blades had not grasped the head obliquely or that the index on the handles accurately expressed the bitemporal diameter?

This plan of estimating the size of the diameter of the fœtal head is not altogether new. Efforts in the same direction have been made with various instruments and with the fingers but have been abandoned because inaccurate. We are forced to rely largely upon the pelvic diameters and to approximate the relative size of head and pelvis by suprapubic pressure upon the head and by suprapubic palpation—a method available even before labor—and whose accuracy depends upon individual experience and skill. When the hand can be introduced into the vagina and when the os is dilated, valuable knowledge of the relative size of the head and pelvis can be obtained by careful digital examination.

The man who discovers an easy and accurate means of determining the diameters of the fœtal head *in utero* will make a most valuable addition to obstetric knowledge, and I heartily wish the doctor's plan would do all he claims for it.

Dr. CLEEMAN : I made some years ago some very careful measurements of diameters of pelves. I believe from the measurements that it is impossible, if the head is high up, to put these forceps on the sides of the child's head. Tarnier recognized that. The blades do not go over the sides of the child's head. He does an unscientific thing ; he screws up the blades to make them hold by their pressure instead of getting them over the parietal eminences. The forceps are liable to compress the head of the child in a very dangerous manner. I can not conceive how forceps without a further curve in the shank can be applied to the sides of the head high up in the pelvis. You would have to depress them so far that you would break the coccyx to get them in proper position.

Dr. Cleeman then demonstrated from the drawing on the board that the forceps could not be got high up, because the coccyx is in the way.

Dr. WILLIAM STEWART : I am sorry that this discussion is not allowed to go over to another evening. I want to take an exception to the last speaker in regard to the character of the curve in high delivery. With a greater curve than that, it would be impossible to put on forceps. The higher up you go, the straighter the blade must be.

Dr. BERNARDY : My experience with the Tarnier forceps dates from the time of its introduction. Prior to the introduction of the Tarnier principle I used in my practice for high cases the Wallace forceps. Its application was often injurious to the mother's tissues, especially the perinæum, which had to be forcibly pushed backward before the instruments were properly applied and locked.

Dr. Cleeman will recall a case in which I called him to assist me in a confinement. I had delivered the patient a year previously by forceps. There was an antero-posterior contraction of the pelvis of about three inches and a half, the labor being so painful that in the present confinement she begged so hard for the administration of ether that I asked Dr. Cleeman to assist me. It was a partial brow presentation. It was determined first to try Hodges' forceps; its application took a long and tedious time and then, on almost the first traction made, the forceps slipped. They were then changed for a Wallace forceps and we had the same trouble to contend with: the perinæum was forced unnaturally back before the instruments could be properly applied and locked and, after an all-night work, the patient was eventually delivered of a dead babe.

The case passed to Dr. Cleeman who, in subsequent confinements, performed version and craniotomy. She then wandered from one physician to another with like results.

One New Year's morning I was requested by Dr. Crowley to assist in the confinement of this patient. Knowing her past obstetrical history I placed in my bag a Tarnier forceps. I found the patient had been in labor some eighteen hours without making any advance; the head presented in the left occipito-posterior position. I easily applied Tarnier's forceps and within twenty minutes she was delivered of a living child—the first in six consecutive confinements.

The Tarnier principle in superior-strait cases can not be put in question; it invariably succeeds where the old-style forceps fail.

I have never applied the Tarnier forceps but with the woman on her back and brought well to the edge of the bed; this position gives us the full scope of the traction rods.

Dr. STEWART: For a number of years I measured as a matter of test, *in utero* and after the child was born, and I never failed to find my measurements by this craniometer correct.

Official Transactions.

FRANK W. TALLEY, *Secretary.*

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF
OBSTETRICIANS AND GYNÆCOLOGISTS.

Meeting held in Chicago, September 24, 25 and 26, 1895.

J. HENRY CARSTENS, M. D., *President*, in the Chair.

After an address of welcome, by Dr. WILLIAM E. QUINE, of Chicago, and a response by the President, the reading of papers was proceeded with.

Abstract of a paper entitled

BILATERAL SUPPURATING PAROTIDITIS AFTER
VAGINAL HYSTERECTOMY.

BY JAMES F. W. ROSS, M. D., TORONTO.

He narrated a case in which after vaginal hysterectomy, the tenth day after the operation, the temperature rose to 103° , and a swelling in each parotid gland presented itself. The swelling gradually increased. The sides of the face became enormously swollen, the eyelids were puffed, and the patient could scarcely open them. The complication he believes to be an unusual one, and for that reason brings it before the Association. Double parotitis is seen occasionally as one of the sequelæ of the infectious diseases, a distinctly septic disease. It is difficult to believe that the removal of the ovaries can produce a parotitis. If parotitis has a peculiar tendency to follow the removal of the uterus we should have sufficient data upon the subject to make us well aware of this fact also.

DISCUSSION.

Dr. EDWIN RICKETTS (of Cincinnati) related a similar case, in which, two days after the removal of the diseased appendages, a double parotitis made its appearance.

Dr. C. C. FREDERICK (of Buffalo) saw a case in the practice of a prominent practitioner in Buffalo a few years ago in which a double parotitis followed ovariectomy. The woman made a good recovery. No suppuration in the case.

Dr. JAMES F. BALDWIN (of Columbus) narrated an instance in which the parotitis was limited to the left side, it having followed a

vaginal hysterectomy about the third day, accompanied by elevation of temperature, pain, and swelling.

Dr. W. G. MACDONALD (of Albany) said that parotitis associated with the removal of the uterine appendages was not a new thing. Among the earlier operators it was not an unusual or uncommon complication. The patients, however, usually died. He saw one case following a supravaginal hysterectomy. He had also seen it after amputations of the thigh.

Dr. JOHN M. AULD (of Chicago) had seen one case of non-suppurative parotitis of one side. It followed perinæorrhaphy and hæmorrhoids.

Dr. H. W. LONGYEAR (of Detroit) had seen parotitis associated with typhoid fever.

Dr. A. H. CORDIER (of Kansas City, Mo.) said parotitis occurs with greater frequency than is supposed in connection with operations involving the ovaries and tubes. He is inclined to believe that there is a sympathetic relationship between the ovaries and the parotid glands.

Dr. A. H. FERGUSON (of Chicago) asked as to the condition of the patient's mouth at the time of the parotitis. In scarlet fever, diphtheria, and a number of diseases associated with disease of the uterine appendages, extension takes place to the parotid gland. In such cases the mouth is foul, and if it can be kept clean parotitis is not so apt to occur.

Dr. Ross said it is well known that the parotid glands, the thyroid glands, and the submaxillary glands frequently become inflamed in inflammatory disease of the testicles, but as to inflammation of the ovaries, we are not so sure. He could not say as to the condition of his patient's mouth at the time of operation.

Abstract of a paper entitled

INTERMEDIATE TREATMENT OF PUERPERAL SEPSIS.

BY A. B. MILLER, M. D., SYRACUSE.

The author summarized his remarks as follows: 1. That suspected infection of the birth canal should be confirmed when possible by a bacteriological examination of vaginal secretions, and every means of differentiating it from other affections should be resorted to, that it may be treated rationally either by medicine or surgery. 2. Irrigation and antiseptics destroy the nutrition of the parts when

continued, and, furnishing increased moisture, improve the field for the development of micro-organisms, aside from the danger of death resulting from the antiseptic used. 3. That the birth canal can be kept comparatively dry by absorbent dressing, removing the culture media, and arresting the development of germs and infection until the abraded parts have been repaired.

Abstract of a paper entitled

THE INDICATIONS FOR OPERATION IN PUERPERAL SEPSIS.

BY L. S. MCMURTRY, M. D., LOUISVILLE.

Since operative surgery a few years ago disclosed the various lesions of pelvic disease, it has been known that pregnancy and the puerperal state may be complicated by pre-existing inflammatory diseases of the uterine appendages, tumors, and septic accumulations inside the pelvis. Chronic and circumscribed disease of this character may be converted into acute and diffuse inflammatory conditions by the trauma of labor. Puerperal sepsis may in this way be the result of pre-existing disease. This class of cases must necessarily be small, since women thus diseased are, as a rule, sterile. That such cases necessarily come within the scope of operative treatment will be generally conceded. The indications and guides for operative interference in this class of cases were then considered by the author. In all cases of puerperal sepsis the most careful examination of the pelvic organs should be made.

In conclusion he alluded to the class of puerperal cases wherein the local symptoms are those of diffuse peritonitis without localization of lesions, but where the uterus is presumably the focus of infection. This class of cases has recently been discussed extensively in relation to treatment by hysterectomy. Empirical operations in surgery are likely to prove more disastrous than similar methods of treatment in medicine. The gravity of such cases may often justify exploration and drainage, but the more extensive operation of hysterectomy will almost invariably prove disastrous.

DISCUSSION.

Dr. W. E. B. DAVIS (of Birmingham) said, with reference to cases of puerperal sepsis, where the temperature runs high they usually die in from a week to ten days, and he believes surgery offers very little hope.

Dr. HERMAN E. HAYD (of Buffalo) said that where a septic condition takes place in the endometrium, or where there remains a portion of the placenta which breaks down, he is satisfied that a sharp curette should be used. With a sharp curette the surgeon can scrape away a good piece of tissue and yet do very little harm.

Dr. WILLIAM WARREN POTTER (of Buffalo) said there was no puerperal fever except it be due to infection; that if the history of these cases was carefully traced, the gynæcologist would find underlying somewhere infection, which may be carried into the genital tract either by the obstetrician himself or by the environment of the puerperal woman; hence the great collateral interest lying closely alongside this subject was the one of preventive medicine. The important question was aseptic midwifery. If aseptic midwifery were practiced in every case, there would be no puerperal sepsis, no ophthalmia neonatorum.

Dr. W. P. MANTON (of Detroit) had never had in his private practice a case of puerperal sepsis. In reference to the use of the curette, it is an instrument, if properly used, which is absolutely devoid of harm.

Dr. H. W. LONGYEAR believed that when the uterus was packed full of gauze it prevented the flow of mucus, blood, and serum. While more or less serum may possibly come away, fragments of placenta or blood clots will certainly be retained. Rise of temperature, etc., should not be an indication for surgical interference in puerperal sepsis.

Dr. WILLIAM H. MYERS (of Fort Wayne) emphasized the importance of differentiating between septicæmia and pyæmia in considering the subject under discussion.

Dr. C. C. FREDERICK said that out of forty cases of puerperal septicæmia which he had seen in consultation in the last eight years, only two had died. Nothing could be found in the uterus and there were hardly any localized symptoms.

Dr. JAMES F. W. ROSS (of Toronto) said the subject was of the greatest importance, inasmuch as a new craze at the present time had seized the profession—that of taking out the uterus in cases in which it is unnecessary, in his opinion, to remove that organ. The pendulum had swung too far, as it did when the removal of the ovaries was undertaken for vague symptoms, and the Association should take some means of swinging it back again to its normal position.

Dr. W. G. MACDONALD (of Albany) related a case in which he favored the use of the sharp curette.

Dr. SHERWOOD DUNN (late of Paris, France) said that in the Broca Hospital, Paris, there were a hundred and eighty-four beds, forty-eight of which were devoted to obstetrical cases. In his three years' connection with the hospital service there, no case of confinement had ever been followed by any septic condition.

Dr. E. F. FISH (of Milwaukee) said, in cases of uterine traumatism, especially in abortions where there were retained septic tampons within the uterus, it was absolutely impossible to curette them away with a dull instrument. He had seen the dull curette used for half an hour at a time, and yet two days afterward pieces of membranes or clots had come away the size of a hen's egg. With a sharp curette everything could be removed.

Dr. A. H. CORDIER (of Kansas City, Mo.) emphasized the importance of treating every case of puerperal sepsis as an individual one. Where surgical interference was called for, it should be resorted to early if we expected to save lives.

Dr. G. E. KRIEGER (of Chicago) predicted that in time we would treat puerperal sepsis very much in the same manner as we treat diphtheria with serum.

Dr. J. HENRY CARSTENS (of Detroit) emphasized the importance of differentiating between the different forms of infection. While the obstetrician might in some cases infect his patient, he believed in auto-infection. He thought a sharp curette was not necessary for removing the shreds of membrane or other *débris* that might be left.

Dr. FREDERICK BLUME (of Pittsburg) said it had been proved years ago that in fifty per cent. of healthy women there were found streptococci or other pathogenic micro-organisms in the vagina. He used a sharp curette for curetting the uterus.

EXCEPTIONAL LOCATION OF THE BLOOD CLOT IN A CASE OF RUPTURED ECTOPIC PREGNANCY.

BY MARCUS ROSENWASSER, M. D., CLEVELAND.

(See page 502.)

DISCUSSION.

Dr. H. W. LONGYEAR (of Detroit) reported a case where a woman bled for several months. On opening the abdomen, the cavity was found filled with blood and clots, and after a tedious operation he was compelled to leave some of the clots in the abdomen. The patient died of shock some three or four hours after operation.

Dr. JAMES F. W. ROSS (of Toronto) reported a case of acute general peritonitis produced by the rupture of a suppurating clot. After an ectopic gestation this clot was found lying in the neighborhood of the broad ligament, and was not the least connected with the tube.

Dr. EDWIN RICKETTS (of Cincinnati) said the cases reported impressed us as to the importance of the earliest possible diagnosis. The subjective symptoms should be more carefully considered.

Dr. W. E. B. DAVIS (of Birmingham) related a case, the wife of a physician, who was delivered at full term of uterine pregnancy. Then a mass was detected in the right lumbar region which continued to grow larger. The patient was losing blood. Operation revealed ectopic gestation. The bleeding was easily controlled, a rapid operation done, but the patient died from shock. Dr. Davis also cited another interesting case.

Dr. RUFUS B. HALL (of Cincinnati) emphasized the necessity of early operation, or at least an early exploration in all instances of obscure abdominal disease. After an experience of fifteen operations for ectopic pregnancy, he is more and more convinced of the necessity of early operative interference.

Dr. THOMAS J. MAXWELL (of Keokuk, Iowa) called attention to transfusion with common salt solution to tide over severe cases of hæmorrhage.

RUPTURED INTERSTITIAL PREGNANCY.

BY L. H. DUNNING, INDIANAPOLIS.

(See page 497.)

DISCUSSION.

Dr. T. J. WATKINS (of Chicago) had met with a number of cases of extra-uterine pregnancy, but none of interstitial pregnancy with rupture. He had one case where the tube had ruptured; the placenta had grown fast to the cornu of the uterus, and where it was impossible to form a pedicle, the condition in the case being similar to that of an interstitial pregnancy.

Dr. BYRON ROBINSON (of Chicago) was fortunate enough to examine a specimen of Mr. Tait. So far as operating on these cases was concerned, it seemed to him that anything other than hysterectomy meant death to the woman.

Dr. HENRY T. BYFORD (of Chicago) said that while he had never

encountered a case of interstitial pregnancy, it was very essential to know how to proceed in such cases by surgical interference.

Dr. A. H. CORDIER (of Kansas City, Mo.) had seen one case of interstitial pregnancy in the practice of Dr. Lanphear, the uterus containing in addition several fibroids. An abdominal hysterectomy was performed.

INTRAPERITONEAL ADHESIONS.

BY E. T. TAPPEY, M. D., DETROIT.

(See page 486.)

Abstract of a paper entitled

INTESTINAL OBSTRUCTION: CLINICAL OBSERVATIONS.

BY W. G. MACDONALD, M. D., ALBANY.

He said that in no branch of abdominal surgery is precise diagnosis so difficult or operative procedures more taxing to the ingenuity of the surgeon. At the present time surgeons of experience are quite unwilling to give a definite opinion until the abdomen is opened and closed. There are a large group of cases of ileus which may be regarded as purely symptomatic, a condition in which the continuity of the intestinal tube is interrupted, but the obstruction is due to conditions of paralysis in the intestinal wall.

The treatment can not always be preventive from conditions which arise during operations. The enucleation of pus tubes or an extra-uterine pregnancy involves the leaving of extensive denuded surfaces to which intestines readily attach themselves, and those who have done secondary section can readily testify to the number of innocent adhesions found as a result of primary operations.

Abstract of a paper entitled

A CLINICAL CONTRIBUTION TO THE STUDY OF THE LATERAL DISPLACEMENTS OF THE UTERUS.

BY EDWARD J. ILL, M. D., NEWARK.

After reviewing the literature, the reader speaks of the importance of this abnormal condition, and thinks it has been generally overlooked, the patient's symptoms being attributed to other ailments. He

had collected from his last year's office case-book all cases of lateral displacements except such as come with tumors. He shows that 14.2 per cent. had lateral displacement. He draws especial attention to those cases which he considers to be congenital and where the pain is referred to the elongated broad ligament. The symptoms begin early in the patient's sexual life, in severer cases progressing gradually to complete invalidism. He then relates *in extenso* several histories. He describes a typical case. The non-operative treatment consists of endeavoring to elongate the shortened ligament by the use of dry wool or oakum tampons pushed between the cervix and ilium on the side of the shortened ligament, keeping the tampon in place by a second and third one. All this is to be retained for forty-eight hours. A hot douche with the patient on her knees and elbows twice daily, when the tampons are *in situ*, is also ordered. He related two cases of extreme suffering where total extirpation of the uterus, tubes, ovaries, and broad ligament was deemed advisable after years of unsuccessful treatment, both of which are much relieved of their suffering.

Abstract of a paper entitled

SOME OF THE INDICATIONS AND ADVANTAGES OF
VAGINAL HYSTERO-SALPINGO-OÖPHORECTOMY.

BY X. O. WERDER, M. D., PITTSBURG.

He said the operative results in suppurative disease of the pelvis in the hands of the abdominal surgeon forms one of the proudest chapters in modern surgery. While a more careful technique and a more thorough operation had lessened the number of fatal cases, they had not been entirely eliminated. Hysterectomy with salpingo-oöphorectomy in suppurative disease of the pelvis not only allows us to remove the nidus of infection more completely, but it gives the patient the very best chance for complete recovery without adding any additional risk to the operation. The mortality compares favorably with that of salpingo-oöphorectomy alone. He thinks hystero-salpingo-oöphorectomy is unquestionably the operation of the future; but whether vaginal or abdominal, still remains *sub judice*. The vaginal method has many features to recommend it. It precludes the possibility of ventral hernia and intestinal and omental adhesions to the line of incision; is followed by less shock because of the minimum exposure of the peritonæum during the operation, and absence of manipulation of the abdominal viscera. Convalescence is more

rapid and recovery more complete. Two cases of vaginal hysterectomy were then reported by the author.

Abstract of

THE PRESIDENT'S ADDRESS.

Dr. J. HENRY CARSTENS, of Detroit, selected for his subject *The American Association of Obstetricians and Gynæcologists*. The address was replete with interesting points concerning the growth of the Association. In speaking of specialists he said: "What we do is not for us, but for the whole profession. We think we can do more by limiting ourselves to a particular branch, and what little mite we add is not for us as specialists, but is to be the inheritance of the whole profession. We want the whole profession to be elevated, to become accurate, and as near scientific as possible in medicine. We want to raise medicine in the estimate of the laity, so that it shall not be laughed at and ridiculed in the pulpit or court-room, but that it shall shine forth as an art and as a science and the noblest vocation."

Abstract of a paper entitled

ÆTIOLOGY OF ECLAMPSIA GRAVIDARUM.

BY F. BLUME, M. D., PITTSBURG.

He said the ætiology of this grave complication of labor is still undecided. The theory which has found the most advocates is based upon the investigations of Lever, who first called attention to the relations between albuminuria and puerperal convulsions. Lever's observations were confirmed by various authors and led to the view that the attacks were the result of blood poisoning by urea; that they were uræmic and identical with those occurring in kidney diseases. According to Spiegelberg, all cases of true eclampsia are of uræmic origin. The cause is a kidney lesion which either pre-existed or developed during pregnancy. In four hundred cases of eclampsia observed by Olshausen, Dührssen, and Gusserow, albuminuria was present in ninety-eight per cent. Trantenroth found that albuminuria developed during the second half of gestation in forty-six per cent. in women whose kidneys were normal before conception took place.

Abstract of a paper entitled

THE PROPHYLACTIC TREATMENT OF ECLAMPSIA
GRAVIDARUM.

BY H. W. LONGYEAR, M. D., DETROIT.

The author recognizes two varieties of convulsions that may occur as a result of the pregnant or puerperal condition—first, those of a purely nervous character, which usually occur in woman of neurotic habit and those who are predisposed to epileptic attacks; and second, convulsions which occur as a result of some change in the blood and tissues of the patient due to renal disease, as especially indicated by the presence of albumin in the urine.

Early diagnosis is of the utmost importance to the success of any preventive treatment, and to insure this the urine of every pregnant woman should be systematically examined by the physician every two weeks after the sixth month. When albumin is found to be present, immediate treatment should be commenced and daily examinations of the urine made thereafter. The author divided the prophylactic treatment into dietetic, medicinal, and operative, the latter to be adopted as a last resort. In simple cases of albuminuria without scanty secretion, many patients will do well and be tided along to safe confinement on an exclusive milk diet without medication.

Abstract of a paper entitled

SO-CALLED PUERPERAL ECLAMPSIA IN ITS RELATION
TO INSANITY.

BY W. P. MANTON, M. D., DETROIT.

The author had recourse to three sources of information—statistics from private practice, statistics from the lying-in hospital, and the records of hospitals for the insane. Never having had a case of insanity following eclampsia in his own practice, he had collected 8,868 cases of delivery reported by eight competent observers, published in current medical literature. In this number he found that eclampsia is noted as having occurred 33 times. In not a single instance is it stated that insanity followed the convulsive attacks. During the four years 1891 to 1894 inclusive, 282 women were delivered in the wards of the Detroit Woman's Hospital, eclampsia occurring in two cases.

Both of these recovered without symptoms of mental alienation. This seems the more remarkable since of the 282 patients confined, 233 were unmarried. During the same period there were admitted into the three principal asylums of Michigan with which he is connected 1,271 female patients. In this number the insanity was attributed to puerperal causes in 110 instances, but in two cases only was eclampsia put down as the exciting cause.

Abstract of a paper entitled

THE PREVENTION OF PELVIC INFLAMMATION IN WOMEN.

BY RUFUS B. HALL, M. D., CINCINNATI.

He pointed out some of its most frequent causes, placing septic infection following abortion and gonorrhœal infection as the most important. He advocated the dissemination of knowledge among the laity by the family physician as a potent remedy for the prevention of these troubles. He especially advocated that women should be warned by their physicians of the great danger of abortion in the early months of pregnancy. It is well recognized by the profession that many married women produce abortion in the early weeks of pregnancy, and it is during this time that the membranes are retained and septic endometritis is induced, leading to salpingitis, pyosalpinx, and suppurating ovaries later. He also advocated that the profession should impart knowledge on every legitimate occasion on the subject of gonorrhœal infection in young men and boys. It is well known that men frequently infect their wives years after they themselves believe they are cured of their gonorrhœa. The author believes that if the profession impart this knowledge to the laity, it will be only a short time until many abdominal sections now made for the relief of inflammatory diseases would not be called for.

Abstract of a paper entitled

DIAGNOSIS OF INTRA-ABDOMINAL TUMORS.

BY A. H. CORDIER, M. D., KANSAS CITY.

The author outlined the methods and procedures which should be followed in examining patients. Tumors through which gases are detected by gurgling indicate either an involvement of the bowel in the tumor, or pressure of the growth on the bowel with adhesions to

the same. If this symptom be coupled with a history of a pyloric cancer or a cæcal growth, it is confirmatory in its indications. Some growths have a disposition to change positions, but all growths have one or more attachments, and it is safe to infer that this attachment is to the site at which the neoplasm had its beginning, and its movements will be only around an arc of a circle with the pedicle attachment to the diagnostic point. Adhesions may prevent a growth from moving, or may anchor a tumor in a locality far from its original point of starting. The history of inflammatory attacks and the pain will come to the rescue here. The character of the pain and the amount and area of tenderness are invaluable aids. The withdrawal of free fluid from the peritonæum will often show the presence of a tumor before undetected. Pus in the pelvis is one of the easiest conditions to diagnose.

Abstract of a paper entitled

PNEUMO-PERITONÆUM.

BY JAMES F. W. ROSS, M. D., TORONTO.

The author reported a very instructive case of this disease. He classified pneumo-peritonæum as follows: First, tympanites intra-intestina. Second, tympanites extra-intestina. (a) Traumatic, (1) from without, (2) from within. (b) Non-traumatic, or spontaneous. (1) Without liquid, gas odorless; (2) ascites and gas odorless or foetid; (3) pus and foetid gas. Third, tympanites *intra et extra intestina*.

With regard to the treatment, exploration by means of a knife and the finger is free from the objection that obtains in the case of a stab in the dark by a trochar. In all of these cases the author believes an exploratory cœliotomy should be performed. Even after the removal of the pressure on the diaphragm the breathing improves. It has been stated by one operator that it is necessary in puncturing such cases to allow the gas to escape very gradually.

LARGE HYDRONEPHROTIC CYST SIMULATING OVARIAN TUMOR: ABDOMINAL HYSTERECTOMY; RECOVERY.

BY HERMAN E. HAYD, M. D., BUFFALO.

(See page 517.)

THE LIMITATION OF CRANIOTOMY.

BY WILLIAM H. MYERS, M. D., FORT WAYNE.

(See page 479.)

OPERATIONS ON THE GALL BLADDER.

BY EDWIN RICKETTS, M. D., CINCINNATI.

The author reported three cases of gall-bladder surgery, and drew the following conclusions: (1) The continual absence of bile in the intestinal discharges does not necessarily signify that there is no operative condition of the gall bladder existing. (2) The bile may flow periodically, and when this is true, symptoms demanding surgical interference are generally present. (3) Jaundice, when present, is very satisfactory evidence of biliary obstruction, although it is not always present. (4) Pains in the region of the gall bladder coming on at intervals and in connection with jaundice, or without jaundice in connection with clay-colored stools, is positive proof of biliary obstruction, and when this is true, an operation should be resorted to. (5) Persistent clay-colored stools, whether we have severe pain or jaundice with them, are the most reliable symptoms governing operative interference. (6) When a stone is primarily engaged in the gall bladder, then a pathological lesion begins. (7) We may have an obstruction of the common duct due to external trauma, such as a blow received over the region of the liver. This may produce a catarrhal condition of the common duct amounting to entire stoppage of the flow of bile. (8) We may have a solitary calculus engaged in the lower end of the gall bladder, causing thickening of the bladder wall and the periodical escape of the infected or non-infected contents. (9) We may have calculi formed in the hepatic or common duct. (10) The importance of probing the hepatic duct through the incised bladder in all cases operated upon, whether the condition present be catarrhal alone or with the presence of stone.

*Abstract of a paper entitled*OPERATIVE PROCEDURES FOR THE RELIEF OF
OBSTRUCTION OF THE BILIARY DUCTS.

BY W. E. B. DAVIS, M. D., BIRMINGHAM, ALA.

The author alluded to a large number of experiments which he had made on dogs, and in which he had tested the value of gauze in

draining bile in injuries of the gall bladder and ducts. He reported cases where he had removed the gall bladder without tying the duct by packing with iodoform gauze. The animals got well. In other instances where he incised the gall bladder and ducts and packed with gauze around the openings, no stitches being used, the animals recovered. Complete walling off of the general cavity was noted when the abdomen of the animals was reopened. A number of cases were examined at the end of forty-eight hours. Dr. Davis also reported a case on the human being in which he had removed the gall bladder and a portion of the cystic duct where there was obstruction in the common duct, packed with gauze after introducing a glass drainage tube, and there was also complete walling off of the general cavity. He advises that in cases of obstruction of the common duct no attempt should be made to suture the opening after the obstruction has been removed, as the patient's condition is nearly always serious, and a prolonged operation will terminate fatally. The obstruction should always be removed if possible. Dr. Davis' experiments demonstrate conclusively that the peritonæum is capable of taking care of a small amount of bile, but that large quantities or the constant extravasation of it will produce a fatal peritonitis usually in twenty-four to forty-eight hours. He thinks the field of cholecystenterostomy is a very limited one.

Abstract of a paper entitled

THE USE AND ABUSE OF THE UTERINE CURETTE.

BY W. B. DORSETT, M. D., ST. LOUIS.

The more the author had used and seen used the uterine curette, the more he was impressed with the following ideas: that when used, the selection as to the shape and form of the instrument in a given case is not always a wise one; that a proper knowledge of its use should be obtained before trying to use it; that it is not a cure-all. Its use should be only in conjunction with other treatment. He looks upon the blunt curette as sold in the shops as a dangerous instrument. The instrument with a sharp cutting edge, properly constructed, is a most useful one, and in the treatment of intra-uterine inflammatory conditions is the *sine qua non* of success. In order to secure a good scraping instrument, the sharp edge should stand at an angle of 60° to the shaft or handle. A greater angle will not scrape thoroughly, and a lesser angle is liable to incise the uterine

wall unless used with a great deal of care. Cases of perforation of the uterine wall are on record, and he thinks they are due to want of care in the selection of the proper instrument. The dull or blunt curette should never and under no circumstances be used.

SOME ANOMALIES FOUND IN ABDOMINAL SURGERY.

BY THOMAS J. MAXWELL, M. D., KEOKUK.

(See page 510).

Abstract of a paper entitled

SHOULD INTRA-UTERINE INJECTIONS OF GLYCERIN BE USED FOR THE INDUCTION OF LABOR?

BY DR. B. M. HYPES, M. D., ST. LOUIS.

The author concludes that these injections are often inefficient, especially so in doses under fifty cubic centimetres. They are liable to be followed by shock, air embolism, thrombosis, metritis, and sepsis. They may, and sometimes do, produce glycerin poisoning—that is, decomposition of the blood-corpuscles, resulting in diseases of various organs, but more especially in nephritis with hæmoglobinuria. The method involves no consideration of the life of the child, and hence results in great mortality. Its use should be abandoned, or the dosage reduced, especially in subjects with prior existing kidney affections.

Abstract of a paper entitled

HAS GYNÆCOLOGY RECEIVED JUST RECOGNITION AS A SPECIALTY?

BY M. B. WARD, M. D., TOPEKA.

The purpose of this paper was to call attention to the efforts necessary on the part of the Fellows of the Society and other members of the profession to elevate to a position with the other specialties the standard of gynæcology, and at the same time to discuss the best means to educate the profession and laity to the all-important truth that to be a gynæcologist one can not at the same time be a general practitioner. As specialists, our duty is clearly in the line of spreading the gospel of truth regarding the proper methods of examination

and treatment of the numerous diseases peculiar to the female sex, in order that every physician shall have a reasonably intelligent understanding of the methods of dealing with the simpler forms of diseases. Dr. Ward said the line must be drawn and, when once fixed, strictly followed before we can expect to command and receive just recognition as gynæcological specialists. This advice must naturally mean a great financial sacrifice on the part of those who have been combining the entire field of surgery with gynæcology. Such a sacrifice, however, will be as bread cast upon the waters to return after many days. It may even temporarily almost take the bread from the mouths of our children; nevertheless, it is the only course to pursue if gynæcology is ever to be recognized as a specialty whose disciples shall receive the encomiums to which they are justly entitled.

Abstract of a paper entitled

SURGICAL TREATMENT OF PERFORATION OF THE
BOWEL IN TYPHOID FEVER.

BY L. H. LAIDLEY, M. D., ST. LOUIS.

The author, in reviewing this subject, concludes that an early diagnosis and operation offer the greatest chances for recovery. If perforation of the bowel exists, it is the duty of the surgeon to make an exploratory incision, close up the opening, and cleanse the abdomen. The more rapidly the operation is made in closing the perforation, which is usually single, and because of the danger in prolonging the operation, the better. In selecting a method for the closure of the perforation a Lembert suture should be used in small openings; in the larger openings, when the lumen of the bowel is contracted by the use of the interrupted suture, resection with the use of the Murphy button is the most advisable course to pursue. The author urges that greater interest be taken in educating the profession to select the cases, many of which are overlooked, to be placed in the hands of the surgeon, and thereby reduce the mortality less than 100 per cent. which heretofore has prevailed.

Abstract of a paper entitled

TYPHOID PERITONITIS.

BY J. B. MURPHY, M. D., CHICAGO.

The author reported some twenty-eight cases that had been operated upon by different surgeons. A case reported by Dr. Van

Hook, of Chicago, was the first to recover. Another case was operated on by Dr. Abbe, and one by Dr. Ill, both of which recovered. Dr. Murphy also reported cases upon which he had himself operated which were followed by recovery. He holds that early diagnosis and prompt operative interference offer the greatest chances for recovery.

Abstract of a paper entitled

KRAUROSIS VULVÆ: A CONTRIBUTION TO ITS
PATHOLOGY AND THERAPEUTICS.

BY H. W. LONGYEAR, M. D., DETROIT.

All of the cases of this affection seen by the author had been in women who had passed the fortieth year, and in each case the symptoms were manifested coincidentally with those experienced by the patient due to the menopause. In the first case in which he recognized the disease the woman was still menstruating, although irregularly, and the symptoms of the kraurosis had troubled her for about a year, the local appearance of the disease indicating that it was in an early stage of development. In the second case the symptoms had been manifested for six or seven years, the patient's ovaries having been removed two years before he saw her and before the menstrual function had entirely ceased, and the kraurosis was found to be in the advanced stage of atrophy. In the third case the symptoms of the disease began with the cessation of the menstrual function, and when examined by the author four years later, the kraurosis had attained what might be called, for comparison, the middle stage. The author then dwelt upon the treatment for this affection, which is both operative and medicinal.

Abstract of a paper entitled

NEURASTHENIA ACCOMPANYING AND SIMULATING
PELVIC DISEASE.

BY DR. C. C. FREDERICK, M. D., BUFFALO.

The author defined neurasthenia as an exhaustion of the nervous system, more particularly the sympathetic nervous system, due to malnutrition. After dealing with the symptoms encountered, he said there was a class of women in whom neurasthenia simulated pelvic disease. It occurs in those of a nervous temperament. It is a fre

quent ailment among our American women. It is seen alike among the rich and the poor, the fleshy and rotund, as well as the thin and spare of form. With reference to treatment, to correct so far as possible the habits of the patient which lead to nerve tire, general tonic treatment and good environment, and, above all, the rest treatment of Mitchell, bid fair to do as much for these women as human skill has thus far devised. Many of them can be nearly or quite cured, and others only partially relieved. Removal of tender tubes and ovaries, which are simply tender and not diseased, always adds to their suffering.

The following officers were elected :

President.—Dr. Joseph Price, Philadelphia, Pa.

First Vice-President.—Dr. A. H. Cordier, Kansas City, Mo.

Second Vice-President.—Dr. George S. Peck, Youngstown, Ohio.

Secretary.—Dr. William Warren Potter, Buffalo, N. Y.

Treasurer.—Dr. X. O. Werder, Pittsburg, Pa.

Judicial Council.—Drs. C. A. L. Reed, James F. W. Ross, L. S. McMurtry, A. Vander Veer, and J. Henry Carstens.

On motion, the Association adjourned to meet in the city of Richmond, Va., the second Tuesday in September, 1896.

THE STATUS OF GYNÆCOLOGY ABROAD.

FRANCE.

Intra-uterine Treatment in Inflammatory Affections of the Annexa.

A. DOLÉRIS (*Nouv. arch. d'obstet. et de gyn.*, No. 33, 1895), after referring to the great divergency of opinion still existing among medical authors in regard to this subject presents his own opinions in this article, in conjunction with those of other authorities.

Gendron reports eighteen cases suffering from metritis with peri-uterine lesions which he thus describes: knotty, fibrous bands of rounded form and more or less extensive masses, resisting or hard to the touch, puffiness, etc. Fourteen of these recovered excellent health after treatment: five, after a period of four years; six, after three years; two, after two years; and one, after one year. Two were lost sight of and one should be accounted as a fifteenth success, because she became pregnant shortly after the treatment, though she died sub-

sequently of tuberculosis; one had laparotomy performed. Our author, therefore, grants fifteen successes out of eighteen cases to Gendron. In eight cases the operation was preceded by dilatation for several days by means of laminaria and sponge tents and drainage by iodoform gauze. In the ten other cases, this order of treatment was reversed. The author believes that the reason for the reversal of treatment in these latter cases was that these patients were unable to endure the pain incident to gradual and prolonged dilatation.

The experience of Fournel is thus summed up: Intra-uterine treatment for peri-uterine disease is seldom efficacious. The proportion of failures in his experience is in the relation of ten to one. He attributes two fatal cases reported to the pursuance of the method in question, though he adds that such a result is happily rare. He believes the procedure to be sometimes useful, most frequently useless and occasionally dangerous.

Dolérís believes that Fournel exaggerates the danger and refers in this connection, to a list of six hundred cases which he has collected from the records of twenty surgeons, in which not one life was lost nor a single case of practical aggravation of the symptoms was caused. He concludes, therefore, that the intra-uterine treatment has vindicated its claim to be the first recourse in cases where ablation of the organs would be the alternative.

Pichevin has shown the possibility of evacuating cystic tubes through the uterus but yet urges the importance of a rapid cure of the disease with more insistence than our author, who believes the length of time necessary to give the method a thorough trial in each case is fully compensated for by the final conservative results.

Porak, Charpentier, Nitot, and Labusquière are all mentioned as indorsing the author's views.

Bonnet strongly denies that the procedure is a dangerous one. He declares that not only has he never had a fatal result but has never even seen, outside of acute congestions, any aggravation of the original disease by this method. He has obtained at least symptomatic cures in nearly half of his cases. He concludes that the treatment is far from being indicated in all inflammatory lesions of the perimetrium but, on account of its innocuousness if practiced prudently and on account of the advantages which may be obtained from it, even if the radical operation must ultimately be resorted to, it should be proposed to the patient when the surgeon has sufficient influence to induce her to endure the annoyance of its length with the possibility of an incomplete success and even of a complete failure.

The author's final conclusions as to the general opinion of his associates is that intra-uterine treatment for diseases of the perimetrium should be the method of treatment to begin with and he believes the results may be classified from present statistics as *positive success*, *doubtful success* and *failure*. He considers this diversity to be owing to the operator and to the location of the operation. He maintains the importance of the method to be proved by the number of cases reported radically cured and by the still larger number of cases in which the marked improvement has caused great amelioration in the suffering of the patients. He adds that not a single death has occurred in consequence of this treatment in the practice of his colleagues, referred to in this article, and but three cases of *actual* aggravation of the disease. He deduces from this that the danger is slight and is undoubtedly far less than that of any operation aiming at ablation.

He attacks Fournel for his opposition to dilatation of the uterus, on which procedure the latter's opposition to the intra-uterine method of treatment is principally based. Fournel's objections are, first, that in tolerant, painless cases, though dilatation may do no harm, it is better to avoid it because, for this very reason, the treatment presents the illusion of being effectual; secondly, in cases of a very acute character there is no need of dilatation: in both this and the former class expectant treatment is, in the first place, justifiable; thirdly, he considers that dilatation in surgical cases, *i. e.*, where pus exists from the onset, leads to sterility by allowing suppuration to proceed unchecked; thus greatly increasing the destruction of tissue by delay in removal and both directly and indirectly causing the death of many patients.

To these arguments, our author opposes the statistics of the six hundred cases collected by himself, already referred to, the results of which, he feels, fully answer the strictures of his opponent; who, moreover, has never had either a death or a serious aggravation of the disease, from the method in dispute, in his own practice.

[The great importance of this article, to our mind, lies in the indication which it furnishes that there exists, among a number of prominent gynæcologists in France, a conscientious desire to find some means sufficiently effectual to obviate the disgraceful and wholesale mutilation of women, which so long held sway over our specialty, and to whose rapid and popular adoption Tait of Birmingham owed the beginning of his world-wide reputation. As regards the merits of the treatment advocated, we think that both Doléris and his opponent are both right and wrong. Neither seems to us to have arrived at the

true conception of the nature of the lesions under discussion nor at the true indications of treatment for these. Both Doléris and Fournel generalize too much when they class all peri-uterine lesions as inflammations of the annexa and consider them as acute, as suppurating and as non-suppurating. They overlook the fact that we rarely find an inflammation of the pelvic peritonæum without having also to take into consideration the effect of the cellulitis which preceded or accompanied it. Moreover, we believe that the majority of the so-called lesions of the appendages, which present upon palpation an enlarged and prolapsed ovary and tube, and where evidences of suppuration are wanting, are not an inflammatory condition of these organs but simply a state of congestion, due to some interference with the pelvic circulation—whether this be a displacement of the uterus from old adhesions or from inflammation of the uterine ligaments, or whether it be due to lacerations of the cervix or pelvic fascia received in childbed.

When the treatment which Doléris advocates in his paper does good, it is, we believe, in the cases just referred to. It acts as a counter-irritant, by relieving the pelvic organs of a long-standing venous congestion and thus restoring a more equitable condition of the circulation. On the other hand, where an organ has for many years remained in a state of constant hyperæmia, we know that organic changes slowly take place. In such conditions of the annexa, as well as where pus has actually become encysted in the tubes, it is not reasonable to expect any return to the normal functional life of these organs. As Fournel says, this organic change is a constant menace to the life of the patient, on account of its progressive character and, we may add, because it presents a constant focus or nidus for the relighting-up of acute inflammation. We, therefore, agree with the latter that, in these cases, the intra-uterine treatment is a waste of valuable time, if not something worse, and that ablation, partial or entire according to the extent of disease in the offending organ, is clearly indicated.

The distinction we have made in regard to the pathological character of the different forms of lesion of the uterine annexa gives, according to our experience and belief, the true indications for the use of the method of treatment so strongly indorsed by our author. It accomplished in a more direct and rapid manner all we can hope for and have long experienced successfully from the use of iodine and glycerin applied to the vault of the vagina. As to the danger incurred by its use, in these days of asepsis, we agree with Doléris that it should not be necessary to take it into account.—ED.]

RUSSIA.

Rare Forms of Ovarian Tumors.

H. THOMSON (*St. Petersburg med. Woch.*, No. 26, 1895), preliminary to reporting two cases, quotes Rosthorn's statements as follows: Tubo-ovarian cysts result from inflammatory changes of the uterine annexa and their peritoneal covering. It is not proper to trace them back to a congenital ovarian tube. Real ovarian and follicular cysts may communicate with a diseased tube through suppurative inflammation or atrophy of adherent surfaces.

When fimbriæ or their remains appear within the cyst wall, we may suppose that during ovulation they came in contact with a ruptured follicle creating an adhesion to the cyst wall, thus establishing a common space.

The first case is that of a woman forty-one years old. She dates her illness back one year and has noticed the gradual growth of the tumor accompanied by some abdominal pain.

The tumor extends as high as the umbilicus and down low into the left side of the pelvis. The uterus is retroverted and displaced to the right.

The pelvic portion extended down deeply between the layers of the broad ligament and the cyst was extensively adherent to the neighboring structures. The tumor contained bloody serum. A rapid and complete recovery resulted.

The second case was a combination of a large ovarian tumor of one side with dermoids of the other and occurred in a woman fifty-nine years old.

She had borne eleven children and had previously been in good health.

She had observed the increase in size of the tumor but had suffered no pain and only the inconvenience in locomotion caused by the great size and weight of the tumor.

In the removal of this growth a very long incision was necessary and extensive adhesions were found. A large amount of fluid was evacuated. The pedicle was broad and came from the right ovary. After removal of the ovarian tumor a dermoid the size of a goose egg was found in Douglas' *cul-de-sac* and two smaller ones in the left side of the pelvis. All three were removed. The largest one contained traces of bone, teeth and hair.

The tumors, together with the fluid evacuated, weighed over seventy pounds. The patient made an uneventful recovery.

Amputation of the Cervix with Cure of Hysterical Aphonia.

SOLOVIEFF, at the Surgical Society of Moscow (*Nouv. arch. d'obstet. et de gyn.*, No. 8, 1895), reported an interesting case of a patient, multipara, thirty-one years old, who suffered from aphonia in consequence of a recent attack of the "grip." The patient consulted him for uterine symptoms. He found, upon examination, hypertrophy of the vaginal portion of the cervix. For this condition, he amputated the hypertrophied portion and also did a curettage. This operative procedure was followed by a suppurative parotiditis. The patient was chloroformed and, while in this condition cried out in a loud voice. When she had recovered from the narcosis she was told that her aphonia was cured, which was actually the fact.

POPOFF, in the discussion which followed, did not believe that the cure of the aphonia was due to the cervical amputation but rather to the opening of the abscess of the parotid.

[We are inclined to believe that Solovieff was correct in attributing this curious result to the amputation of the uterine neck, though he was evidently unaware of the true pathology of the condition he found. This was undoubtedly subinvolution due to laceration of the cervix, and the aphonia was quite in accord with analogous reflex symptoms following such injury, which have for many years been familiar to American gynæcologists through the writings of Dr. Emmet of New York. The latter ascribes these *reflexa* to the presence of a cicatrix in erectile tissue, and he believes that this acts by irritation to the neighboring branches of the sympathetic system. This theory, propounded by him many years ago, has never been seriously combated nor superseded by any other explanation equally satisfactory. A number of similar results after the Emmet operation, or after amputation for laceration of the uterine cervix, as well as after the removal of cicatricial tissue in other neighboring organs, as in the urethra and vagina, are detailed by him in his *Principles and Practice of Gynæcology*. He reports several cases there of severe and persistent "neuralgia of the face," completely cured after removal of scar tissue from the cervix. Elsewhere he has reported a case of inability to swallow solid food of several years' standing, which was entirely overcome within twenty-four hours after he had operated upon the cervix. The same author has reported similar experiences in cases where the cervix has been scarified by the long-continued application of caustics, as well as after operations upon the urethra and upon the vagina for the removal of scars left after injury in labor.—ED.]

FINLAND.

A Second Series of One Hundred Laparotomies.

G. HENRICIUS of Helsingfors (*Central. f. Gyn.*, No. 33, 1895) gives the statistics of this series of his cases as follows: *Forty-seven* ovariectomies (seventeen bilateral) with five deaths; *twenty-seven* spayings, seventeen of which were for inflammation (eleven bilateral), with two deaths—both in the bilateral inflammatory class, six for myoma, three for hæmatosalpinx, one for aborted tubal pregnancy; *fourteen* myomectomies with no deaths, of which one was total extirpation, eight after Chrobak's method, one the removal of a fibromyoma attached to the fundus by a short and broad pedicle (sixteen hundred grains in weight) in the sixth month of pregnancy (without abortion), four enucleations; *one* Freund operation for cancer of the cervix with one death; *eight* ventrofixations with no death; *one* laparotomy for probable tuberculous cyst of the mesentery; *one* for pancreatic cyst; and *one* for omental cyst, with no deaths in the last three.

OBSTETRICS.

Criminal Abortion and the Traumatism Incident to its Performance.

DENSLAW LEWIS (*Chicago Clinical Review*, October, 1895) calls attention to the large proportion of unmarried women of all classes who seek to evade the consequences of indiscretions, though the number of married women who seek to escape the obligations of motherhood by inducing abortions is very large.

Misstatements are willfully made by these patients to induce the physician to undertake some form of intra-uterine examination, and the physician needs to be constantly on his guard. The fact that induced abortion is morally wrong has surprisingly little weight with such patients, and almost the only argument that has any effect is the danger connected with such an operation.

Methods resorted to for the interruption of pregnancy are: (a) *Drugs*, including purgatives of various kinds, oils of savin, tansy, etc.; binocide of manganese; oxytocics, as ergot, cotton-root bark, etc. In the earlier months of pregnancy the action of these is often ineffectual, it seemingly being essential that there shall be a body of some size in the uterus upon which the contractile force can expend itself. In

many instances the use of drugs has produced the death of the mother instead of accomplishing the desired abortion. (b) *Hot vaginal injections*, plain or medicated, to induce uterine contractions. (c) *Intra-uterine injections*. (d) *Introduction into the cervix or body of uterus of solid bodies*, such as catheters, pencils, syringe nozzles, hair or hat pins, tupelo or sponge tents and a great variety of other bodies.

Results of Traumatic Abortion.—Sudden death has been induced by the mere introduction of a sound or other foreign body into the uterus. Such deaths can only be attributed to reflex action, an inhibition of the nervous system, produced by irritation of the cervix. The injuries vary from laceration to complete perforation of the uterus, and in many cases where the injury is slight they heal without serious disturbance of the general health unless there be infection; in the latter case, septicæmia, peritonitis, salpingitis, often with pyosalpinx, are the usual results.

The foreign body may produce the abortion and yet remain *in situ* itself with little discomfort, or it may become the starting point of a suppurative process, through the agency of which it is expelled into the adjoining viscera or penetrates the neighboring tissues.

The treatment of these lesions depends on their location and extent, their relation to the abortion or the pathological conditions that may have supervened, as well as on the location and nature of the foreign body which may have been a determining agent in the case. The danger from infection is imminent in every abortion, and when, in addition, there is a direct communication between the vagina or the uterus and the peritoneal cavity, when laceration of the parturient canal has occurred—often through the agency of an unclean instrument—or when such an instrument, the bearer of pathogenic microbes, is itself lodged in some portion of the genital tract, the necessity for exceptional antisepsis is evident. But the antiseptic methods must be modified by the conditions present. While, as a rule, in obstetrical practice, lacerations should be repaired at once if the parts are infected or liable to become so, efforts at repair will be useless and may be harmful. If pus is to form it is not well to have it inclosed under strips of mucous membrane, where its escape is prevented and its absorption favored. The douche should be used with great caution, remembering the possibility of perforation. The liquid used must be sterilized water, a boric-acid solution or other innocuous substance.

Where infection has taken place the treatment consists in providing a free means of escape for purulent discharges, the removal of ne-

crotic tissue and in preventing, as far as possible, general infection due to absorption of pathogenic germs or the ptomaines they have produced. Suppurating surfaces must be cleansed with absorbent cotton; to vaginal lesions apply iodoform, aristol or other powder, or paint them with iodine or nitrate of silver, or peroxide of hydrogen may be used or a drop or two of concentrated solution of carbolic acid. Where septic infection has progressed and abscesses have formed within the musculature of the uterus, and the danger of fulminating septicæmia or fatal pyæmia is considered great, but one operation is to be considered—that of complete hysterectomy, with the removal of as much of the infected tissue as possible.

If perforation of the uterus has occurred without injuring the fetal envelope, vaginal douches must not be used; swabbing out the uterus or the use of gauze or drainage-tubes, is ill-advised. The opening of the peritonæum is apt to be small and the surfaces easily fall together, and should suppuration now ensue it will be without danger to the peritonæum. Should incomplete abortion complicate perforation the secundines should, in most cases, be removed.

In perforation of the cervix of recent origin it is well to tampon with sterilized or iodoform gauze. From twelve to twenty-four hours will allow of partial separation of the decidua, facilitating the removal of the secundines, but this interval is of special value in allowing the peritoneal surfaces to become agglutinated, thus shutting off the entrance of sepsis to the abdominal cavity.

If the foreign body is present and accessible it should be removed. If it has been there for some time it is liable to produce ulceration of the uterine parenchyma, the abscess usually extending into the cellular tissue. If the foreign body has escaped into the tissues surrounding the uterus and become the starting point of an abscess, the treatment by incision and drainage will usually admit of its removal. If the foreign body is in the abdominal cavity, abdominal section must be performed though, if the body could be felt in Douglas' *cul-de-sac*, it might be removed by vaginal incision.

Unless the peritoneal surfaces have become agglutinated the uterine wound should be sutured by a sero-serous suture. Adhesions of uterus, tubes or ovaries should be loosened and, if the latter are seriously inflamed or the seat of disease, they should be removed. Injuries to blood-vessels, intestines, etc., should be repaired.

The Narrow Pelvis in Northern Germany.

SCHATZ, at the Obstetrical and Gynæcological Section of the Congress of German Physicians at Lübeck, September 16, 1895 (*Münch. med. Woch.*, No. 39, 1895), says the normal pelvis of the books does not correspond with the normal Caucasian pelvis. The symmetrical pelvis of the Caucasian race is seldom seen in northern Germany, the prevailing type being wider and less round. The clinic at Rostock shows nine per cent. narrow pelvis: three per cent. uniformly narrow, four and a half per cent. flat (not rhachitic), one per cent. flat and rhachitic. At Mecklenburg uniformly narrow pelvis are frequent, due to the recent immigration of Polish female laborers. Infants proportionately large, born alive, are apt to develop pulmonary atelectasis. Seventy per cent. of cases in flat pelvis are delivered without aid. *Version* yields seventy-five per cent. of living children in simple flat pelvis, the best results of version being obtained if performed before the rupture of the membranes and with a dilated os. Compression of the skull is attended with less fatality than very high extraction with difficult arm delivery. In discussion, Prochownick (Hamburg) held that uniformly narrow pelvis in northern Germany were more frequent in degenerate families, the flat pelvis among the poorer classes.

FEHLING (Halle), in the discussion which followed, considered the chief difficulty in extraction due not to impaction of the arms but to the delivery of the head; advised Walcher's hanging position.

LEOPOLD (Dresden) said Saxony abounded with narrow pelvis. He had observed an increase in rhachitis; the common flat rhachitic pelvis was very frequent; next in order the uniformly narrow pelvis; and last the flat pelvis, the latter among the richer class. He favors Walcher's hanging position being assumed after the extraction of the arms and disapproves of version in primiparæ if avoidable.

PÆDIATRICALS.

AMERICAN.

The Use of Bromoform in the Treatment of Whooping-cough.

H. B. CARPENTER (*Philadelphia Polyclinic*, September 14, 1895) has reported a number of cases of pertussis treated with bromoform. Since that time he has used the remedy in a larger number of cases, and usually with most marked improvement in the condition of the patient. In some instances the disease was influenced in a very favorable manner, the paroxysms being greatly reduced both in frequency and intensity, showing the powerful influence exerted by the drug upon the course and duration of the disease. The benefit seems, partly at least, to be due to its action as a local anæsthetic upon the pharyngo-laryngeal mucous membrane. The author begins the treatment with two-drop doses every four hours to a child of two years, increasing this somewhat if necessary. Bad effects are never seen from these doses.

Bromoform usually stops the vomiting within a few hours, and in a few instances it has checked the disease while in the full vigor of the paroxysmal stage. The duration of the treatment is from two to four weeks. About seventy-five per cent. of the cases recover within one to three weeks. It is not claimed that bromoform is a specific, but that it will give better results than any other treatment that we know of to-day.

As bromoform is but slightly soluble in water, it is best to add some alcohol to the solution as follows :

℞ Bromoform.....	℥xlviij ;
Rectified spirit.....	ʒiv ;
Distilled water.....	ʒj ;
Sirup of Tolu.....	q. s., ad ʒiij.
M. et Sig. : One fluidrachm in water every four hours.	

Bromoform may be given dropped on sugar or in water. The taste is scarcely perceptible. Bromoform is very volatile and decomposes readily. It should be kept in closed bottles and protected from the light.

Trismus Neonatorum.

J. W. MARCY (*Philadelphia Polyclinic*, October, 1895) has seen eight cases of this disease, seven of which proved fatal. All the fatal cases were among negroes amid filthy surroundings. The parents of the case that recovered were healthy Germans living in the country. They all developed the disease within ten days after delivery. The symptoms most characteristic of the disease are the boardlike hardness of the abdominal muscles and a peculiar drawn and aged look of the face. The treatment that was used in the successful case was a dose of castor oil, minute doses of pilocarpine hydrochlorate, because the kidneys did not seem to act sufficiently. For the spasmodic condition, tincture of solanum carolinense, and pushed to narcosis. It was begun with seven drops every three hours, then every two hours, then increased to fifteen drops every two hours. The child would sleep two or three hours, then awaken, and some milk from the mother's breast would be poured into its mouth. This treatment was continued until the spasm relaxed. The relaxation took place from above downward, first in the jaws and neck, then the hands and arms, then the abdominal muscles, hips, knees, etc.

FOREIGN.

Artificial Feeding of Infants.

P. A. LAP (*Arch. de toc. et de gyn.*, September, 1895) attributes nearly all of the ailments of infancy to faulty nutrition. To all infants under fifteen months he prohibits the use of solid food—bread, meat, fish, etc. The use of these articles is followed by attacks of diarrhœa, vomiting, swelling of the stomach, and other symptoms of indigestion. During the hot season these children are subjects of cholera infantum, and should they survive this disease they remain predisposed to chronic inflammation of the alimentary canal and to rhachitis. During the last few months the author has noted fully sixty cases of disease caused by errors in diet. He agrees with Bouchard, Bagynski, Lomby, Guellot, and others as to the causative relation of malnutrition to rhachitis. Guellot says "there is no rhachitis among children fed by mother's milk; more children have died by the bottle than men upon the battlefield." We see children living in healthy localities and well-ventilated houses that are rhachitic because their food is not well regulated.

For digestive disturbances the author advises the following plan of treatment: For diarrhœa he gives no food, but administers filtered and boiled water to which is added brandy or champagne. When the diarrhœa is checked he renders the intestine aseptic by the use of small doses of calomel and benzoate of soda. The diet during the second day of the disease should be the whites of eggs only. On the third day he begins to feed them on sterilized milk. If the child be under ten months he advises a wet-nurse.

ITEMS OF INTEREST.

We have been requested to publish the following *Official Programme* of the

INTERNATIONAL PERIODICAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

SECOND SESSION to be held at Geneva, Switzerland, in the first week of September, 1896.

GYNÆCOLOGY.

1. *Treatment of Pelvic Suppurations.*—Referees: Dr. BOUILLY, Paris; Dr. KELLY, Baltimore; Dr. ZWEIFEL, Leipsic.
2. *Surgical Treatment of Uterine Retro-deviations.*—Referees: Dr. KUSTNER, Breslau; Dr. POZZI, Paris; Dr. POLK, New York.
3. *What method of closing the Abdomen presents the best guarantee against Abscesses, Eventrations and Hernias?*—Referee: Dr. GRANVILLE-BANTOCK, London.

OBSTETRICS.

1. *Relative frequency and most common forms of Pelvic Contractions in different races, groups of countries or continents.*—Referees: Dr. F. BARNES, London; Dr. DOHRN, Königsberg; Dr. FOCHIER, Lyons; Dr. KUFFERATH, Brussels; Dr. JENTZER, Geneva; Dr. LUSK, New York; Dr. REIN, St. Petersburg; Dr. PAWLICK, Prague; Dr. PESTALOTTA, Pavia; Dr. TREUB, Leyden.
2. *Treatment of Eclampsia.*—Referees: Dr. CHARLES, Brussels; Dr. CHARPENTIER, Paris; Dr. HALBERTSMA, Utrecht; Dr. LOEHLEIN,

Giessen ; Dr. MANGIAGALLI, Milan Pavia ; Dr. PARVIN, Philadelphia ; Dr. SMYLY, Dublin.

As indicated by the number and choice of Referees, the Committee, desirous of provoking upon certain questions, investigations and debates as general as possible, has endeavored to present the opinions of the principal schools for discussion. We hope, honorable colleague, that you will honor the Congress with your presence, and take part in its discussions or read original communications. Switzerland, and Geneva particularly, has always felt especially honored when scientific men have seen fit to hold conference there. The welcome that has always been extended to them in the past by the authorities, the population and their colleagues, is a guarantee that the reception which will be given you next year will be worthy of you and of our traditional hospitality. The Committee of Organization will make all preparations that members of the Congress and their families may be assisted in combining their journey to Geneva with other excursions in different parts of Switzerland.

REGULATIONS OF THE CONGRESS.

Article 1. The International Periodical Congress of Gynæcology and Obstetrics comprises Founders, Permanent Members and Members inscribed for one session. The Founders and Permanent or Life Members pay a single initiation fee of three hundred francs (about fifty-nine dollars), which absolves them from the payment of any future dues. Members only inscribed for one session pay a fee of thirty francs (six dollars), upon the receipt of which they will receive a card of Membership to the Congress, entitling them to all privileges during that session, as well as a Copy of the Proceedings of the Transactions of the Congress. Founders and Life Members must prove acceptable to the Central Committee on Organization before being regularly inscribed. Gynæcologists and Obstetricians whose names are accepted by the Central Committee, and whose applications are received before the date of Meeting of the coming Congress, will receive the title of Founders.

Article 2. Members of the Congress desirous of taking part in the discussions of the questions of the Official Programme are requested to inform the Secretary before the fifth day of July, 1896, stating definitely the questions they desire to discuss.

Article 3. Members desiring to present to the Congress original communications must forward the complete explanatory title of the same to the Secretary before May 5, 1895.

Article 4. Unannounced discussion of any paper will be limited to five minutes. Debaters formerly inscribed in accordance with Article 2 will be limited to ten minutes.

Article 5. All oral or written communications must be in English, French, or German.

Article 6. All manuscripts must be handed in to the Secretaries at the end of the session during which they have been read, and debaters who have taken part in the discussions will be kind enough to remit to the Secretary a *résumé* of their discourse.

Article 7. All communications to the Congress will be transmitted to the Secretary General. The Committee of Organization, which resumes its functions immediately after the end of the Congress to proceed to the publication of the Transactions, will be privileged to decide upon the partial or total insertion of these communications.

Article 8. Students of Medicine will be able to obtain cards of admission upon presentation of their proper credentials, but will not be allowed to participate in the discussions.

Article 9. An Exposition of Gynæcological and Obstetrical Instruments will be exhibited in the local of the Congress.

P. S.—The Sessions of the Congress will take place in the University Halls placed at our disposition by the Department of Public Instruction. Sessions will continue from 9 to 11.30 A. M. and from 3 to 6 P. M. Morning Sessions will be devoted to original communications; those of the afternoon to the Official Programme. If necessary the Committee will decide upon the forming of sections.

The date and location of the next Congress will be decided by vote after the termination of the last session of the present one of 1896.

The General Secretaries are: Dr. BETRIX, for *Gynæcology*. Dr. CORDES, for *Obstetrics*. *Treasurer of the Committee*, Dr. BOURCART.

Secretary General for North America (through whom all correspondence and business will be directed), DR. FERNAND HENROTIN, 353 La Salle Avenue, Chicago, Ill.

In the name of the Committee of Organization: The President: Dr. Prof. VULLIETT, 18, Avenue Du Mail, Geneva, Switzerland.

P. S.—In making application for membership please give name and address in full, as well as all titles.

DR. EMMET OF NEW YORK.

Some time last July *The New York Herald*, through gross carelessness, published the death of "THOMAS ADDIS EMMET of New York" with a portrait of Dr. Thomas Addis Emmet; the occasion being the demise of a cousin of the latter, bearing the same name but, by profession, a civil engineer.

Although *The Herald* could not avoid immediate knowledge of the error of placing Dr. Emmet's portrait in connection with this obituary, it had not the decency to remedy it but its Paris *Edition* gave the positive information that "Dr. Emmet of New York was dead." While naturally annoyed at the time, Dr. Emmet, not wishing any further notoriety of that kind and believing the incident closed, did not think it necessary to deny the report in the newspapers.

He evidently, however, did not take into sufficient account the excellent Chinese proverb, that "It takes Truth an hour to put on her boots to catch a lie," for he and his family have received continuously, since the first report, at first telegrams and then letters of condolence and other evidences of the propagation of the statement, from all over this country and from Europe.

We have been told that one newspaper in the West, wishing to rival the reputation of *The New York Herald* for the accuracy of the information the latter furnishes its readers, announced that we, the editor of this JOURNAL, "having died of blood-poisoning, Dr. Emmet of New York, had broken-heartedly retired permanently from the practice of his profession."

As Dr. Emmet has strong objections to being murdered in print (a sentiment in which he has our full accord), while he is still in the best of health and vigor and as much interested in the practice of his profession as ever, he has requested us to call the attention of our readers to the falseness of the reports referred to.

As for the editor of the newspaper who, in his attempts to snatch the palm for accuracy from *The New York Herald*, saw fit to announce our own demise, we are quite certain of our ability and desire to assure him of the fact that we are very much alive, if we ever should have the pleasure of a personal interview.

THE
AMERICAN GYNÆCOLOGICAL
AND
OBSTETRICAL JOURNAL.

DECEMBER, 1895.

PERITONEAL ADHESIONS AFTER LAPAROTOMY.

BY BYRON ROBINSON, M. D., CHICAGO,
Professor of Gynæcology in the Post-graduate School.

If one operates on the abdominal viscera of one hundred dogs and kills them from two to six weeks after operation, he will find seventy-five per cent. have peritoneal adhesions. It has been my misfortune to be compelled to reoperate on seven cases of laparotomy—three for adhesions, two for adhesions and post-operative developed parovarian cysts, and two for other troubles. In every one of the seven cases there were many and dense adhesions. I have performed a post mortem on four other cases, which proved fatal after laparotomy. In each of the four fatal cases there were peritoneal adhesions. So that in eleven cases of laparotomy—on subsequent inspection in seven living and four dead—numerous adhesions existed in every case. It may be presumed that peritoneal adhesions are alike abundant in man and dog following laparotomy. If this be so, then it behooves us to attempt to discover the symptoms which indicate the method of treatment. In the first place, it must not be supposed that merely peritoneal adhesions give special trouble, as any one who has had any experience in autopsies can deliberately deny. In two hundred autopsies I think the percentage of adhesions in the regions which I shall term major regions of peritonitis will amount to (*a*) in the meso-sigmoid, eighty per cent.; (*b*) in the cæco-appendicular apparatus, seventy-two per cent.; (*c*) in the pelvis, seventy-five per cent.; (*d*) around the gall

bladder, sixty-five per cent. The above large amount of peritoneal adhesions found in adult autopsies will no doubt be denied by many physicians, but the best method to contest it is to perform one hundred autopsies with carefully recorded notes, and then sum up the amount of peritoneal adhesions found in the four above-mentioned regions. From the above statement of the frequency of peritoneal adhesions found in adult autopsies on subjects which never experienced a laparotomy at all, the frequency of peritoneal adhesions in those subjects who have experienced laparotomy must be still greater; in fact, in my eleven cases one hundred per cent. had adhesions.

Therefore the operation of laparotomy can not be indicated for merely peritoneal adhesions. The peritoneal adhesions must be of a definite kind and produce definite symptoms to indicate a reopening of the abdominal cavity. It may be stated in general that peritoneal adhesions around fixed and solid organs seldom ever demand laparotomy for removal. The liver may be almost buried or surrounded by peritoneal adhesions, and yet no laparotomy is demanded, for the patient does not experience definite symptoms and diagnostic acumen fails to detect it. How often, in autopsy, have we found the cæco-appendicular apparatus surrounded with many adhesions, and yet no complaint of the patient of pain in this region ever reached the ear of the attending physician! Scores of times have I noted dense and widespread peritoneal adhesions in the meso-sigmoid, but I have never known a patient to complain of definite symptoms or fixed pain in the left iliac fossa from mere peritoneal adhesion. Now, the same rule applies to adhesions in the other great region of peritonitis—the pelvis. For merely adhesions about the uterus little complaint comes from the patient. If the tubes are far enough destroyed to check tubal peristalsis, the tubes and uterus may lie quiescent in a solid mass with little complaint from the patient. Hence it may be generally stated, with a good showing of much truth, that little complaint arises from peritoneal adhesions around solid or fixed organs. Then what organs demand laparotomy for peritoneal adhesions? The most general answer is, Laparotomy is demanded for peritoneal adhesions on those organs which are highly movable and possess peristalsis. We will include in those organs which demand laparotomy for peritoneal adhesions—

1. The small intestines and sigmoid.
2. The bladder.
3. The Fallopian tubes

The patients who suffer the most are those who have adhesions between three very movable organs, such as the small intestines (S-romanum) and the bladder.

One patient on which Dr. Lucy Waite and I operated had a very dense adhesion between the sigmoid flexure and the end of the amputated Fallopian tube. I have noted dense adhesions at the cut-off end of the Fallopian tube in post-operative cases, and no doubt its mucous membrane—endosalpinx—allows infectious material to pass out into the peritoneal cavity, because it was originally infected, demanding an operation. At the ends of the amputated tubes we may always look for the chief adhesions, and in my opinion much of the trouble due to adhesions will be found at the amputated ends of the Fallopian tubes. The mucous membrane of the tube is very liable to allow continuous infection to trickle out of its mouth, following laparotomy, and if the cut-off end of the tube happens to come in contact with a peristaltic intestine (or organ), it will only be induced to renew its infectious flow from the movement of the viscus. The mucous membrane of the tube should be covered or buried with a stitch, or the tube should be scooped out of the corner of the uterus. This patient had suffered fifteen months after the first laparotomy, and, so far as I know, has been well ever since the sigmoid loop was freed from the stump of the left Fallopian tube. The symptom which this patient complained of was continuous pain. The pain was so exacerbated by any bodily movement that she could not walk about. Several of the best surgeons and physicians of the city examined her, but none diagnosed the case. Dr. Lucy Waite and I made the diagnosis of tender tubal stumps. The uterus was free—*i. e.*, it moved freely with the free sigmoid loops. She had a severe recurrent colitis, perhaps, during ten months of the fifteen. Besides the recurrent colitis, she simply had continuous aching pain in the lower abdomen, and especially the sacrum, which was terribly exacerbated by almost any bodily motion. Our diagnosis of tender tubal stumps was wrong, as was proved by breaking up the adhesions between the tubal stump and the sigmoid loop. Her friends report her quite well five months after the operation.

In another case I assisted Dr. Lucy Waite to operate on a case which had had two previous laparotomies. The first laparotomy on this thirty five-year-old woman was to remove the appendages—for what cause I could not learn. She was ill with dull, aching pain always after the first laparotomy. A year after the first laparotomy she had a second laparotomy performed, but on opening the abdomen

the operator closed the wound and informed her that nothing could be done, as the adhesions were so dense. Now, this patient passed pus suddenly *per rectum* some three months after the first operation. The pus continued to pass *per rectum* for a few months. A vaginal examination of this patient before the third laparotomy revealed a uterus not as movable as it should be; also considerable tenderness of the bladder. She continually had an abdominal aching, which was so exacerbated by movement that she could not earn her living. Walking induced pains in the abdomen. Dr. Lucy Waite operated by incising the abdomen entirely clear of the two previous abdominal incisions, so that she would not strike any of the old adhesions. The trouble proved to be an extensive adhesion between the bladder and large bowel. In the center of these adhesions was an abscess containing an old ligature of silk and perhaps two teaspoonfuls of pus. The adhesions could not be torn apart without rupturing a hole in the bladder or bowel wall. Dr. Waite simply with a scalpel divided the scar between the bowel and bladder. The old bowel perforation had filled up with hard, white cicatricial tissue. The bowel wound was elevated to the incision wound, and the bladder wound was packed with gauze, so that should a fistula occur, either in the bowel or the bladder, the gauze packing would conduct out the material. She recovered nicely and her pain disappeared.

In still another case in which I assisted Dr. Van Hoosen to operate on a patient on whom we performed laparotomy a year previous, we found attachments of the small intestines to the right stump of the Fallopian tube and to the bladder. The examination of this patient before operation gave almost negative results. She did have tenderness on the right tubal stumps, but since only the tips of small intestinal loops were adherent to the stump of the Fallopian tube, they did not impart any fixation to the uterus. I declined to assist in the operation for some months. Finally we operated and found dense old cicatricial adhesions to the stump of the right Fallopian tube and the bladder. There were three distinct cicatricial adhesions of the top of intestinal loops and one very solid adhesion to the bladder. The adhesions were so dense and strong that a dispute arose during the operation as to the best method of breaking them up. I claimed that the best method was to cut the cicatricial tissue or adhesions with a scalpel. Dr. Van Hoosen claimed that was dangerous, so we decided to use both methods. The most dangerous and dense were those making the ends of the stump of the Fallopian tube adherent to the loops of intestine. These were cut

through with perfect safety. The adhesion of the small intestine to the bladder was broken by tearing, not cutting. As a consequence a hole was torn in the bladder. Dr. Van Hoosen closed it with three sutures of catgut (Lembert sutures). This woman made a good recovery. Every patient on whom we reoperated presented the identical symptoms, and we always found the small intestines, the sigmoid, the stump of the Fallopian tube, and the bladder the elements involved. One particular symptom in every case in which the bladder was involved was that emptying of the bladder violently exacerbated the dull, aching pain, as well as bodily motion and defecation. All had pains of a dull, dragging character. All the patients recovered after the repeated laparotomies.

CONCLUSIONS.

1. Operations for peritoneal adhesions are seldom ever required when the adhesions surround solid or fixed organs.

2. The major peritonitic regions—the appendicular, the gall bladder, the sigmoid regions—seldom ever demand operations for peritonitic adhesions. The fourth major peritonitic—the—pelvic region seldom requires an operation for peritonitic adhesions around the uterus itself.

3. The peritonitic adhesions in the pelvis which demand operation are those involving the loops of small intestines, sigmoid, bladder, or Fallopian tubes.

4. Peritonitic adhesions requiring operation are those which involve the most movable organs which possess peristalsis.

5. The peristaltic motion of the adherent loops of small intestines, the sigmoid, the Fallopian tubes, and the bladder, is what produces pain.

6. The pain is a dull, dragging pain, exacerbated by motion, defecation, and urination, if the bladder is adherent.

7. The stumps of the Fallopian tubes are the most frequent points of adhesion. This is due to the mucous membrane of the tube being left exposed to the peritoneal cavity, and no doubt recurrent flows of infection trickle out of the end of the tube and can keep up its recurrent attacks after the adhesions are formed.

8. The mucous membrane of the Fallopian tube should be buried with a suture, scooped out of the cornua of the uterus, or covered with peritonæum.

9. The ligature should not be put around the tube, but simply around the ovarian artery.

10. No doubt catharsis at the end of the second day produces sufficient peristalsis to free many coils of intestine from the bed of soft exudate.

11. It does not appear from these seven cases that drainage increased the peritoneal adhesions. In fact, the most of these cases were not drained, and by far the worst cases were those not drained at the first operation.

12. The great prophylaxis in these cases is to cut off the open connection between the uterus and pelvic peritonæum by burying in some way the stump of the Fallopian tube.

13. In several of these cases nearly two years after the first operation, as far as the eye could detect, the lumen of the Fallopian tubes was not closed, and the mucous membrane was thus exposed with its open lumen to the peritoneal cavity—in surgery a chance to keep up the old infection which demanded the first operation. The tubes must not only be removed, but the tubal lumen must be closed and shut off from the peritoneal cavity. Of course the final prophylaxis is what we are now doing, and that is removal of the uterus for bilateral disease of the appendages.

REOPENING OF THE ABDOMEN DURING THE FEW DAYS FOLLOWING A CÆLIOTOMY.*

BY W. H. PARISH, M. D., PHILADELPHIA.

In a large number of cœliotomies the following four cases are the only ones in which I have reopened the abdomen shortly after the first operation. Doubtless some cases would be saved by this procedure in the practice of every busy operator :

Mrs. G., after supposing herself pregnant for two months, was seized with the usual symptoms of ruptured tubal pregnancy. For several weeks she was under the care of various physicians. A tumor of the size of an adult head developed in the right half of the lower abdomen and pelvis. General peritonitis supervened, with extreme exhaustion and emaciation.

I now saw the patient for the first time, and at once made an incision directly into the tumor above Poupart's ligament, and evacuated

* Read before the Philadelphia Obstetrical Society, November 7, 1895.

about three pints of grumous blood intermixed with pus. This incision did not open into the peritonæum. Marked improvement occurred until the third day, when vomiting returned, which soon became stercoraceous. Various attempts to secure movements of the bowels failed, and death seemed imminent. The emaciation was so great that the coils of intestines and their vermicular action could be seen clearly through the abdominal walls. The distention was great except in the region of the descending colon.

I now made an incision in the left *linea semilunaris* on a level with the umbilicus. Everywhere the intestines were matted together by dense adhesions, and evidently the contraction of the wall of exudate about the blood-and-pus mass had dragged upon the adherent bowels to such an extent as to produce strangulation, which would have proved fatal unless relieved. I tore and cut all adhesions within reach and closed the incision last made without drainage.

The incision into the tumor was kept open for a number of days. The patient recovered, and she has since been delivered safely at the full period.

In this case, if a median incision had been also made on the day of the first operation and adhesions had then been broken up, the dangers of strangulation of the bowel would have been avoided. This was not done at that time because of the extreme exhaustion of the patient.

For several months Mrs. N., a resident of New Jersey, had been suffering with hæmorrhage and pressure symptoms because of a fibroid tumor of the uterus reaching to the umbilicus. I did a supravaginal hysterectomy in one of the private rooms of St. Agnes' Hospital. It was necessary to tear up vascular adhesions. The operation was done largely in the Trendelenburg position. The bleeding seemed controlled by ligature, but a drainage-tube was nevertheless introduced. On my return to the patient, twelve hours afterward, the dressing was soaked with blood and the tube was occluded with a soft clot. On withdrawing this, blood ran from the tube. The patient was a strong, vigorous countrywoman, and the pulse (88) showed no ill effects from the loss of blood. However, as the blood continued to run from the tube, I again had the patient etherized and opened the abdomen at midnight. In the Trendelenburg position, after removing about six ounces of blood from the pelvis, I easily found the bleeding point and applied effectively a ligature.

In this instance the elevation of the pelvis during the operation may have prevented oozing, which made its appearance after the

patient had been placed in a horizontal position. The reopening of the abdomen was indicated, and convalescence progressed favorably, except that the lower angle of the wound did not close by first intention.

In the spring of 1895 I removed one moderately enlarged ovary—a small cystoma—a very simple operation.

After recovering from the ether the pulse ran up to 130, with evidence of more than usual abdominal pain. The patient was an intellectual young lady of wealthy parentage.

On the morning after the operation it suddenly occurred to my mind that I had left a small gauze sponge within the abdomen immediately under the incision. I saw at once my first assistant, and he likewise felt convinced that the gauze was in the abdomen. Twenty hours after the operation, with the pulse still 130, I reopened the abdomen and made a thorough examination of it but did not find any gauze. Everything was in perfect condition. The abdomen was re-closed, gradually the pulse became reduced in frequency and recovery promptly followed.

This patient is now entirely well, and I am confident there is no gauze in the abdominal cavity, though my assistant is still, I think, of the opinion that it was not removed.

Mrs. B., operated on in a private ward of St. Agnes' Hospital.

Both sets of appendages were removed because of double pyosalpinx. Numerous dense adhesions were broken up. Douching with boiled water was resorted to, and a glass drainage-tube placed in for twenty-four hours. The subsequent symptoms for several days were rather favorable than otherwise, except that the temperature kept about 100° and the pulse about 100 per minute. On the sixth day I left the city, and on my return on the eighth day the resident physician informed me at night that the patient would probably not live until morning. On visiting her, I found her indeed exceedingly ill: temperature 103.5°, pulse 130, vomiting frequent, abdomen much distended and tender, features pinched. General peritonitis was evidently present and death was imminent. I at once had the patient etherized and taken to the operating room. I opened the previous incision and found, as far as the eye or the finger could examine, universal and somewhat firm adhesions, involving not only the pelvic but also the abdominal peritonæum. I broke up the adhesions everywhere and found no fluid of any character, no flocculi, and none of the appearance of the usual form of septic peritonitis. After douching, drainage was again resorted to. In twelve hours the pa-

tient expressed herself much improved. Vomiting had ceased, the features had lost the anxious and pinched appearance, the pulse and temperature were better, convalescence had already begun. Complete recovery followed.

VAGINISMUS : ITS CAUSES AND TREATMENT.*

BY JOSEPHUS HENRY GUNNING, M. D.,

Formerly Instructor in Electro-therapeutics to the New York Post-graduate Medical School and Hospital ; Electro-therapist to the French Hospital ;
Electro-gynæcologist to the North Eastern Dispensary ;
Gynæcologist to River View Rest for Women ;
Member of the Neurological Society ;
and Fellow of the New York
Obstetrical Society.

No condition of the body more frequently undermines the life of the young wife in the first bloom as such, and none is more fatal and destructive to her marital life and happiness than the symptoms recognized under the title of this paper ; and more, on the part of the physician there is hardly a condition against which different plans of treatment have been invented, and in none possibly has the result been less favorable, both as to the condition to be treated and to the physician called to treat it, knowing as he does beforehand that as a rule he will reap very little glory for his labor and pains.

I wish this evening to present a few suggestions as to the probable cause of the condition, or disease (so called), and a method of treatment.

Definition.—What is vaginismus? You all know what it is generally considered to be, and what the definition given by various authors. Also that it is a condition that has its most important bearing on married women who are filling truly the position of wife. My definition of vaginismus is : A reflex irritation which is recognized as a spasm of the vagina, varying in character from that of a simple firm contraction, closing the mouth of the vagina by the constrictor muscles of the canal, and sometimes, aided by the muscles of the rectum, to that of a severe and almost tetanic cramp marked by a pain that may first be a simple uneasiness, and changing to that of an intense deep-seated

* Read before the New York Obstetrical Society, October 15, 1895.

pain, associated with general feelings of terror and fright, which may end in a fainting spell, or an opisthotonus. According to my theory, it is the result of pressure on, or irritation of, the spinal cord or its membranes at the end of the dorsal section as also the lumbar enlargement, with the spinal nerves, and is reflected through the sympathetic nerve, and by the hypogastric plexus and the pudic nerve, producing a local nervous irritation, or a neuromata of the nerves themselves, or their peripheral ends, supplying the walls of the vagina with their fine nerve filaments, both motor and sensory, clear to the external orifice and anterior fold of the wall (the hymen), and also distributed to the clitoris, vagina, bladder, rectum, uterus, and ovaries. As a consequence, a low vitality of these parts exists with poor nutrition as a result, with loss of tone in these organs through the weakened blood and nerve supply, and an increased sensitiveness of the parts, which may be so tender that coitus can not be perfected at all, or only partially performed, and that under protest on the part of the woman.

This condition of vaginismus is present in three special classes, according to my mind, and these are given by Dr. Pozzi, of Paris, with a slight modification. He divides them into a class according to the frequency with which they occur and the special character of each.

The first and most frequently met with is when there is hyperæsthesia with contraction. The second is where hyperæsthesia is alone present, to which I would add a severe state of congestion; and the third, and least frequently met with, is a contraction without hyperæsthesia. Each of these forms requires an individual treatment.

Causes.—In consequence of the conditions mentioned, and the attributable cause, the parts become excessively susceptible to irritation from any source. Even a touch with a feather will often provoke a contraction.

We shall now consider the causes of vaginismus as presented under the three divisions first described: First, hyperæsthesia with contraction is present when there is disease of both kinds of nerve filaments, which supply the parts in the form, usually, of neuromata. The second form, hyperæsthesia with congestion, we find is the class that furnishes most of the physiological and pathological changes found in the internal organs that are posterior to the hymen. Thus, a vaginitis stimulated by an endometritis with its leucorrhœa, tenderness of the cervix, diseases of the ovaries and uterus, or from displacement of them. Then we find external to the hymen inflammation of the vulvo-vaginal glands, or a sequense to coitus, as a torn hymen, which is some-

times caused by the position of the vulva found in some women when it is high up under the symphysis pubis. When coitus is attempted for the first time the glans penis strikes the urethral meatus and the fossa navicularis, and both are carried up against the symphysis pubis, and in some cases the glans enters the urethra and lacerates it, producing congestion and inflammation of all the parts. Often tender points are found in the lacerated hymen, and ulceration, with ulcers also in the fossa. The third division, and the one least frequently met with, is contraction without hyperæsthesia. This is purely a reflex condition, superinduced by a change in the body of the nerve, or from an irritable nerve center, aggravated by diseased tissues or organs close at hand, as urethral caruncle, hæmorrhoids, fissure of the rectum, adherent hood of the clitoris, an excessive general nervous state (possibly a direct reflex here from the clitoris), and prolapse of the ovaries.

Treatment.—In this paper I shall only present the treatment of the second division (hyperæsthesia with congestion), as the form of vaginismus in which there are so many external sources of irritation which can be easily removed and the patient greatly relieved.

I shall leave the other two forms for another paper, which I shall present at another time, here or elsewhere.

The usual plans that are familiar to all are : First, local medical treatment, consisting of ointments of various kinds, hypodermics of morphine or cocaine, lotions, suppositories, etc. Second, the semi-surgical plan, consisting of stretching, forcible dilatation, copulation, and pregnancy (whereby full dilatation is surely accomplished). Third, the surgical measure of dissection of the hymen or its tender lacerated parts, tenotomy of the sphincters, cauterization, escharotic applications, and carrying out the Irish maxim : "Where there is a head, hit it." Each of the measures has its place in the treatment, and all are excellent methods of relieving the immediate diseased conditions and irritations. But they do not go far enough, because the changed tissues are only the result of sympathetic conditions depending on other states for life. Of course, when the tissues are removed the local irritation is lessened, and better opportunity is offered for a more extended and curative plan of treatment. But cases so treated, that have come under my observation, were not permanently benefited. At the time of operating they were temporarily relieved, perhaps, but they soon became tender again when the parts were distended beyond the limit reached while they were under treatment. Overfatigue often induced an attack, and, after continuance

for a while, the distress would return (though modified in a degree) when coitus was attempted. At times penetration could occur without much pain, at other times the pain would come on during the act, while at other times the agony would be suffered after the act was completed, when the organ was being withdrawn. So intense is this pain that opisthotonus is induced, relieved only by a rectal injection of hydrate of chloral used as a palliative. This experience caused me to seek help in some other plan, and this is my apology for recommending an agent not fully indorsed by us; but I assure you it will be of invaluable help in treating this most troublesome complaint.

After the examination of the genital tract, and after the diseased conditions have been noted, it is best not to begin local treatment at once, but to commence a course of general treatment which will influence the two special conditions presented in the patient—that of extreme nervousness, and tenderness of the local parts of the vulva and surrounding tissues. In regard to overcoming these, there is not an agent which will produce such pleasant and satisfactory effects at the outset of the treatment as a general and generous application of electricity. It seems to act as a tonic and to soothe the whole system by improving the circulation, stimulating the appetite, and increasing peristalsis of the bowel and of all the membranous organs. The method of applying the general electricity (that is, the constant current) is to use an electrode made of tin or zinc, about three by five inches in size, covered with absorbent cotton, or a wetted towel once folded. Slightly bend the electrode, so that it will readily conform to the surface of the body, and place it over the pit of the stomach at the seat of the solar plexus, connecting it with the positive pole of the battery. Another electrode, of about four by seven inches in size, covered in the same manner as the other, is to be placed over the lower dorsal and lumbar region, this to be attached to the negative pole. When all is in readiness, turn on the current, either through a rheostat or cell by cell, until five milliamperes are reached. This is about the amount the patient will bear without being restive. This dose should be continued for five minutes at the start, gradually increasing the period to ten minutes.

Electricity.—The forms of electricity used by the reader in the treatment of the symptoms just given is the *interrupted* galvanic current. This is not the current one gets from a humming machine (the faradic), but the current that comes direct from the galvanic cells, called the *constant* current, which is caused to pass through a little instrument that breaks the flow and interrupts it. The first one I used

was a homely affair, but it answered the purpose very well, and it can be easily made. It was made out of an ordinary electric call bell by removing the gong from the iron frame and substituting a piece of metal for contact with the bell clapper for attachment to a post, at which one of the cords in the galvanic circuit was connected directly to the patient. The other end was connected to the clapper where the spring was fastened, and from this point carried to the end where the cell is. A dry Mesco cell was then connected to the little posts and the current established, when the magnetic hammer would commence its work; then, when the patient was connected with the other pole of the battery and the current from the cells was turned on, the current became *interrupted*. The Kidder Manufacturing Company have made some on a better plan, compact and neat, like the one here presented. This little affair can be attached to any portable galvanic battery in use without any trouble. The reason why the *interrupted* current is the one to be used is because it has two distinct actions on the tissues to which it is applied. The first is a chemical one, and is that of a weak escharotic and chemical drying effect and catalytic action at the one pole, while at the other is going on a marked electrolytic change that lessens the size of the tissues, where it is in contact, by its influence on the moisture of the tissues, and produces small embolic plugs in the capillary blood-vessels, in this way cutting off the blood supply and producing pressure, and thus controlling the irritation of the nerves and inducing anæsthesia of the parts.

*Instrument.**—The instrument is called by the reader's name—Gunning's bipolar vaginismus electrode. Fig. 1 presents the instru-



FIG. 1.



FIG. 2.

ment complete. Fig. 2 is a part of the instrument, or that portion of the electrode to be used in the deepest part of the vagina. This instrument consists of two parts. The portion to be used internally is

* Made by the J. Kidder Manufacturing Company of this city.

made on the principle of a Duchenne double uterine electrode, so as to present a small point easily introduced, that can be readily enlarged after being placed in the vagina. The other electrode is made in the shape of a small speculum, with flat-pointed lips, that can be readily passed into the vagina through the vulva and the perforation in the hymen; and it is so arranged that it slides over the other electrode, and is to be left in the parts, having pushed the internal electrode up against the fundus of the uterus, or at the cervix, or into Douglas' *cul-de-sac*, allowing the application thus of the electric current to be made at the seat of the peripheral lesion, and being movable and so arranged that the poles can be placed at any distance apart to meet the extent of surface to be treated. When necessary, it can be removed without turning off the current. The internal electrode, or the one passed first, can be gradually withdrawn through the external one until the metallic points meet, when the entire electrode can be withdrawn without the slightest shock to the patient.

Application.—This requires much care, and must be without pain at the beginning of the treatment, otherwise the patient will become nervous and afraid, and will dread the treatment as she does the conubial approach. When the instrument is at first applied have the poles close together; and when the current has been used for about five minutes with the electrode in that position, it may be slightly separated, and can be pushed gently and steadily farther into the canal until the entire instrument is within the vagina. The rapidity with which progress is made must be governed by the sensations of the patient. It is advised that at the first sitting very little distress be caused for the sake of not producing pain or prejudice in the patient. Sometimes it will take five or six *séances* before the entire pole can be wholly placed in position, bearing in mind the old axiom, "The more haste the less speed." After the patient has become accustomed to the introduction of the entire instrument, proceed in the way already indicated in making further progress by gradually dilating the external pole by means of the screw on the side. When the hypersensitiveness has been partially overcome, and the patient has become acquainted with both doctor and electricity, the current should be used for ten minutes, after which time the current is cut off and the instrument is allowed to remain in position for ten minutes; then withdraw the electrode while the external part is still in position and dilated. This treatment should be made three times a week, and never less than twice, with an average dose of from five to eight milliampères, depending on the sensitiveness of the patient's

skin. This *séance* of five minutes is gradually lengthened to twenty, according to the judgment of the physician and to the progress made.

When points of ulceration, or tenderness of the hymen, or of the parts heretofore described are manifest as a cause, it is better to operate and remove them as soon as the treatment is under way, bearing in mind that the plan here presented is not suggested as a specific line of treatment, but as one which will go a long way in overcoming this trying condition with that of a rational treatment, in the line of tonics, etc., that may be indicated. When these conditions are thus relieved, the benefit has proved more permanent than any other in the reader's hand.

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TREATMENT OF ECLAMPSIA.*

BY JOHN O. POLAK, M. D.,

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The few clinical notes which I have to present for your discussion this evening can hardly be dignified by the title of a paper; furthermore, my statements must be largely dogmatic, as the conclusions are drawn entirely from a personal experience in nine cases of eclampsia.

Vinay, in referring to the pathogeny of eclampsia, states that the ætiological problem does not lie in the more or less normal condition of the urine, in the presence or absence of albuminuria, nor even in the integrity or alteration of the kidney, but in internal intoxication and the sufficiency or insufficiency of the emunctories. My own observations lead me to agree with Vinay's statement, for many women have these attacks with no albumin in the urine, while others with a marked albuminuria have passed through an uneventful pregnancy. In my experience a diminution in the amount of urea eliminated has borne a more constant relation to the occurrence of the convulsion than the presence of albuminuria.

Davis emphasizes the fact that eclampsia is the result of toxæmia produced by failure of excretion not only of the kidneys, but also of

* Read before the Kings County Medical Association, October 8, 1895.

the liver, skin, lungs, and intestines. Whether this material retained is urea, creatin, creatinin, bacteria, or their ptomaines, acting singly or combined, has not been accurately determined. He also draws particular attention to the relation between constipation and toxæmia.

Other observers, as Rapin and Monnier, claim to have isolated a special bacillus, which when inoculated into animals causes symptoms similar to those of eclampsia. Cerdes insists that the eclamptic bacillus is the only cause, since it is not found in other diseases, and since the convulsion does not occur without it.

While there is such a wide difference of opinion as to the origin of the puerperal convulsion and the exact relation which a pregnancy nephritis bears to it, two important facts must not be lost sight of—*i. e.*, that the eclamptic attacks are due to a toxæmia the nature of which is not known; secondly, that the ultimate cause of the trouble is the child *in utero*. The treatment naturally divides itself into the prophylactic and the management of the attack, which latter, because of the time of occurrence, will differ as to whether the convulsion appears during pregnancy, labor, or childbed.

Admitting that the convulsion is generally coincident with a pregnancy nephritis of greater or less severity—as was so in eight of the cases making the basis of this paper—and, further, granting that a nephritis during pregnancy once established, the kidneys never regain their normal condition while the gestation continues, as the extra tax upon the already crippled kidney increases as pregnancy advances, hence the woman is ever open to the possibility of a sudden explosion of uræmic symptoms. After delivery, on the other hand, the renal symptoms subside and prompt recovery is the rule; therefore, in the presence of expected eclampsia, two indications are paramount. The first is to cause prompt, thorough, copious elimination by every means possible—*i. e.*, purgation, diaphoresis, and diuresis. This last is accomplished by the employment of copious normal saline infusions.

The second indication is the rapid and immediate termination of pregnancy; this is especially urgent in the last month of gestation, when the child has little to gain and the mother frequently much to lose by delay. In looking over my histories I find twelve cases (not included in this paper) in which a nephritis of greater or less severity complicated the pregnancy. In seven labor was induced between the fifth and eighth months; the other five went to term and were delivered without accident, the child being dead in three instances and nephritic infarcts found in the placenta. These gestations were permitted to continue, owing to the improved urinary condition follow-

ing the copious exhibition of water and the employment of tonics, baths, and a restricted diet, or the patient refused to consent to any interference whatsoever.

With increased experience in this dreaded accident, the necessity for repeated chemical and microscopic examinations of the urine during the latter months becomes more apparent; the quantity passed in twenty-four hours and the amount of urea eliminated should be a matter of special inquiry.

(Sufficient importance has not been attached to the total amount of solids eliminated.)

In the prophylaxis we may secure elimination through any or all of the emunctories; the activity of the skin is obtained by wearing warm flannels and the employment of daily hot baths. The patient being placed in a full bath of 80° F., the temperature is then gradually raised to the highest point of tolerance, and hot drinks are administered, after which she is wrapped in a blanket, placed in bed, and the sweating continued; the patient must be carefully guarded from exposure.

The relation of constipation to toxæmia is so intimate that too much care can not be employed in emptying the intestinal tract. The bowels should be moved each day by colocynth, senna, or licorice, with occasional doses of calomel, which performs the double function of catharsis and diuresis. Although salines have been very generally condemned, I believe that a well-diluted drachm of Rochelle or Carlsbad salts taken each morning upon an empty stomach will prove of benefit to the patient. Diuretics which act upon the renal cells, thereby increasing the work put upon the tubules, have been utter failures in my hands. Pure water, or water containing lithia, accomplishes more with the patient, who should be directed to drink two or three quarts daily, and kept on a diet restricted to milk, eggs, and a small quantity of the white meat of fowl. From two to four quarts of a normal saline solution injected into the colon daily has markedly increased the amount of water passed in twenty-four hours. By this forced ingestion of pure water diuresis is obtained by a process of filtration in the glomeruli without putting extra work upon a diseased organ.

Veratrum viride in small doses is useful as a prophylactic when the pulse is full, hard, and rapid, as is often the condition preceding eclampsia.

Now be it understood that while dietetic, diaphoretic, and cathartic measures are of great value as temporary expedients, they do not

cure a pregnancy nephritis once established while the fœtus is *in utero*.

A brief analysis of my cases may serve to illustrate the necessity for radical treatment. Of the nine cases referred to, eight were primiparæ between the ages of twenty-five and forty-one; in six labor had begun before the convulsion appeared; the number of convulsions varied from three to twelve. *Accouchement forcé* with manual dilatation was employed seven times; Dührssen's deep cervical incision once.

Three children were born dead, and seven women made interrupted recoveries after delivery.

Two patients died, one being an ambulance case, admitted to the hospital in coma with an arm and cord presenting, after unsuccessful treatment by a midwife for twenty hours; she subsequently died of sepsis on the fifth day. In the other instance an expectant plan was followed, using a bougie, with bromides, chloral, and veratrum. The patient died in the eleventh convulsion. In no instance did the convulsive seizures continue after the evacuation of the uterine contents. From the foregoing facts it would seem that the expectant plan of management should be relegated to the past—to be spoken of only as a matter of avoidance in practice. As my experience differs in nowise from that of other observers, it may be well to formulate certain indications for induction, and briefly to detail the most surgical methods.

Before Viability.—A pregnancy nephritis progressing unfavorably under proper diaphoretic, cathartic, and dietetic measures is a positive indication for the induction of abortion. Persistent frontal headache, nausea, epigastric pain, general œdema, diminution in the amount of urea, and of the quantity of water passed in twenty-four hours, together with partial or complete amaurosis and an albuminuric retinitis, are among the chief symptoms to be watched.

After Viability.—With the existence of a nephritis of pregnancy, each day's delay subjects the woman to an increased danger of eclampsia, while the child, as I have already stated, has little or nothing to gain by waiting. Hence premature labor is indicated.

In the presence of the convulsion, we are all agreed that immediate delivery is the one thing necessary, but we differ as to the methods of obtaining this end.

When operative procedure is decided upon, the period of gestation determines the method of operation. In the early months, after proper counsel, the patient should be placed in the Sims position, the vulva

and vagina thoroughly scrubbed, then irrigated with an antiseptic solution, after which the anterior lip of the cervix is firmly grasped with a tenaculum forceps and the cervical canal cauterized with strong tincture of iodine, and then the canal is carefully, slowly, and symmetrically divulsed to a diameter of an inch or an inch and a half. A Goodell-Ellinger dilator is best for this purpose. When the os has been thoroughly stretched, the finger is introduced into the uterus and the membranes are peeled up as high as can be reached. The lower segment and cervical canal is now firmly packed with iodoform gauze (strip gauze two and a half inches wide by five feet long is preferable for packing), the fornices are filled, and finally a vaginal plug inserted.

This tamponade is removed in from ten to twelve hours, when usually the ovum will be found separated and in the vagina. Should the delivery not have taken place, the dilatation will be sufficient to deliver manually. In the latter months induction by the bougie is the safest and most reliable method; an aseptic technique is absolutely imperative to success. To induce labor by the intra-uterine injection of sterilized glycerin, as has been recommended by Pelzer and Edgar and practiced by the writer, is but to subject the patient to added dangers. This method should never be employed with an existing nephritis.

In the presence of the convulsion nothing but the most radical treatment will save the life of the patient—*i. e.*, *accouchement forcé* either following manual dilatation or the deep cervical incision of Duhrssen. When either of these rapid methods is employed, the patient is necessarily subjected to increased danger from shock and sepsis. The convulsions may recur in such rapid succession, the intervals so brief, that the patient passes directly from coma to convulsion, without even a moment of partial consciousness intervening. The coma deepens with each succeeding convulsion, and death may occur at any moment from asphyxia. There is intense cerebral congestion from arrested respiration and pressure on the jugular veins. An increase in the body temperature is a constant characteristic of eclampsia and influences the prognosis adversely. Hence our first effort is to control the convulsion by the administration of chloroform or morphine and the use of veratrum viride hypodermically in an initial dose of fifteen drops of the fluid extract, thus reducing the pulse-rate and blood tension, with consequent diaphoresis.

With the pulse reduced and held between sixty and seventy, a convulsion is not likely to occur, and evacuation of the uterus may

be immediately proceeded with. In employing manual dilatation, the patient is chloroformed and placed in the lithotomy position across the bed (or, better, on a table). The vulva and vagina are then thoroughly scrubbed and disinfected, after which the whole aseptic hand is passed into the vagina and one or two fingers through the cervix, carefully and slowly dilating it until three fingers are admitted, and so on, until the coned hand can be introduced into the os. At this point in the operation, unless great care be taken, deep lacerations are apt to occur, occasionally producing serious hæmorrhage. From twenty minutes to an hour should be spent in this dilatation. When the canalization is complete, delivery may be accomplished by either forceps or version; the latter is preferable in all cases when the head has not firmly engaged. Rapid dilatation in one of my cases was obtained by deep cervical incisions, as suggested and practiced by Dührssen.

The incision is made with the knife or scissors, the preference being given to the latter. These artificial lacerations extend to the utero-vaginal junction, and are made to the right and left of the median line, both anteriorly and posteriorly; in this way the bladder, rectum, and deep tears into the broad ligaments are avoided. The portio vaginalis must be effaced before resorting to this method. These tears need not be repaired unless the patient's condition justifies the extra time and shock necessitated. An intra-uterine and vaginal tampon of iodoform gauze may be needed to control the hæmorrhage subsequent to delivery.

An intra-uterine douche should be given after employing either of the above methods.

Even after the uterus is empty and the convulsions have ceased, suppression of urine may persist, and our patient dies of uræmia. It is to this class of cases to which I desire to direct your attention.

The activity of the skin may be preserved by hot baths, as already described, veratrum continued in five-drop doses for its diaphoretic and diuretic effect, and active catharsis established with elaterium or croton oil.

The ordinary diuretics, as the potassium salts, digitalis, diuretin, etc., are practically worthless to increase the amount of water passed in such an emergency, and do harm by stimulating the renal cells, or by increasing the blood pressure in the diseased organ. The forced ingestion of pure water—employing a normal salt solution of 100° F., which is thrown into the colon through a fountain syringe at slight elevation, the patient lying on the left side with the hips slightly

elevated—will rapidly increase the urinary secretion. These injections of sterilized water may, also, be made directly into the circulation, as suggested by Dawbarn in acute anæmia.

By way of recapitulation I present for your discussion the following conclusions :

1. That eclampsia is due to a toxæmia in which the entire excretory system plays a part.

2. That constipation bears an intimate relation to this toxæmia.

3. That a pregnancy nephritis is frequently coincident with the occurrence of convulsions, and that an albuminuria is of much less importance than a diminution in urea and total solids eliminated, or a decrease in the amount of water passed in twenty-four hours.

And, finally, that while diaphoretic, cathartic, and dietetic measures often improve a nephritis of pregnancy, the woman is never safe with the fœtus *in utero* ; therefore the gestation should be terminated in the most surgical manner.

PLASTIC OPERATIONS FOR THE CURE OF FISTULÆ
INTO THE VAGINA FROM THE BLADDER AND
RECTUM. REPORT OF A CASE OF ELEVEN YEARS'
STANDING.

BY T. A. STODDARD, M. D.,

Gynæcologist to the Woman's Hospital, Fueblo, Colorado.

Mrs. R. came to me in March, 1895, with the following brief history : Eleven years ago, as a result of a protracted labor, sloughing took place, so that since that time she has been totally unable to control the action of her bowels or bladder. During the intervening years she had been operated upon seven times, by Dr. W. P. King and others of Kansas City, without any good results.

On examination, I found that the whole base of the bladder had sloughed away, as well as every vestige of urethra—in fact, there was little tissue covering the posterior surface of the pubes except perios-teum. The fistulous opening into the bowel was large—about two and a half by one and a half inches.

On April 16th I placed the patient in Sims' position under chloroform anæsthesia, repaired the recto-vaginal fistula and attempted to make a new urethra. I used silver-wire sutures and removed them

in ten days with perfect results as regards the fistula, but my attempt at manufacturing a urethra was a failure.

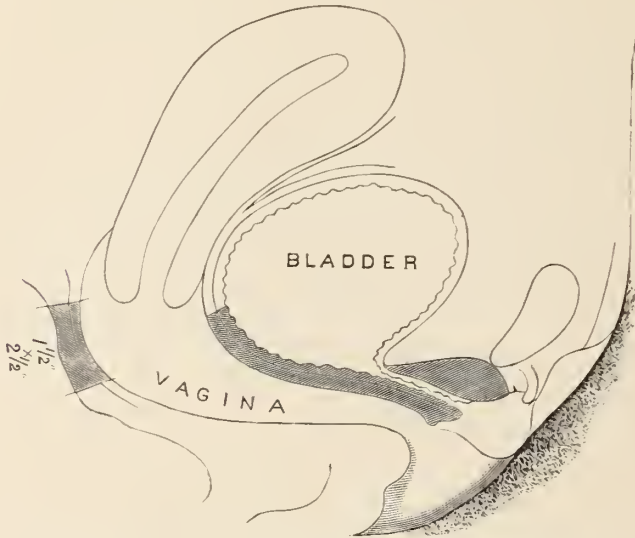


FIG. 1.—Vertical section showing relative position of recto-vaginal and vesico-vaginal fistulae.

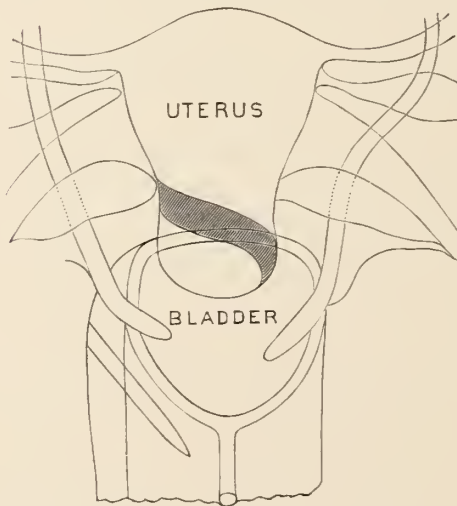


FIG. 2.—Sketch of uterus, etc., showing spiral incisions made for obtaining flap in repair of urethra.

One month later I again chloroformed the patient and proceeded to repair the bladder. I began by separating the tissues from the anterior and lateral surfaces of the uterus and succeeded in obtaining sufficient tissue to accomplish my purpose. I then vivified the edges and brought them together with silver-wire sutures, at the same

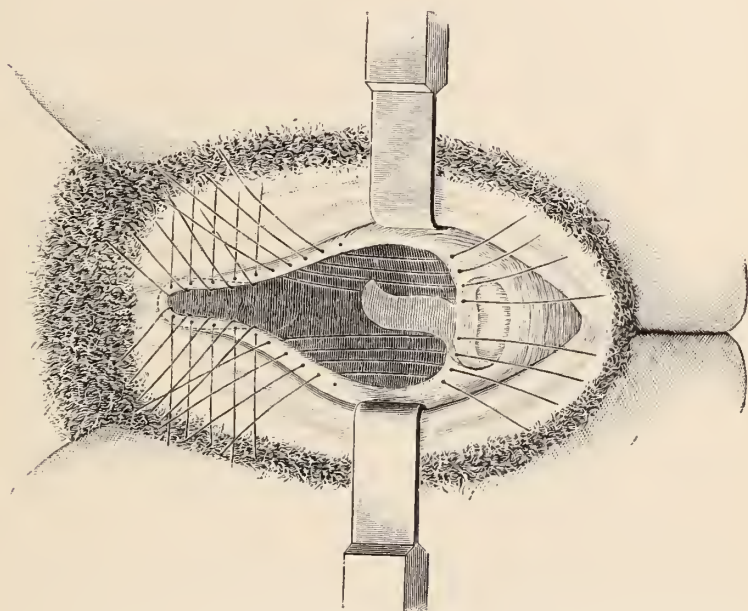


FIG. 3.—Sketch plan of vagina, showing vesico-vaginal fistula, with sutures in position; also spiral flap suspended from the cervix of uterus, afterward placed so as to form urethra.

time taking care to leave a space undenuded at the anatomical site of the old urethra. This opening I intentionally left sufficiently large to allow for contraction afterward. I now dissected a flap from the cervix, running spirally almost around it so as to give me a length of nearly an inch and a half, and this flap, after denuding in the track of the old urethra, I stitched in place with silkworm gut. In denuding for the attachment of the flap I dissected up two strips of tissue, each about a quarter of an inch wide and about three eighths of an inch apart, on each side of the center line. The sutures in the repair of the bladder I passed antero-posteriorly and thus brought the cervix close to the original site of the neck of the bladder. When the operation was completed I placed a piece of glass tubing through the new

urethra into the bladder, so as to afford free egress for the urine. This tube I kept in place constantly for fifteen days, only removing it once in three days to cleanse it. The stitches I removed in twelve days and found that part of the flap had sloughed away, but still there was enough to render good service. The patient can at this writing retain her urine for three and a half hours and then get over a vessel and void it naturally. She has no trouble with her bowels, and is really a sound woman, after being in this condition (a living death) for eleven years. Drs. Willard, Black, Paul, Woods, Rice, and others assisted me, and the operation was done in the Woman's Hospital in this city.

“IS SO-CALLED CONSERVATISM IN GYNÆCOLOGY
CONDUCTIVE TO THE BEST RESULTS TO
THE PATIENT?”*

BY E. ARNOLD PRAEGER, M. D., LOS ANGELES, CAL.,

Fellow of the American Association of Obstetricians and Gynæcologists ;

Fellow of the Obstetrical Society of London, Eng. ;

Professor of Gynæcology in the Los Angeles Polyclinic ;

and Gynæcologist to the Free Dispensary.

It is the universal custom aboard ship to take and correct the vessel's position daily at a certain hour, and the doing this does not in any way interfere with her progress.

Let us suppose that on a given ship a party of men, whose occupation was navigating, but who were simply passengers on this particular vessel, got together and openly expressed their opinion that the course was wrong, the position incorrect, and that danger was ahead for the numerous lives on board ; we can easily imagine that the ship's officers, without perhaps admitting that they paid any attention to unofficial interference, would carefully review their *status in quo* and, being satisfied that their course was unassailable, would let the ship proceed, knowing full well that they had taken into account all that should be considered to bring the voyage to a successful termination, and that the information at their command was to them more valuable and trustworthy than all the “accumulated vapourings of irresponsible frivolity.”

* Read by title before the American Association of Obstetricians and Gynæcologists, September 25, 1895.

It seems to me that without delaying unduly the progress of this Association (which I will compare with the ship) through the sea of science, and without running the risk of causing any of the more strictly scientific papers with which she is loaded down to be jettisoned, I may make use of the few minutes at my disposal to inquire whether the loud and at present somewhat fashionable utterances that we are running on rocks, or, in other words, that we are displaying recklessness in dealing with the lives committed to our care and overoperating in gynæcology have any foundation in fact, or whether the course we are pursuing is not absolutely correct?

Overoperating in Gynæcology formed the subject of the address in the Department of Gynæcology and Obstetrics at the recent meeting of the British Medical Association in London. From the stand taken by a number of the medical profession one is almost inclined to ask whether it is of any benefit to the world that there should be gynæcologists?

Their remarks and assertions, for which they do not produce the least particle of proof, would imply that gynæcology is a sort of illegitimate appendage of medicine, which should be choked and strangled out of existence as a monster which has suddenly arisen to unsex and destroy lovely woman, whereas in truth the science which deals with the diseases of women is one of the higher branches of surgery.

I will grant at once that in any case in which any of these gentlemen, who are raising this cry are consulted, they have a right to express themselves as to the necessity or otherwise for operation; but they have no right to condemn wholesale, and generalize without official information, nor must they expect that for all time they are going to be allowed to do all the talking.

It is surprising that that branch of surgery which has made the greatest strides in the latter part of this century is the one which has had to endure the hardest knocks and the greatest opposition from the exponents of what I venture to submit is miscalled "conservative surgery."

I very much question whether "conservative" should ever have been placed in front of the word "surgery," for unless it is intended to convey a meaning of contempt for the modern practice of to-day, its use is tautological, for the true surgeon has always been as conservative as the state of knowledge in his time has permitted him to be, and has as zealously opposed the sacrifice of the most minute portion of skin or the smallest drop of blood which could be saved

with due regard to the interests of his patient, as did Portia when she laid down the law to one Shylock, who was about to insist on the enforcement of his bond for one pound of Christian flesh.

Now we are told that a love of glory, the glamour of a successful operation, even the big fee (which these gentlemen who rejoice in the name of "conservatives" seem to imagine accompanies or follows every case), tempts the gynæcologist to ruthlessly unsex, wound, and even kill the poor suffering women who fly to them for succor, after having in all probability spent their all with those who are declaiming against us and our branch of practice.

These men are of the same race who so bitterly opposed the operation for removal of ovarian tumor when first it began to be practiced with anything like success—a condition for which they were then and are now powerless to suggest any other plan of treatment that did not consign the sufferer to a miserable and certain death.

The principles of surgery somewhat resemble justice; you can not have one system of justice for a person of a white skin and a totally different system for a person of a darker hue; in the same way your principles of surgery can hardly insist on early incision of the finger where a felon is suspected, and deny early incision to a collection of pus within or liable to find its way into the peritonæum. If surgical principles are so elastic and make such a glaring discrimination between different parts of the body, then I very much fear that our boasted science is not science.

The charge brought against us of seeking to short-cut our way to fame is very wide of the mark, because the moment the people find out that a surgeon is what they are pleased to call "fond of the knife," his usefulness is likely to be seriously impaired. I know this to be true, most assuredly, of men located in the smaller communities, and from remarks overheard concerning men doing surgical work in the largest centers, I believe it to be equally applicable to them.

If there are men in the profession—I do not say there are—who prostitute their opinion for the sake of notoriety or more material gain, is it not at least probable that they are to be found among the ranks of those who continually put themselves on record as opposed to the teachings of the newer pathology, and that some among these are trying to short circuit fame by adopting what is becoming a fashionable craze, in effect, to preach that it is better for one hundred suffering women to die unrelieved than that one should be relieved at the expense of organs which are not only useless but a source of danger? I have little fault to find with the following sentence, which

I quote from the address before alluded to: "Certainly experience has taught much hitherto unsuspected as to what may be accomplished by skillful procedure and scrupulous antiseptic precautions, but the enthusiasm aroused may readily be carried too far. I have lived long enough to see the evils of rushing on too impetuously, and in watching the progress of gynæcology during long periods of time, have witnessed the wax and wane of many enthusiasms which have had their day, and have had a share in bringing something like discredit on a department of practice which, rightly exercised, is productive of great good, but exercised unwisely is capable of producing infinite harm."

I think no one will venture to dispute the truth of that statement; but it has a very much wider application than its author perhaps intended. Any department of medicine rightly exercised is productive of great good, but exercised unwisely is capable of producing infinite harm.

There are also many who, without being able to boast of an extended experience covering half a century, can say truthfully that they "have witnessed the wax and wane of many enthusiasms" in other branches of medicine besides the gynæcological—as witness the inflation of the rectum with sulphureted hydrogen, the injection of tuberculin for tuberculosis, and the much-vaunted coal-tar products, of which it was at one time prophesied by "enthusiasts" that they would revolutionize the treatment of fevers, etc.

Were we anxious to retaliate for the many hard knocks dealt to us as gynæcologists, we would not have very hard work to prove that as many had fallen victims to new drugs and new-fashioned theories in medicine, without any pathological facts to support them, as can be laid to the charge of the surgeon or gynæcologist; while if we were to take into account the sins of omission of our ultra-conservative friends, and attempt to count those whose lives were sacrificed to prejudice and might have been saved by more radical treatment in the hands of a surgeon, we should have such a heavy balance in our favor that some of our ultra-conservative critics would in all probability look about for some other materials from which to construct their papers for a considerable time to come.

Were it not for the "enthusiasts" medicine and surgery would not have made the rapid strides with which they are rightly credited. That some have allowed themselves to be carried too far is no doubt true, but it is only just and fair to give them credit for the best intentions; they acted in accordance with their lights, and were

groping in the dark to discover means for the relief of suffering humanity.

It is right that enthusiasm should encounter mild criticism to keep it within bounds, but when pathology points the way to effect a cure, or as near a cure as our limited knowledge permits it to do, those who in a hasty or obstinate manner refuse to accept its teachings and neglect no opportunity of expressing their disbelief in the necessity for operation for the relief of dangerous conditions, such as pus-tubes, etc., surely place themselves somewhat in the position of the serpent when he tempted the first woman with the assurance, "Ye shall not surely die."

The writer of the address to which I have alluded speaks of "an ardor for stitching up rents in the cervix uteri following childbirth—rents which were described as producing many hitherto evils, and frequently conducing to the establishment of malignant disease. One votary of this practice boasted of having detected and operated on, in a short period, no fewer than three hundred or four hundred cases which he found in examining nine hundred women. Surely here was a marked illustration of the *mimia aigentia*." I venture to ask whether this is a fair way of putting the case. We all know of a celebrated lithotomist and of the large number of lithotomies with which he is credited. Would any dare to suggest that he has been overoperating?

The reason he does so much work in this line is clearly because he has obtained so much proficiency in his specialty that his light can no longer be hidden under a bushel, and patients flock to him.

This argument might be extended to several others in many branches of practice, against none of whom has the charge of overoperating even been hinted, and I ask whether it should not be held in the case of the gynæcologist referred to in my quotation, in a similar way, that he is a man possessed of skill and a large *clientèle*, certainly until the contrary is proved, rather than he should be branded as a man who is operating needlessly and thus held up as the type of what constitutes the gynæcologist?

Lest some suppose that I am attaching too much importance to the views of one man, I wish to quote from an "editorial" in the *British Medical Journal* of a week later than that which published the address which so far has formed the subject of my text. After bestowing a few complimentary remarks on the address, the article goes on to say, "Unfortunately, several European authorities of high repute continually advocate extreme courses, such as total extirpation of the

uterus, with the appendages, in cases of chronic, or even acute, inflammatory affections of the tube and ovary. Last June the German Gynæcological Association met at Vienna. A leading authority laid down the law that in gonorrhœal disease of the appendages it is absolutely wrong to leave the tube and ovary on one side, even if they seem healthy, and that it is much better to remove the uterus as well. Another authority supported him on the score that many 'parenchymatous bleeding areas' are to be found in the uterus in these cases, so he always removes that organ. He does the same, he adds, in cases of malignant ovarian tumor—a clinical and pathological condition quite different from gonorrhœal inflammation. Veit, of Berlin, spoke in a vein of satire. The advocates of amputation of the uterus insist that when the appendages alone are removed, exudations on the two pedicles set up pain and cause adhesions to the intestine, or else fix the uterus. Veit attributes the exudations to fresh gonorrhœal infection; 'therefore,' says he, 'castration of the husband is the best thing for the patient.' Unfortunately, in France as well as in Germany, hysterectomy is extensively carried out. It is difficult to conceive anything more unsurgical than extirpation of the internal female organs for damage done by gonorrhœa."

I think it will be conceded that there is a large proportion of cases in which in the interest of the patient's future well-being it is advisable when removing the ovaries and tubes to also remove the uterus.

The modern method of excision of the breast demands the complete removal of the axillary glands, the fascia, and the skin beyond any suspicious line of infection; and is it not probable that the same holds good that in removing the adnexa for malignant disease it is wise also to extirpate the uterus, which would otherwise, at best, be but a useless organ, especially when we consider that its removal adds little if any to the danger of the operation? Is it not easy to understand also that there must be a certain number of cases in which the uterus is found to be so diseased (when the abdomen has in the first instance been opened for the extirpation of diseased appendages) as to make it advisable in the interest of the patient to sacrifice that also?

Although a great many contend that it should invariably be removed at the same time as the ovaries and tubes are, because without them it is a useless organ, I think it is not in accord with correct principles to remove an unoffending organ simply because it is useless. Yet, according to the *British Medical Journal*, this course has the advocacy of many authorities of high repute, and therefore it should not

receive wholesale condemnation until it is proved beyond the shadow of doubt that gynæcological authorities are either less educated or more reckless, or both, than their brethren in the other branches. The sentence, however, that I find hardest to reconcile with pathological fact is that containing the startling statement that "it is difficult to conceive anything more unsurgical than extirpation of the internal female organs for damage done by gonorrhœa."

When so flat-footed a statement as this is made, it appears to me that we are entitled to ask the writer (whose views must at least coincide with those of the editorial staff, otherwise the article would not have been admitted as a "leader") whether he knows anything about the damage to the internal female organs caused by gonorrhœa? and if so, what treatment short of ablation is in the majority of cases of the slightest avail?

This is a fair sample of so-called "conservative" literature. Those who have had to deal with internal female organs damaged by gonorrhœa know that delay here, in the largest proportion of cases, means death and a harvest for the undertaker.

If the writer is aware of any plan of dealing with this terrible condition which will at the same time preserve to the patient her organs and her life, he should not lose time in publishing the fact, that his *confrères* will no longer be under the necessity of indulging in the unsurgical (?) course which he finds it so hard to understand.

I do not wish to be understood as advocating the needless mutilation of the human or other animal; but when diseased organs threaten life, or place the patient in such a position that life becomes a burden, or prevents the performance of the necessary duties, I can imagine no higher privilege than that of the surgeon to remove the offending members and restore his patient to a condition of safety or usefulness.

While in the greatest number of instances the best rule for guidance undoubtedly is that the least sacrifice of parts is an exhibition of the best surgery, in malignant disease, on the other hand, it is better to "cut wide of the mark."

The removal of ovaries and tubes simply for pain, when they do not present pathological conditions, has for some time been condemned by gynæcologists, and there is no more occasion for members of the general body of the profession to keep harping on that string than there is for the gynæcologist to keep on reminding the ophthalmic surgeon that the eye is a valuable organ and should not be wantonly condemned simply because it is unsightly or sightless and no source of danger to the other eye. I imagine it would be found,

if an exhaustive inquiry were made into the matter, that the neurotic cases—those in which the patient “carries her sexual apparatus on her brain”—do not remain in the hands of the gynæcologist after it becomes apparent that the sexual organs are not the seat of disease, but are handed over, as they should be, to the neurologist. Having indulged in this long introduction, let me briefly inquire what so-called conservatism does for the female from an early period of her existence.

In the first place, while it raises its voice loudly against operative measures having cure for their object, it appears to take no stock in prevention, and has done nothing to lift the veil of ignorance, mock modesty, or whatever you choose to call it, which covers the whole subject of the physiology of the sexual apparatus.

It almost necessarily follows that the young about the time of puberty (if their minds have not already received the “evil communication” which, we are told, “corrupts good manners”) get anything but strictly trustworthy physiological facts about their functions, from those who neither in knowledge nor years are fit or capable to impart information which, properly given, would be useful, and in a great many instances really preventive.

Does the young expectant mother, as a rule, receive from the medical practitioner the information that would be so useful to her during the time of her pregnancy?

Is it not a fact that too often she is left to obtain information which may or may not be trustworthy from more or less ignorant females, whose only qualification, as a rule, is that they have been through the mill?

How often does it happen, in spite of all that has been written as to the importance of repairing damage to the perinæum immediately after the completion of delivery, any attention is given to that body, on the integrity of which a woman's comfort and future well-being so largely depends?

Or if it is stitched, how much value can be attached to the manner in which it is done in too many cases; for is it not a fact that too often the woman gets up with only a skin perinæum, one existing in name only, and, anatomically, not of the slightest practical value to her?

Then some few months or weeks after, when she complains of more or less backache, bearing-down pain, pelvic distress, or purulent discharge, how often is she submitted to strictly scientific treatment?

Is it not of such frequency that it may almost be stated as the

rule that she is given some supposed tonic and vaginal wash, and that without adequate directions as to use, and assured that as she gets stronger she will lose her symptoms?

And the last state of that woman becoming worse than first, she eventually does what she should have done long ago, and falls into the hands of a gynæcologist who restores her to society a useful member.

The great reward bestowed on the gynæcologist is the charge of having operated needlessly.

While it has not been proved with mathematical accuracy that laceration of the cervix is the cause of cancer, is it not a fact that in the greater number of cases of cancer the cervix is found lacerated? And may not the unhealthy tissue thereby induced be more prone to take on malignant degeneration?

Or granting, for the sake of argument, that there is no relationship between laceration and cancer, is there any valid reason why an injury of the cervix should not be repaired by suturing in precisely the same manner that the general surgeon would adopt in a wound of the lip, or forearm, or any other part of the body?

Why attempt to get primary union in one part of the body, and teach that it is wrong in another?

What would be thought of the surgeon who took so little pains in approximating the edges of a wound in a woman's face that an ugly scar was the result?

Beyond the fact of the annoyance caused by the unsightly scar in this situation, the cicatricial tissue would not in all probability cause or set up any suffering; and yet fault is found with us for trying to prevent a mass of scar tissue in the cervix, where it undoubtedly is often productive of a neurosis.

In commencing malignancy of the uterus, does not so-called conservatism in delaying operation, or in only removing a small and insignificant portion of the cervix, condemn the patient to an almost certain recurrence and death? True conservatism recommends the removal of the whole organ early, with but little risk to life and at the expense of a body whose functions are already lost in consequence of the disease.

So long as we hold fast to surgical principles and apply them to our gynæcological patients, I think we can make sure of keeping on the right track, and instead of being put on the defensive, we are entitled to ask of all our critics and of all cavillers—and we shall require something more than mere assertions from them—“Is so-called conservatism in gynæcology conducive of the best results to the patient?”

THE SURGICAL MANAGEMENT OF SUPPURATIVE
FORMS OF TUBAL AND OVARIAN DISEASE.*

BY JOSEPH PRICE, M. D., PHILADELPHIA.

For centuries there was no precise knowledge of the character and organs involved in pelvic suppuration. Everything was put under the head of pelvic abscess. The term in itself conveys an idea of the limit of the knowledge of the earlier surgeons—if by such name we may designate them—of the character, the relating functions of the pelvic organs, and the troubles in which they are frequently involved. But it is not to profitable purpose to spend much time in a cemetery; we find more profitable teaching in the work of the men of our own than in the work of the men of the earlier centuries. Limited as was the nomenclature, it served to cover about all that was known.

We are no longer greatly in need of medical and surgical terms. Every experimenter, with the coincidence or accident of a success, takes a cross-field cut to get into print and herald the new method or doctrine his genius has evolved, and not satisfied with anything in the old or in the clearly descriptive and intelligible of the modern, he invents a new nomenclature, and to his new fad or "fad" gives the sweet seductive euphony of his name.

We would naturally suppose that as we grow in precise knowledge of the character and organs involved in pelvic suppuration there would be a more general consensus of opinion as to the structures involved in the most common varieties of intrapelvic disease and as to treatment.

While our literature is burdened with discussions of pelvic diseases and their treatment, there have been a few men doing our scientific thinking for us—a few who have answered many of the obstinate scientific questions which lie within the range of facts related to other facts.

Bernetz and Goupier have carried the spirit and accuracy of the mathematician into their minute investigation, their keen scrutiny of co-ordinate influences and results. They were investigators and not mere controversialists; they devoted time and effort not to disputing about facts, but to discovering them. Our science would be a sterile thing without the impetus, and the patient, prolonged investigation such

* Read before the Philadelphia Obstetrical Society, November 7, 1895.

men give it. What is best, they give us classified facts, vital relations ; give us results and reasons for them, give us discoveries and not inventions of doubtful value, the logical conclusions of practical investigators and not mere theorizing. As close observers they have given us the results of their observations. A very distinguished scientist has given us a broader meaning of observation than that of common acceptance. He has defined it to mean "the strenuous exertion of all the faculties behind the eye as well as the assiduous training of the eye itself." He adds : "I have educated five observers ; one of them, to be sure, has turned out to be my deadliest personal enemy, but still I affirm that he is a good observer, and that is the best compliment I could pay him were he my dearest friend." It is true that the men who have given us all the science worth the name have not been without their scientific enemies.

The source from which most mischief has come to genuine scientific discovery has been through a class of small critics of the kid-glove or japonica variety—those amateur scientists who glean up and combine all the discoveries and results of the experience and observation of many specialists into one confused mixture. They have been obstructionists for the reason that they have diverted attention from subjects of vital importance and which should receive the most profound study. It is not claimed that all the conclusions of our eminent scientists are without the circuit of legitimate criticism and controversy. There are many errors to be corrected. We have not outgrown the possibility of new achievements. There is much yet within the chaos of facts for our finding.

There are, however, in our science and art some settled truths—truths settled by clinical and surgical experience, which we can not do better than adhere to ; the successes are not the same when they are deviated from for the new of some adventurer. Early in the history of true pelvic pathology and surgery these adventurers and obstructionists referred to denied the existence of tubal and ovarian disease. Later, recognizing the error of their ways, they again became obstructionists in the surgical management. Still later they became advanced thinkers and originators—full of deep surgical wisdom ; critics of well-established, safe, and simple forms of treatment. To follow the campaign of a few would-be leaders is one of the most interesting and at the same time disgusting chapters in pelvic pathology and surgery. First, they denied the existence of tubal and ovarian disease, occlusion of tubes, with retention of blood, pus, and water, with partial or general adhesions to important viscera or structures.

Later they admitted all, but they had tortured original methods of treatment.

Simple, direct, and positive methods were criticised. A few months or a year later they tried to startle the world by rather ultra and heroic methods of treatment, modifying or changing their views and methods about twice yearly, fully contradicting themselves about every six months. Nothing could be more unfortunate for the numerous sufferers throughout the world than the present disagreement as to real pathological conditions demanding simple surgery. Recently the whole subject has been greatly complicated by new methods, new appliances, and positively new men or operators. I say new operators because they have been in the field but about two years. Mr. Tait organized a large and wonderful school in pelvic surgery. They followed his simple and complete methods with startling success throughout the world. The reports of small and large series of successful operations for greatly complicated troubles, were very numerous. The reports in about all cases were of a pleasing nature.

Early in the history of this great work the followers of Mr. Tait had a lower mortality and better results in a more complicated class of troubles to deal with than the present school of undecided operators.

Much of the new work is that of a class of men who have served a very short apprenticeship. The new gynæcologist, like in homœopathy—that which is new is not true, that which is true is not new, a fact peculiar to both. The noble battles fought out are worthy of our thoughtful consideration. The statistics and tables given will not stand before the veteran abdominal operator. Much of the work shows decided timidity, and some of the tables, with the history of the cases, would indicate unjustifiable work. Some of the blind and blundering procedures remind one of a very common expression of women—an untruth in its bearing—"What you don't know will never hurt you!" It is by what we have done and are doing, and the results thereof, that professional and non-professional judgment is influenced. Electricity, sacral resections, and a number of fads, are no longer heard of; they served but a short day. Infrapubic work, so much lauded at present, will do a world of mischief before it is discarded. I can not understand how any one familiar with pelvic disease, with knowledge based upon a large suprapubic experience, can claim superiority for the lower method. With a large experience with vaginal hysterectomy for malignancy, and in operative obstetrics, the facts, as con-

firmed by experience, force one to the adoption of the upper method for ease, for the exercise of good surgical judgment, and completion and refinement of technique. Sufficient time has not elapsed to give statistics value as a criterion of judgment. A longer and more general trial of the method will give shocking results. For actual disease—pelvic, acute, or chronic—the numerous unrecognized injuries and accidents to surrounding structures and important viscera will stay the hand of all conscientious surgeons or bring reproach upon abdominal surgery generally. The absolute incompleteness of this method must condemn it. An operation, to be complete, must remove all that it professes to remove. It must correct all pathological complications and lesions, and leave all surrounding structures in as normal relations as possible.

Unrecognized and unrepaired fistula to the number of five or six per cent. following the infrapubic operation is alone sufficient reason for its total rejection as one of the most imperfect, inefficient, and unsatisfactory methods ever practiced in gynæcology.

The careful reading and studying of good abdominal and pelvic literature—the contributions of experienced investigators and thoughtful observers of all phases of the operation—furnish the most convincing arguments in favor of the suprapubic method. Ignorance, prejudice, or timidity only will bar out the proofs so ready at hand. The logic of results certainly will not. The common expression “inoperable” comes from the infrapubic operators or adventurers who have just *stumbled* into the field of abdominal surgery, and are asking, in the phrase of an ex-Congressman, “Where am I at?” He attempts an abdominal section, finds a few adhesions, wipes his thoughtful brow, breathes out a few expressions of surgical wisdom, closes an eighteen-inch incision by “My method”—his certainly—and then declares the case “inoperable.”

He then suggests or attempts the new dismal-swamp procedure by stabbing through the vaginal vault with a knife or scissors, a pus-tube, or ovarian abscess, or extirpates the little healthy uterus, stating that “the adhesions of the appendages were so solid that I could not complete their extirpation.” I presume this same operator and authority would remove the penis for unilateral or bilateral buboes, and consider it good surgery. The suprapubic surgical management of suppurative forms of tubal and ovarian disease is easy in the acute cases, complicated and trying in the many neglected and chronic cases, but rarely is it necessary to “back out from the operation at the table” or abandon the operation at any point. The management of the

omental bowel, small and large adhesions, careful repair of all bowel lesions, is easy and vital in every case.

The enucleations are complete and easy in puriform disease. A prominent operator records that "I have left twenty-one times parts of the appendages in the pelvis in the one hundred and fifty-seven cases of serious suppuration upon which I have operated."

Now a moment's reflection upon this recorded admission of a man traveling in America as a gynæcological missionary, where gynæcology had its genesis. I have hundreds of times repaired bowel lesions, and have freed adhesions by the hour. Nothing in my professional work gives me more pleasure than our ability to deal with visceral complications and lesions incident to the natural history of intra-abdominal and pelvic disease. The scientific and surgical interest of the American profession in bowel and all visceral surgery, as exhibited in the records of surgeons, is a matter of very natural and just pride. There will be no more encouraging or brighter chapter in the history of surgery than that which will record the work of the last decade.

The suprapubic method, as perfectly practiced—free of errors of omission and commission—is the only operation that can give perfect, immediate, and permanent results. The accidents, complications, and sequelæ commonly referred to in discussions of the suprapubic operation—that of infection, adhesions, fistula following drainage, and improper ligatures—are all avoidable, except in very rare, very feeble patients.

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EDITORIAL.

THE PRESTON RETREAT CONTROVERSY.

We had expected to avoid all editorial reference to this correspondence, which has rarely been equaled in medical literature by the acerbity of its language and the charges and counter-charges of moral turpitude which it contained. It has been, we doubt not, as unpleasant to our readers as it has certainly been to ourselves, and we with them must assuredly rejoice that it is at last, so far as this JOURNAL is concerned, ended.

We have, however, received, since the appearance of the November issue, strictures upon the propriety of our publishing the last letter of Dr. Price, owing to the intensely personal and offensive character of the latter in its references to Dr. Norris. As these strictures came from a source which we know to be both honest and friendly and which has our sincere respect, and lest others among our friends may also conceive a mistaken notion as to our own position and standpoint in regard to this controversy, we have thought it well briefly to make this statement, before we and our readers hasten to forget a most unsavory episode.

We must begin by affirming that our relations both with Dr. Norris and Dr. Price are entirely and equally friendly; we respect and admire both for their professional attainments and the hard work which enabled them to arrive at their undoubted prominence. We know that, in the matter of this controversy, we have felt and evinced abso-

lute impartiality and fairness. As to the merits of the question involved, it is the part of our readers to decide; it is not ours.

Could we have foreseen the unpleasant virulence which the controversy has developed, we frankly confess we would never have accepted Dr. Norris' first letter, which began the correspondence. This, though referring to a scientific matter, distinctly and deliberately impugned Dr. Price's truthfulness and honor. If fault there was of ours, it was here, in that we permitted Dr. Norris to make a personal attack upon Dr. Price in these pages; having, however, once allowed this, we had no recourse but to permit Dr. Price the right of self-defense. As to the language which the latter saw fit to apply to his adversary, that is a matter of taste. We felt that we, in our editorial capacity, had no right to refuse his reply, so long as this was couched in language admitted by the English dictionary, was grammatical, and was pertinent to the subject at issue.

Dr. Norris' language throughout was couched in polite terms, that of Dr. Price was not; but we fail to see the difference between the two in the matter of offense. It is the same thing, practically, whether one is called a "liar" (however that word be spelled) or a "damned liar"; it is extremely unpleasant for non-combatants who must hear it but, apart from this, the worst that can be said of the latter expression is that it is tautological.

This was our position throughout the Preston Retreat Controversy and we confidently submit it to the judgment of the fair-minded among our readers and our friends.

CREDIT TO HIM TO WHOM CREDIT IS DUE.

We publish in this issue among our Original Communications a short article by Dr. Stoddard of Pueblo, Colorado, to which we would call the attention of our readers for two instructive reasons, namely, because Dr. Stoddard himself deserves great credit for attaining success in one of the most brilliant and at the same time most difficult of plastic operations and likewise because, we regret to say it, the author has entirely neglected to give credit to the one man, so far as history informs us, who first devised, perfected and widely published, by writing and clinical teaching, the method of operating our author describes. We are sorry that Dr. Stoddard omitted this very proper

formality ; for the operation, or in fact any operation to restore the lost urethra, has so rarely been attempted except by its originator. It has been so little tampered with by means of improvements and modifications, that those of our readers who were unfamiliar with the operation would naturally give Dr. Stoddard credit for originality where, as a matter of fact, every step which he describes had long ago been perfected and laid ready for his use by another. We do not for a moment suppose that such a result could be anything but distasteful to the former, as an honest man who would not wish to "shine in borrowed plumes." It is or ought to be sufficient honor for Dr. Stoddard that he has accomplished with success what few men have ever attempted and where, of those who have attempted it, most operators, with the single exception of its inventor, have signally failed.

Dr. Thomas Addis Emmet of New York first performed the flap operation to restore a lost urethra in the fall of 1862, at the Woman's Hospital; this case with several others was published in Emmet's book on *Vesico-vaginal Fistula*, in 1868. In 1879, the same operation was described by Dr. Emmet in the first American edition of his *Principles and Practice of Gynaecology*; again, in the German edition of the same book published at Leipsic in 1881 and, less than ten years ago, in a French edition.

Since 1862, therefore, Dr. Emmet has frequently performed this operation both publicly and in private practice, and thousands of surgeons have witnessed him and listened to his clinical lectures upon it, from every section of this country and from many parts of Europe. Notwithstanding all this, the operation has, as we have said, so rarely been attempted, on account of its difficulty and, partly also, on account of the comparative infrequency in late years of the injury itself—owing to the great improvement in obstetrical methods—that it is practically a new procedure, still to be appreciated and adopted by the profession at large.

For this reason, therefore, it is especially just and important that, as the operation is brought into general adoption by the success of other men who attempt it, full credit in each case should be accorded to its originator until, by the general knowledge thus diffused, it shall have become a common procedure and all danger of disputed authenticity shall have passed.

CORRESPONDENCE.

VAGINAL HYSTERECTOMY.

PAOLA, KANSAS, *November 1, 1895.*

To the Editor of the American Gynecological and Obstetrical Journal :

SIR : By request of several surgeons who have become somewhat acquainted with my method of vaginal hysterectomy, and desiring upon my part to contribute what I can for the relief of suffering women, I offer for publication the following brief description of an operation which has been in my hands remarkably efficient and is very simple :

The patient should have no breakfast, although a glass of hot milk would be admissible, and she should be on the table at 11 A. M., her hips elevated four inches by means of a pillowcase stuffed with excelsior and flattened somewhat in the middle.

Two assistants hold her feet and one is at hand to do my bidding, besides an experienced anæsthetist who sits upon a stool at her head. While being chloroformed (I use nothing but Squibb's chloroform) I shave off all hairs, using an aseptic soap for lathering.

I sit upon a chair of proper height, my back to a good window, with the light coming in over my shoulders ; beside me are two buckets half full of water, made aseptic, also a large bowl for my hands, and several small sponges fastened to handles six inches in length, used for mops, to be rinsed in the buckets of water.

Two hypodermic syringes are at hand, one loaded with nitrate strychnine, one-thirtieth of a grain to five minims (this being a dose), the other with alcohol or brandy ; the anæsthetist uses the latter, I the former, his place of medication being the arm, mine the thigh. These are used if collapse threatens ; or upon the first indications of unusual weakness commencing, a hypodermic of morphine is sometimes given before beginning the chloroform. Now, with a bivalve speculum of common length, the vagina is opened and a Bernays' retractor introduced to the bottom of the uterine cavity, and after being locked it gives me complete control of the uterus ; with this instrument the womb is pushed up, which action shows the union of the vaginal membrane and neck of the uterus, which is the place to make the circular incision. Or it can be rotated, or dragged down, or held to one side while dissecting upon the opposite one ; in short, this instrument is a necessity with me, and is far superior to "guy ropes."

At this point the speculum is removed and one with very broad blades and only an inch and a half in length is placed in the vagina and fully expanded, which renders the field of operation all that can be desired. With this short speculum I have no need of assistants to hold retractors, which usually is a source of annoyance to an operator.

With the uterine retractor firmly held with the left hand, and the womb dragged down into good light, I use a slightly curved, pointed scissors, and make the posterior circular cut, going well around toward the anterior upon each side.

I use nothing but fingers and thumb in separating the rectum from the uterus, always keeping as close as possible to the organ being removed. The peritonæum is easily torn when reached, and the smooth surface of the fundus, as also the attachment of the broad ligament, informs me that this part of the operation is finished; any adhesion which can not be broken must be clipped with the scissors.

Now, with the uterus held firmly against the rectum, the circle is completed in front of the cervix with the scissors. Here I am on dangerous ground, and must proceed very cautiously for fear of wounding the ureters or bladder, and here again nothing but my fingers and thumb are allowed in the wound; but by being very persistent in prying, lifting, and pushing, a place is found near the ligaments where the finger passes up to and through the peritonæum, after which it is rather easier to complete the separation. Now, with the uterus free from its attachments to the rectum and bladder, one of two methods is adopted:

If the uterus is enlarged to double its normal size I drag it downward with the retractor and commence the dissection of the broad ligaments subperitoneally, taking off half an inch or more of the peritonæum upon each side of the ligaments and extending beyond the insertion of the tube, here, as elsewhere, the scissors and nails being the only cutting instruments used.

After one side of the organ is denuded, the retractor enables me to twist the uterus upon its axis so that it is convenient to dissect the other side as was done the first.

However, if the womb is not enlarged much, I prefer to reach up with a long tenaculum and fasten into the fundus, guided by a finger, either in front of or back of the organ, according as it is anteverted or retroverted, and after unlocking and removing the retractor bring the fundus down through the wound in the top of the vagina, and with a strong-toothed forceps or my left hand I can hold it firmly and

well out of the vagina, where I can more easily do the dissection than by the first method, and proceed from the fundus toward the neck. The dissection around the cervix should be closer to or into the organ than is necessary farther toward the base, to avoid hæmorrhage, *but and if* the dissection has been *properly* done, no fear need be entertained that any alarming hæmorrhage will follow.

After removal of the organ a small sponge mops out any blood and rests a moment against the raw surfaces, and one with thread attached is permitted to remain sometimes until the patient is prepared and put to bed, when it is removed and nothing else allowed in wound or vagina.

The patient's hips are elevated slightly in order that the intestines shall gravitate from the wound.

I use no stitch, ligature, or clamp, because neither are necessary, and *if* not, then *all* are *unsurgical*.

It is not necessary to stitch the broad ligaments together, nor the peritonæum, nor the initial wound in the top of the vagina, for they each will naturally coapt themselves together more perfectly than can any operator.

A post-mortem examination years after this operation will show the broad ligaments grown together, as also the surfaces of the rectum and bladder, which before were united to the womb. And no stitches are needed in the vaginal membrane, because, with the uterus removed, the front and rear walls lay together like a flattened tube, as is the vagina, and the circular cut forms itself into a straight line from side to side, the lips or edges of the wound coming into perfect apposition.

I have examined a month subsequent and found the remains of the wound with considerable difficulty. It is the same or worse with the clamping or tying of the arteries. Dividing the *many* branches of the arteries under the peritoneal covering with scissors, or "bruising them off" with the nails, is the secret why no considerable bleeding occurs, and then I get rid of *clamped* and *tied nerves*, as also the sloughing and decomposition of tissues following their use.

I have seen intestines forced into the wound caused by vomiting from the effects of the anæsthetic, but as soon as everything was taken from the vagina, the hips elevated, and the parts were allowed to coapt or adjust themselves, I never could find them afterward.

I am thoroughly convinced that atmospheric pressure, together with the mechanical hugging together of the bladder and rectum and broad ligaments, as also the pressure from above, render it next to impossible for prolapse or hernia of the intestines to occur after my op-

eration ; but it might be a troublesome sequel when clamps or even ligatures and stitches are allowed to remain in the wound, with their consequent discharges from the decomposition and sloughing of tissues, necessitating the frequent washing and disturbing of the healing surfaces to prevent infection, while with my procedure there is just enough venous oozing to establish excellent drainage with Nature's dressing, which almost secures healing by first intention.

After reaction there is generally not more than one degree above normal temperature, and in three days the patient will get out of bed, if allowed, and is sometimes hard to convince that such a profound operation has been performed upon her.

My after-treatment generally consists in giving nitrate of strychnine hypodermically from every three hours at first to three times a day at the end of a week, adding as needed morphine, for I wish the patient to be as comfortable as possible during convalescence.

In a future article I should like to point out the class of cases which should have the benefits of this operation, when, too, I would report some cases which were operated upon and the effects which followed.

O. G. CRANSTON, M. D.

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Stated Meeting, November 7, 1895.

The *President*, WILLIAM H. PARISH, M. D., in the Chair.

The Re-opening of the Abdomen During the Few Days following a Caeliotomy.

BY WILLIAM H. PARISH, M. D.

(See page 610.)

DISCUSSION.

Dr. MORDECAI PRICE: I think the Society owes a debt to Dr. Parish for presenting these cases. While I can appreciate his feeling in the first and would probably have done exactly as he did, I feel that to avoid just such conditions it is absolutely necessary to be exceedingly arbitrary in my own operating room. I permit no meddling

with my instruments or dressings; it is just this meddling which makes such an accident possible. There are two or three on record, and I have had two or three operators speak of cases of accident where sponges had been meddled with by those present. We should avoid the possibility of this accident by carefully noting everything connected with our operation and allow absolutely no one to meddle except those assisting. I have had the feeling of which Dr. Parish speaks and reported a case after an operation for gallstone. The patient had been put back to bed, when I remembered that I started with six sponges and found twenty-one in the basins that had been placed there by a meddlesome nurse, who I shall always believe had hoped to accomplish a death for me. Every one connected with the operation insisted that there was no sponge left in. I was satisfied when I operated that there was none left in, so I did not satisfy myself by re-opening.

The other case reported by Dr. Parish gives me great encouragement in peritonitis following operation. I understand that Dr. Parish saved his case by opening and irrigating and washing out the peritonæum. I have found that cases without drainage, with dry peritonæum but with adhesions, are always dangerous, and the only remedy in such cases is irrigation and washing; nothing but warm water will save. These cases would all of them have been fatal except the first. There is some question whether it did good in the first one. I believe that re-opening in cases doing badly, and thorough washing (irrigation should not be done without drainage) will do no harm. My re-opening cases, I must confess, were not so favorable. I lost half of them. Perhaps one reason for this is that I have not always been so prompt in re-opening where symptoms were not exceedingly grave. Two were from hæmorrhage. I did not open soon enough; both were complete closures; when hæmorrhage was sufficiently apparent to warrant the assurance that it was hæmorrhage, it was too late.

Dr. JOSEPH PRICE: This is an interesting and instructive group of cases. Dr. Parish deserves credit for his surgical courage and also for the interest he has in a work of vital importance. But few men have the courage to present a group of cases of this character; but few have the courage to refer to their accidents, to errors of commission or omission in some of the trying cases they have to deal with. Early re-opening is of vital importance. In hæmorrhage nothing short of early re-opening will save the patient. The drainage-tube in hæmorrhage serves as a safeguard and sentinel. They are the cases with adhesions, firmly fixed ovaries and tubes of five, ten, or fifteen years'

standing, in which you have to tear off an ovary, with every surface as adherent as the paper on the wall or barnacles on ships. Sometimes you have free oozing, and the drainage-tube keeps most careful watch and gives timely warning. In septic conditions the re-openings, as a rule, are too late. In the case referred to, of general universal peritonitis with agglutination of all the viscera, the re-opening was quite timely; the woman had done well for some five or six days, and the bad symptoms developed rather late. Old, unrecognized adhesions are a common cause of obstruction, as in the third case referred to, and it serves as a test of the importance of early recognition and the freeing of adhesions of omentum and small and large bowel and the bands of adhesions bridging both. Only last Sunday I did a section (the third) on a patient. Two of the sections were done by two of the best surgeons in Philadelphia, and they were probably very complicated operations. The operation seems to have been, from the pelvic point of view, a perfect one, but from the intra-abdominal standpoint adhesions were quite universal, and the case was interesting from most any standpoint, particularly in connection with the present vaginal attempts at pelvic surgery. I found numerous bands extending from the ilio-pectineal lines up through the abdominal cavity. These were surely secondary or post-operative sequelæ. Acute obstructions are usually of a septic nature or due to paresis with overdilatation of bowel, and of course bands of unrecognized adhesions favor extension of paresis. Prompt reopening is important.

Sponges and foreign bodies: If surgeons follow the rule of definite numbers—four or six—the nurse counting the sponges and gauzes, and the assistant doing the very same thing before and after the operation, it is an easy matter to avoid accidents of that character. There should be at hand only gauzes and instruments sufficient for the operation. There should be no surplus of such material; if desired, have such surplus at hand in a reserve vessel. Beginning with eight, some years ago, I now begin with four and have a reserve fund of four, also a reserve stock of gauze. In regard to instruments, the numbers are, as a rule, too numerous for safety. I have only once in my experience left an instrument in the abdominal cavity; never sponges or gauze. I remember in Petersburg, Va., I placed a hæmostat on a bleeding point in the omentum. I placed it at a very convenient point, in haste, as the patient was a very old woman and I wanted to save all the blood possible. I was also speaking to a physician present. I thought of the instrument after suturing, took out the sponge on the omentum, severed two sutures without

difficulty, found the hæmostat with one finger and no mischief came of it.

Abscesses not recognized in the mesentery, or posterior to the sigmoid, or about the head of the cæcum, are responsible for some post-operative deaths, and re-opening in these cases will save a few cases. Thus Keith calls attention to vaginal incision for huge accumulations of serum and filth. In these cases, of course, Keith saved his cases by vaginal incision and drainage, if at all. Dr. Jacobs refers to a case. Dr. Parish thinks the foreign body is not in the patient; but Jacobs found a fæcal fistula in his patient due to cotton or gauze which had remained there a long time.

Dr. NOBLE : I did not have the pleasure of hearing all of Dr. Parish's paper, but the question of re-opening the abdomen is one which has come up to every operator of considerable experience. I have re-opened a number of times after operation—probably half a dozen to twelve altogether. For hæmorrhage I re-opened once. That was a case of bilateral ovarian tumor with fleshy pedicle. The ligature did not slip off but was not tight enough to prevent oozing. I re-opened, washed out the abdomen, and the patient made a good recovery. As far as bleeding is concerned, I have never had a genuine secondary hæmorrhage. I had two other primary hæmorrhages where ligation was not proper; one got well and one died—died of sepsis. There was not a large hæmorrhage, but the woman was already exhausted, and the additional loss of blood favored the occurrence of sepsis. In the septic cases my own judgment is that it depends upon the particular case, as to whether it is worth while to re-open the abdomen. If the operation has been done in a patient very much prostrated, having a suppurating ovary or pus-tubes, where there has been active sepsis before operation, with hectic fever for months or weeks, if septic peritonitis develops here it is useless to re-open. The pulse in these cases is usually upward of 140 and so thready that the additional shock of a second operation merely hastens the fatal termination.

When septic trouble develops in patients whose status is good immediately before the septic trouble appears, it depends on the type of peritonitis as to whether it is advisable to re-open the abdomen. When the temperature is low (not over 102° F.), the skin dry, not much sweating—in other words, not much septic absorption—I have never re-opened the abdomen, and I have had but one such case die. Some of them have had localized abscesses which have discharged through the abdominal incision. When the temperature shoots up

above 103° F. the patient gets a leaky skin, symptoms of exhaustion appear, and the pulse becomes rapid and small; undoubtedly, if such cases are not washed out they will die. I have re-opened a number of these cases, and quite a number of them have got well; probably half have recovered.

During the past year I removed a hydrosalpinx from a colored girl. I did not think at the time that the trouble was septic, hence she was not irrigated and not drained. She promptly developed septic peritonitis. I re-opened the abdomen, washed out, drained and recovery followed. I have had a number of cases similar to this, but these were cases in which the patient's condition was good when the primary operation was over. There is a very great difference between this class of cases and the class of desperate cases with septic trouble quite marked before operation, which develop virulent septic peritonitis while in a condition of shock from operation.

Concerning sponges and gauze, I have never had the experience of leaving a foreign body in the peritoneal cavity. I always feel that an operator has all he can do to do the operation; he should not charge his conscience with sponges. I leave this to the second assistant. It is his business to know that the sponges are out; that is the understanding in all my operations. I think this is a very great improvement on letting the surgeon be responsible for them. In the cases where they are left in—almost always the bad cases—if it is not the business of some particular individual to be responsible for sponges and gauze, in the haste to finish the operation, which is necessary for the patient's well-being, there is strong probability of sponges being left behind.

Dr. HOFFMAN: In reference to re-opening the abdomen in convalescence, or patients dying of peritonitis, but subsequent to abdominal section, I feel that it is necessary to distinguish not so much between patients as it is to establish the procedure on some underlying principle dependent upon the action of sepsis. If I have a patient who after operation develops signs of peritonitis, I must find out and satisfy myself whether or not there is anything in that pelvis to remove; whether there has been, say, a collection of blood; whether there is hæmorrhage, or whether through some cause of my own there is a septic peritonitis developing with the diffusion of the products of sepsis in the abdomen. If there are collections in the *cul-de-sac* (as they usually occur in pelvic operations, no matter what the condition of the patient), we should give the chance which will come of cleaning out the pelvis—that is, all septic material there should be removed.

I do not think that the simple rise in temperature indicates what would be from Dr. Parish's standpoint a condition in which re-opening was necessary. Dr. Noble refers to the rise of temperature up to 102° ; that is not enough indication for re-opening the abdomen of itself; it may be if accompanied by some collection, purulent or septic, of any nature whatever, in the pelvis. I have two cases in mind. I have altogether re-opened three in my work. The first developed at the end of five or six days a septic condition. I examined and found a fullness in the *cul-de-sac*. Her condition was not alarming at all; somewhat restless, but everything apparently going on well. I did not regard it as a septic case, and, by the way, it was my tenth case, so I deferred opening, although I was satisfied something was wrong; but I kept on hoping it would come out all right because the patient was in such a good condition. I even went so far as to go to Dr. Price and ask his opinion. He reassured me; but still the long duration of convalescence made me seek the advice of Dr. M. Price. He at once advised re-opening, which was done, and I found what I supposed there. Afterward I found this case had been one of criminal abortion; there had been evidently a puerperal septic condition antedating the operation which gave the foundation for the sepsis.

My second operation was performed in a case exactly similar to this, in which I came to the conclusion that re-opening was necessary, although to this day I do not know why sepsis occurred. I stayed with the woman all night, administering champagne and stimulants along with her attendant physician.

The other case was simply one of hæmorrhage with hæmophilia, who at the time of operation bled profusely simply from the incision. I tied carefully, but notwithstanding, in freeing adhesions, there was a good deal of bleeding. I introduced a drainage-tube, and in the course of four or five hours the nurse was sent to me with the report that there was quite a hæmorrhage in the case. I re-opened on the bed, without removing the patient. Examination of the lower ligatures on the stump showed they had not slipped, but oozing was present, probably from bad tying, and bleeding continued slightly for a day or two. Of the three cases I re-opened, two recovered, one died.

Dr. W. S. STEWART: As to sponges, Dr. Noble states that he has always left sponges to the assistant. I did this once, to my sorrow; not that I lost the patient, but because of the fact that I had to open the abdomen after an operation. The patient had an immense tumor weighing ninety pounds; she was almost collapsed. When through with the operation I inquired particularly, before applying stitches

and tying of ligatures, if the sponges tallied with the number given. After the assistants had gone, in collecting everything I found, to my dismay, that there was one sponge missing, and as my assistant had assured me of the number used, I believed him. The result was that I had the drain in the yard of the house dug up, and went to a great deal of searching around where the *débris* had been cast from the water that had been used. Still I could not find the sponge. Before leaving I decided I would have to re-open the abdomen, and on opening it found the sponge over the pubic bone. It was removed and the patient recovered. I do not think, therefore, that it is well to leave sponges even to a careful assistant, but we should look after them ourselves.

Dr. JOSEPH PRICE. : Throughout recent discussions and old ones it has been and is very common for men to say dogmatically that patients suffering from general peritonitis have never been saved and can not be saved. I have met repeatedly in records of cases with the statement that purulent, suppurative or adherent peritonitis always results fatally. Surely this case, a typical one, should impress the authors of such statements with the fact that they can be saved and they are saved. It is unfortunate in connection with this subject that such utterances are made. It simply impresses the man with few sections to fold his arms and make no effort whatever to save just such cases. I am glad, indeed, that Dr. Parish puts this case on record, because it is typical of not a small group of cases. Many are permitted to die. The statement has been repeatedly made here that they always result fatally. Not so ; far from it. They can be saved and they are saved in good numbers. Further, the statement has been going around the country that gunshot and stab wounds twenty-four hours old are always fatal. This statement was made at Charlestown, at the meeting of the Gynæcological Society, by three or four surgeons of large experience, and was met by case after case of twenty-four, thirty-six and forty-eight hours, and even of longer duration, in which were four, six or more wounds of torn and punctured viscera, and the peritoneal cavity was full of filth. This case of Dr. Parish was saved by the freeing of all previous adhesions, a procedure condemned and not practiced, excepting by very few men. Again, the irrigation and toilet condemned and here practiced was so thorough and complete in both that it resulted in almost a rapid convalescence or a subsidence at least of what seemed threatened dissolution. In a case where operating and repeating operation on a woman who had gone through an abdominal section, which latter is usually considered sufficient for one

to endure safely, only fortifies our argument—this particular case of a woman not in a favorable position for surgery. It would be interesting to hear some of the authors express themselves about this particular case—to have them play battledoor and shuttlecock, as they commonly do, with this case.

Dr. PARISH concluded the discussion. He referred to the statement made by Dr. Hoffman as to its being necessary to determine the presence of something in the abdominal cavity to be removed before opening the abdomen. In neither of the cases of peritonitis reported by Dr. Parish was there anything to be removed. He did not remove anything—no pus, no blood, no serum; nothing but adhesions of all the viscera of the peritoneal cavity was found. The point is to wait until one is convinced that there is something to be removed. Adhesions were the cause of the trouble; care in breaking up these adhesions with douching, thus freeing the circulation and restoring the nerve supply of various viscera, will in some cases avert death. A very important part of an operation is to break adhesions in recent or old peritonitis. Undoubtedly if there is pus, lymph, fæcal matter—anything abnormal—in the abdominal cavity, it should be washed out. As I understand diffuse suppurative peritonitis, I do not think that either of the cases I had should be classed as such. Much of the misunderstanding which exists between operators is, I think, based on a difference in the use of the term diffused septic peritonitis. Many cases can not be cured by an abdominal incision. We should not re-open and douche these cases in which the blood is so infected, the tissues so involved, that an opening of the abdomen will not give a favorable result. In a doubtful case I think the abdomen should be opened, adhesions broken up, and whatever is foreign removed.

The Surgical Management of Suppurative Forms of Tubal and Ovarian Disease.

BY JOSEPH PRICE, M. D.

(See page 637.)

Dr. GEORGE M. HUGHES read a

Report of Ten Abdominal Sections, with Specimens.

In reporting the following cases I will state that they are my first cases of abdominal surgery, and I wish to thank my uncle, Dr. Joseph

Price, for taking care of the patients for me in his private hospital, and for assisting me with the operations. To this I attribute the successful result in each case.

These cases had suffered for months constant pain in one or both ovarian regions and the back, locomotion being attended with great pain, and they were wholly or partly unable to attend to their duties.

In regard to the operations themselves, or to the pathological conditions found, I can offer nothing new. All the operations were done from above; all had adhesions of the omentum. The large and small bowels were freed, and, wherever thought necessary, free irrigation and glass drainage were used.

All of the cases have been kept under observation since the operation, and in none have there been any after-complications. The incisions are perfect, despite the fact that these patients had to make their living by hard work. The technique of each operation has been, as far as possible, that of Dr. Price.

CASE I.—Miss E. S., aged twenty-three, no children, no miscarriages, suffering three years. Admitted to hospital March 5, 1894. She had had an abdominal section five months before, but experienced no relief. Section on March 8, 1894. Removal of both appendages and freeing of all adhesions. Pathological condition: Salpingitis with adhesions of tubes and ovaries, omentum and colon adherent about the cicatrix.

The section was followed in a few hours by delirium tremens, and it was necessary to give very large doses of bromide. It took three nurses and myself to control her, and the delusions lasted about forty-eight hours, when her mind cleared and she made a nice recovery. Discharged April 24, 1894. She declared that she was not addicted to drink but was an excessive cigarette smoker. She has since been under observation and is perfectly well.

CASE II.—Mrs. M. R., colored, aged twenty-three, no children. Suffering two years. Admitted to hospital April 10, 1894. Operation April 11th. Section: Removal on both sides; glass drainage. Pathological condition: Right hydrosalpinx; left tubal pregnancy; general adhesions. In this case the pregnancy was not suspected before operation. She was discharged May 7, 1894.

CASE III.—Mrs. N. McC., aged twenty, one child, suffering nine months. Admitted to hospital July 31, 1894. Operation August 1st. Section: Removal on both sides. Pathological condition: Salpingitis with friable adhesions; cystoma of the right ovary. Discharged August 30, 1894.

CASE IV.—Mrs. A. L., aged twenty-two, one child, suffering two years. Admitted to hospital August 9, 1894. Operation August 11th. Section: Removal on both sides. Pathological condition: Double hydrosalpinx, with general adhesions. Discharged September 8, 1894.

CASE V.—Miss J. R., aged twenty, suffering three months. Admitted to hospital October 25, 1894. Operation October 27th. Section: Removal on both sides, irrigation, and glass drainage. Pathological condition: Acute pyosalpinx; general adhesions; an angry, acute peritonitis. She recovered nicely, and was discharged November 26th.

CASE VI.—Mrs. M. W., aged twenty-nine, one child. This patient gave a history of but two weeks' suffering. She was admitted October 29, 1894, and was operated on, October 31st. Section: Removal on both sides, free irrigation, and glass drainage. Pathological condition: Double pyosalpinx, with large ovarian abscess of left side; universal adhesions. Recovery. Discharged November 29, 1894.

CASE VII.—Miss L. P., colored, aged twenty-two, one child, suffering one year. Admitted to hospital November 2, 1894. Operation November 4th. Section: Removal on both sides, uterus freed and brought forward, irrigation, and glass drainage. Pathological condition: Double pyosalpinx; retroflexed and adherent uterus; general adhesions. Recovery. Discharged December 4th.

CASE VIII.—Miss A. D., colored, aged twenty-one, suffering five weeks. Admitted to hospital November 5, 1894. Operation November 6th. Section: Removal on both sides, irrigation, and glass drainage. Pathological condition: Double pyosalpinx; universal adhesions. Recovery. Discharged December 6th.

CASE IX.—Mrs. A. D., colored, aged twenty-nine, three miscarriages, suffering one week. Admitted to hospital December 8, 1894. Operation December 10th. Section: Removal on both sides, irrigation, and glass drainage. Pathological condition: Acute double pyosalpinx; universal adhesions. Recovery. Discharged January 8, 1895.

CASE X.—Miss A. B., aged twenty-nine, suffering one year. Admitted to hospital January 4, 1895. Operation January 6th. Section: Left ovariectomy, uterus released. Pathological condition: Left cystoma; uterus retroverted and fixed. Recovery. Discharged February 5, 1895.

DISCUSSION.

Dr. J. PRICE: This paper gives an opportunity for discussing recent deviations from the good things. A large number of these

cases, had they been operations by the infrapubic methods, would have been incomplete. Observations have been more carefully made recently because our attention has been called to the relative merits of the two procedures. It seems to me, from almost daily experience in dealing with disease, that the contra-indications for the lower operation begin at the anus and continue clear to the diaphragm. There is scarcely a step of the procedure from a surgical and pathological point of view that is not contra-indicative to successful work. Work begins about the dirtiest points of the body, where the risks of contamination are the greatest, and continues with the possibility of injuries and incisions in healthy structures, favoring sepsis from filth from above and below. I desire simply to call attention to a few points. Were it necessary to extirpate the uterus in all operations, I would make this a secondary operation. I would deal, by the super-pubic method, with pus-tubes, suppurating dermoids, suppurating extra-uterine pregnancies, conditions complicated by sepsis and filth, by removing them at once and would later remove the uterus in the midst of healthy surroundings; not incise the vaginal vault, the broad ligaments and open up healthy spaces and lymph spaces, with quantities of filth above. The lower or vaginal operation as at present practiced is an operation to be condemned from beginning to end and is practiced by men in a large measure of limited experience with the upper procedure. But four operators with a long experience are doing the operation by the lower method; for instance, Polk, some years ago at Newport, brushed even the pathology of pelvic disease to one side. After an experience of five or six years a man is not competent to judge of a better method. The history of Belgian, Dutch, and French work is short as compared with the experience of American and English operators. Scarcely a branch of intrapelvic or abdominal operation had its origin outside of this country. The so-called Tait operation was done by John L. Atley in 1843. The specimens, of diseased tubes and ovaries, were below the ilio-pectineal lines and adherent, and not the abdominal operation practiced later for cystoma—the work of William Baynham in 1790-'99, of McDowell, the originator of ovariectomy in Kentucky, in 1809. There is scarcely a branch we can not lay claim to, and lay claim to even the present refinements.

Report of Cases of Abdominal Section.

DR. JOSEPH PRICE gave the clinical history of a young woman twenty-three years old. She had an enormous cystoma, free of adhe-

sions, severe asthma, and a bad cough for many years. Operation was postponed with the hope that some improvement might be brought about by well-directed treatment. This failed. He then decided to remove the tumor, and the operation was a perfectly simple one, but the cough was alarming; it was distressing to see this young woman fairly coughing up her lungs and diaphragm for some three or four days. Her recovery was surprising. Dr. Price stated that he had other cases of a similar nature and has one or two in bed now with coughs—one old lady of seventy-eight, from whom he removed a huge tumor; he would have liked to have postponed the operation and done something for the relief of her lung. He placed over her abdominal incision broad adhesive strips and made an effort to relieve her cough. She is improving now, the tenth day. It is a puzzling question at times to decide upon an operation where there are lung complications and heart disease. He recalled the case of a woman a year ago coming under his care—a woman of considerable importance, with a bad heart. He referred to Dr. Pepper, who said “Go ahead” after consultation. She recovered without a bad symptom, notwithstanding the administration of an anæsthetic was dangerous.

Dr. Price read the following letter:

PHILADELPHIA, *June 1, 1895.*

DEAR DOCTOR: Your letter concerning Miss B. at hand. I certainly have had my hands full. The operation itself gave me no concern; it was the stubborn condition of the lungs and the extremely weak heart. Her pulse for nearly five days kept varying between 140 and 170. Temperature never above 101°, but the condition of the lungs frightful. You can imagine the distress of coughing fifty times every hour, and the strain on the abdomen. I used strychniæ sulphas and digitalis continually hypodermically, with ammoniæ carbonas, and free stimulation and counter-irritation. To-day, temperature normal; pulse 102, stronger, fuller; breathing free; râles clearing; appetite improving. Stitches half removed; this was done to not take the entire support away; balance will be taken out to-day all the way through. I think the nurse (who is a charm) and myself have worked bravely, and will undoubtedly report a perfect success of the operation.

Yours,

LOUIS E. TAUBEL.

Report of an Interesting Case.

Dr. M. PRICE: I would like to give this case because of its interest in the direction of abdominal surgery. A diagnosis had been

made before I reached the patient. It seemed to be a clear extra-uterine pregnancy. Two months had passed without periods. I could not get any previous history of trauma. If I had known before what was told me after the operation, I should have had a perfectly clear idea of what I had to deal with.

She had a swooning spell with all the symptoms of hæmorrhage on Saturday night; Sunday morning this occurred twice; absolutely pulseless; could not count at wrist; very little at neck. I found a large mass in Douglas' *cul-de-sac*; the patient's weight at least one hundred and forty to one hundred and fifty pounds. The only absent symptom was the want of prominence of the abdomen. Nothing really prominent either to show that there was mere fluid or a collection of blood in the abdomen at all.

I recommended at once section for her relief and told the husband we had a case of extra-uterine pregnancy to deal with. There was no question in my mind but that blood was in the abdomen. On opening her, I dropped my fingers into the abdomen and found a pregnant uterus and, going behind the uterus, I found a small tumor in Douglas' pouch, surrounded with a film of adhesions, with some inflammation or peritonitis. I ligated and put her to bed. I thought the specimen might be extra-uterine but found it to be a sloughing dermoid, a little dermoid which had undoubtedly been injured. Two weeks before, she had been thrown from a carriage and had a number of swooning spells.

She made a beautiful recovery, without any bad symptoms whatever, and the pregnancy is going on to term nicely. The case so closely simulated rupture of extra-uterine pregnancy, with all the accompanying symptoms in regard to weak pulse, tumor masked behind the uterus, that I had no doubt it was one.

Official Transactions.

FRANK W. TALLEY, *Secretary.*

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, October 15, 1895.

The *President*, BACHE MCE. EMMET, M. D., in the Chair.

Dr. HENRY C. COE presented the specimen,

*Tuberculosis of the Uterus and Annexa ; Vaginal Hysterectomy ;
Secondary Hæmorrhage ; Recovery,*

with the following notes : Mrs. G., an Italian, aged twenty, married six years ; two children, the youngest aged three. Health poor during past four years. Amenorrhœa for ten months, with constant pain in the right side and rapid decline of health. Leucorrhœa, but no bloody or foul discharge. Evening rise of temperature 100° to 101° . No evidence of pulmonary or abdominal trouble.

The patient was sent to me at the Cancer Hospital as a case of cancer of the uterus requiring hysterectomy. Examination showed a small retroflexed and firmly adherent uterus, with hard nodular masses in Douglas' pouch, the whole being fused together by exudate.

Vaginal hysterectomy was performed with clamps, considerable difficulty being experienced during the operation on account of the many dense old adhesions. On opening Douglas' pouch a small quantity of ascitic fluid escaped, and the palpating finger detected miliary nodules over the pelvic peritonæum and the surface of the uterus and tubes. The diagnosis of tuberculosis of the pelvic organs was made at the outset, which was confirmed afterward by examination of the specimen. Jacobs' clamps were used, five or six in all.

Convalescence absolutely afebrile. The clamps were removed at the end of forty hours (on the morning of the third day). On detaching the clamp—applied to the left uterine artery—profuse hæmorrhage from this vessel at once occurred, which nearly proved fatal to the already feeble patient before it could be arrested. As it was impossible to locate the bleeding point in order to reapply the clamp, I was obliged to use powdered subsulphate of iron in addition to a tampon. The patient reacted well, and the wound healed quickly ; but her convalescence was delayed by an exhaustive diarrhœa of tuberculous origin (tubercle bacilli being found in the stools), while she had hectic

and progressive emaciation, indicating the progress of the disease. She was discharged at the end of four or five weeks, but when seen a month later had not improved in health. There was still no evidence of pulmonary tuberculosis.

The interesting points in the case were : 1. The question of diagnosis. The progressive emaciation of the patient could only be explained by some malignant process, though the local condition suggested only inflammatory disease of the annexa. 2. The importance of early interference in cases of primary tuberculosis of the pelvic organs before the disease has become disseminated. 3. The occurrence of secondary hæmorrhage with the use of the clamps. Jacobs himself has stated that this should never occur, at least when the instruments used by him are employed. 4. The fact that this hæmorrhage is not necessarily fatal, even when a large vessel is concerned, provided prompt measures are adopted.

DISCUSSION.

The President, Dr. BACHE EMMET, queried whether the vessel from which hæmorrhage had taken place may not have given way because involved in a tubercular mass ; and in that event the use of ligature instead of clamp would have been followed by the same result on tension being made to release the ligature.

Dr. COE said he thought it not unlikely, as both broad ligaments were partly broken down.

The PRESIDENT added that he thought the case afforded under those circumstances no argument in favor of the ligature over the clamp. In his own experience the use of clamps had been attended by complete closure of the vessels and absence of accidents.

Dr. J. RIDDLE GOFFE thought the conclusion arrived at by the President—that ligatures would just as likely have been followed by hæmorrhage as forceps—was not well founded. The forceps had prevented hæmorrhage as long as they were in place, and probably would have prevented it altogether had they been left on longer. As stated by Dr. Coe himself, a ligature would have been allowed to remain longer, and there was no reason to think its final removal would have been followed by hæmorrhage ; but if there were any danger in that direction, it would constitute an argument in favor of catgut, which requires no removal. Dr. Goffe had never ventured to use catgut in hysterectomy until this fall, when he had had two successful and very satisfactory cases. Two ligatures were used on each side. The convalescence had been much more comfortable than with the use of

clamps or silk. The discharge had been less, and the after-treatment had given less trouble. Therefore, from his limited experience, he was encouraged to continue the use of catgut in vaginal hysterectomy.

Dr. COE said he would like to know the experience of the Fellows with regard to the amount of pain after the use of clamps as compared with that after the use of ligatures. The patients in whose case he had seen clamps used had usually suffered a great deal of pain, and it seemed but natural that seizing so large a mass of tissue in the broad ligament with this instrument should cause much shock to the nervous system and pain, which was relieved as soon as the clamps were removed.

Dr. A. P. DUDLEY said that in several cases this fall in which he had been compelled to make the combined operation he had employed clamps, and the patients had suffered much more pain than others had suffered on whom he had used ligatures, especially catgut. In four recent cases of hysterectomy for fibroids he had found it necessary to do the laparo-vaginal or combined operation in three, and had used clamps, except on the ovarian arteries, which he tied with silk. These patients suffered very little pain, except at the seat of the clamps, and when these were removed the pain ceased almost entirely. An objection to the use of clamps was that if they were left on longer than thirty-six or forty-eight hours the tissues became so crushed that they came away in an enormous slough. The cases, therefore, had been slow in healing because of the fact that a large slough came away after the work had been done. Cases in which catgut was used got well much quicker, and he seldom employed anything else.

The PRESIDENT could not understand why there should be more pain from the use of clamps than from gathering up the same amount of tissue and constricting it with a ligature. Pain had not been a symptom of moment in his cases, and he had not before heard it mentioned as a feature for consideration in the use of clamps in vaginal hysterectomy. So far as he was concerned, the most weighty reason for using ligatures in preference to clamps was the amount of slough produced by the latter. He thought that the pain complained of probably had its site at the fundus of the vagina and at the vulva, from the mass of clamps sometimes used.

Vaginismus : Its Causes and Treatment.

BY JOSEPHUS HENRY GUNNING, M. D.

(See page 613.)

DISCUSSION.

Dr. H. L. COLLYER thought vaginismus was not very uncommon among newly married women in high life. Of course among the lower classes, where sometimes morals were not so strict, it occurred less frequently.

The treatment could be considered under the operative and the non-operative. In non-operative treatment he agreed with the author that electricity caused subsidence of pain and was easily applied, but he thought it would fail in severe cases. It had been his experience that it was necessary to place some patients under the influence of an anæsthetic and divulse or stretch the hymen or vagina before relief was obtained. In some cases the vaginismus was due to an irritable hymen, and, as recommended by a member of this Society, it was necessary to remove it before the pain would cease. In many cases, however, simply applying cocaine and overstretching the hymen was sufficient to give relief. The same result could be obtained by electricity, only it would require many more sittings.

Dr. A. P. DUDLEY would like the author to make a little clearer his reasons for believing vaginismus to be due to disease of the spine. It did not manifest itself, Dr. Dudley said, until an effort was made at intercourse; but if it were due to disease of the spine, one would expect it to manifest itself even in virgins before acquaintance with the male. Any accidental touch of the external genitals might, with such an ætiology, be expected to give rise to an attack. Personally, he had always looked upon vaginismus as a local condition rather than one due to spinal disease.

Dr. E. L. H. MCGINNIS had arrived too late to hear the reading of the paper, but he wished to say with regard to the treatment of vaginismus by electricity that he thought this method certainly deserved consideration when it was remembered that the disease was largely a nervous condition. It was a well-known fact that the faradic current, from the long fine wire, and of not too great strength, was a powerful antispasmodic. He had had no experience with the interrupted galvanic current in these cases, having been satisfied with the faradic. He used a small electrode—about the size

of the uterine sound—in order to avoid stretching the vagina, carrying it up to, but not into, the uterus, and with both the positive and negative poles within the vagina he gradually increased the current from zero up to a point as high as the patient could bear without actual pain, continuing it about fifteen minutes. Examination afterward showed no muscular spasm, the muscular fibers being quite relaxed. The treatment was repeated three times a week for about six weeks, at the end of which period the husband had no further trouble. If the vaginismus were due to the sensitive remains of a hymen, he thought these should be excised.

Dr. THOMAS ADDIS EMMET, having been called upon, said he had heard but a small portion of the paper, and consequently was unable to discuss its merits. Nor had he had any experience with electricity in vaginismus which would enable him to speak of it as a remedy. He objected to using the term vaginismus as if it were the disease, for in his experience it was a symptom only. It seemed to him as reasonable to attribute the irritability of the eye, from a cinder in it, to disease of the posterior columns of the spinal cord, as to look to disease of the spine as the cause of vaginismus. There was every reason to believe that vaginismus was a local condition, and that if the extra-sensitive surface was removed the patient would be cured. In a few cases it was necessary to divide the muscle, but usually stretching was sufficient. But there was always impairment of the general health, and improvement of the general condition would beyond question help the local condition. He knew of no way to relieve a severe case but by surgical means.

Dr. GUNNING (closing the discussion) replied to Dr. Goffe's question that he would say the patient began to improve after six or eight applications of the electricity, and, when the treatment was continued for two to four months, would quite relieve the vaginismus. Regarding Dr. Collyer's statement—"that dilating and cutting were required in a number of cases"—he would say that in one case of his own the vagina had been dilated as thoroughly as it was possible to dilate it, for the patient had given birth to a child with the aid of forceps. In this case there had never been penetration of the male organ, and when childbirth occurred the hymen had to be cut, yet this patient had suffered as severely from vaginismus after delivery as before. Therefore dilatation was not sufficient to cure in all cases.

In answer to Dr. Emmet, he believed that the spinal cord or its membranes were, like death, nearer than we thought to the provoking cause in vaginismus, because the pains, etc., were not stable, but were

flying about. For example : When the pudic nerve had been cut, the painful sensation often came back, not always in the same place, but would show itself in the track of some other nerve, as in the hypogastric plexus. And the pain was not usually limited to any one spot, as in one of his cases there was intense pain in the point of the coccyx. Regarding the cutting operations, he had seen cases in which the treatment had been started with Sims' operation, and this having failed, every other form of operation had been performed, until the vulva was so scarred as to present the appearance of having been burned with nitric acid, and no relief had been given. Electricity had been recommended in the paper as a means of cure because this plan of treatment had been found useless ; and in many of the cases, if it was used, it would save the patient the operation.

Dr. DUDLEY had wondered why, if this was its origin, bathing and other vaginal and rectal douches—sources of local care—did not provoke an attack.

Dr. GUNNING replied that it did. And further, as to his reason for believing the disease was, or might be, one of the spine, he had seen a fatal case in which an expert had pronounced it to be such.

As to the faradic current used by Dr. McGinnis, Dr. Gunning had employed it also, and found it acted best in the class of cases referred to by Dr. Harrison, in which there was a spasm of the muscles. He recalled a case of a comely servant girl with whom the coachman one evening took too great a liberty, and at the end of the intercourse, in attempting to withdraw, there occurred a spasm of the vaginal and rectal muscles which held them fast until they were caught by their employer. A doctor was sent for, who relieved them as dogs are parted in the street. It was his intention to take up this form of vaginismus on a future occasion. As to the glass dilator mentioned by Dr. Harrison, he had had patients come to his office, lay the little glass instrument on his table with this statement, "that they had been using it for a long time and it had done but little good," and asked for some other more effective treatment.

Dr. Gunning said, in concluding, that he had spoken of three forms of vaginismus : One which was painless, another that was hyperæsthetic, and the one now under discussion—hyperæsthesia with congestion. That in the treatment of this condition he had recommended cutting in certain cases for two reasons : First, to remove local irritation ; second, to open up the way for a more perfect application of the electricity, though electricity often relieved without any cutting.

Nephritis following Operations.

DR. A. PALMER DUDLEY reported further on a case which he had first operated upon ten years ago, removing the tubes and ovaries for gonorrhœal salpingitis after encountering great difficulty in separating the parts from the adherent intestines. The patient had some figs smuggled to her; she disposed of the seeds by blowing them into the abdominal wound, and they were discharged about two weeks later through the lower angle. The wound had thus far refused to heal. She recovered, however, and drifted to Seattle and other points West, and finally had another laparotomy done in Chicago for a sinus behind the uterus. The operator failed to remove this, and later in the laparotomy wound hernia developed. The patient visited Dr. Dudley again recently, and he made an attempt to close the hernial opening and at the same time removed the uterus through the vagina, as it was causing her much pain. A few hyaline casts and a small amount of albumin had been found in the urine, and as ether had already been given twice, he thought it safer to use chloroform. After getting through the pelvic floor he opened the abdomen, took out the old hernia scar, found the whole surface of the uterus covered by adhesions to the bladder and omentum, broke these up, and in doing so tore a rent into the bladder, which he sewed up at once. After removing the uterus he closed the hernia and returned the patient to bed. She did well for thirty-six hours, but then word came that no urine was being secreted. They managed in twenty-four hours to get the kidneys to secrete eight or nine ounces, but, in spite of all their efforts, the patient became comatose at the end of the third day, and remained so until death, at the close of the fifth day after the operation. A post-mortem examination was refused, but they managed to get the kidneys through the vagina without mutilating the body, and examination of these showed waxy degeneration with an acute process ingrafted upon the old. All the pyramids were destroyed.

The case, Dr. Dudley said, illustrated the danger of frequent administration of ether, and of the care which should be exercised in undertaking so grave an operation on a person showing the slightest indications of kidney lesion. Although in this case chloroform had been given during nearly the entire operation, yet the last ten minutes ether had to be used, and this probably had lighted up the fatal nephritis.

Dr. GEORGE M. EDEBOHLS thought one such experience as Dr. Dudley had related was quite enough for any operator. He had had

an almost identical one following a vaginal hysterectomy. Urine was secreted to the total amount of twelve ounces only during the three days following operation. The patient became comatose and had convulsions on the third day, the coma and convulsions persisting until death on the fifth day. An autopsy could not be obtained, but from the fact that there had been some albumin and some casts in the urine before the operation, and from the events following it, they felt certain that the patient died of suppression of urine dependent upon kidney disease. They were aware of the danger of giving the anæsthetic (ether), but the indication for operation was a vital one. Such cases did arise occasionally—cases in which an operation was necessary to save life and in which examination of the urine demonstrated nephritis, and we had to take the risks of uræmia. Since the above experience he had been in the habit of applying dry cupping over the renal regions at the time of operation or immediately after, hoping in this way to forestall a too active congestion of the kidneys in cases in which these organs were diseased. He believed he had obtained benefit from this practice, and would recommend it to his colleagues.

Dr. T. A. EMMET said it had been fully thirty years since he had called the attention of the profession to the suppression of urine, with disease of the kidneys, following the use of ether. He afterward had several similar cases, until at length he came to realize the importance of ascertaining the condition of the kidneys before giving ether as an anæsthetic. During the ten years while he was at the head of the Woman's Hospital it was a standing rule to have a most careful examination of the urine made in all cases before operation. The condition of the kidneys was regarded as far more important than the condition of the heart.

But he had risen for the more special purpose of calling attention to a fact of importance, yet one which was often overlooked—namely, that when disease of the kidney was far advanced an ordinary examination of the urine would often fail to give any evidence of the disease. But by stimulating the kidneys before examining the urine, if disease existed it would then be found to contain casts where before they had been absent.

Dr. H. L. COLLYER would suggest that the acute nephritis might have been due to the manner in which the anæsthetic had been given. He had seen cases in which the urine had contained about one half its volume of albumin, yet in those cases ether could be given without increasing the nephritis. The safety lay in giving as little of the

anæsthetic as possible, so as not to carbonize the blood and injure the kidneys. In cases in which sufficient relaxation could not be obtained without crowding the anæsthetic, it would be wise to forego any operative procedure or resort to chloroform.

Dr. DUDLEY repeated that chloroform had been used, and that ether had only to be resorted to in the latter part of the operation. It was always his custom to give as little of an anæsthetic as possible, and to mix it with air. His patient was at no time quite still upon the table, which showed that the anæsthetic had not been crowded.

Dr. H. C. COE said that in cases in which renal disease had been recognized he had of late used oxygen and chloroform, as recommended by a French operator. Dr. Coe had tried this combination in several cases, and the result had been satisfactory.

Dr. EGBERT H. GRANDIN would call attention to the fact that the value of oxygen during anæsthesia in the class of cases under consideration had been overlooked. It had, however, been mentioned in an article in a recent number of the *Medical Record*. It had been eighteen months since he had begun the use of oxygen in combination with chloroform or ether in cases in which there was reason to fear either the heart or kidneys. Dr. Coe would be able to recall an obstetrical case of great moment in a woman with fatty heart and amyloid kidneys, and they were able under oxygen and chloroform anæsthesia to do a rather serious obstetric operation and yet put the patient to bed alive and keep her alive twelve or fourteen hours. It was well to remember that where we had occasion to fear ether we could always use chloroform, provided oxygen was at hand. Although he was educated in a section of the country where it was considered malpractice to use chloroform, his own favorite anæsthetic was chloroform in both obstetric and general operative work. If there was any reason to think there was a lesion of the kidney, he would not under any circumstances give ether unless it was in combination with chloroform, at least three parts of the latter, and also protected by oxygen. It seemed to Dr. Grandin that the time had come when we ought not to lose cases from anæsthesia. Nor should we hesitate to operate in cases of disease of the heart or kidneys if the operation was an urgent one. There were cases in which we had to relieve the patient and run the risk of cardiac syncope, or else let her die. But we should have some one to give the anæsthetic who knew how, and who would watch the patient, not the operator. With such assistance, and with oxygen present, he believed there was no

safer anæsthetic to-day than chloroform, in particular in septic cases, where of necessity the kidneys were involved.

Dr. R. A. MURRAY thought Dr. Emmet had struck the keynote of these cases. But there were two further facts to be borne in mind in operating upon the genital organs—namely, the influence of shock, and that we were operating upon organs directly connected with the nerve plexuses which controlled the circulation of the kidneys to a great extent, as had been shown by Trousseau. When there was doubt as to the condition of the kidneys, we should always give a large quantity of liquids and examine the amount, the specific gravity, and other characteristics of the urine. The specific gravity, however, was the best guide. When it fell to 1.010 it was more significant than one third albumin by bulk on boiling. It usually meant the contracted, cirrhotic kidney, or the third stage of the inflammatory kidney. Whenever one met with a case in which there had been long suppuration anywhere, he should be suspicious of the kidneys, for prolonged suppuration rendered these organs very vulnerable, usually produced waxy degeneration, and this often with but few casts except in the stage of congestion. Therefore, by following the suggestion of Dr. Emmet and stimulating the kidneys, we might cause a number of hyaline casts to appear in the urine when under ordinary conditions they were absent.

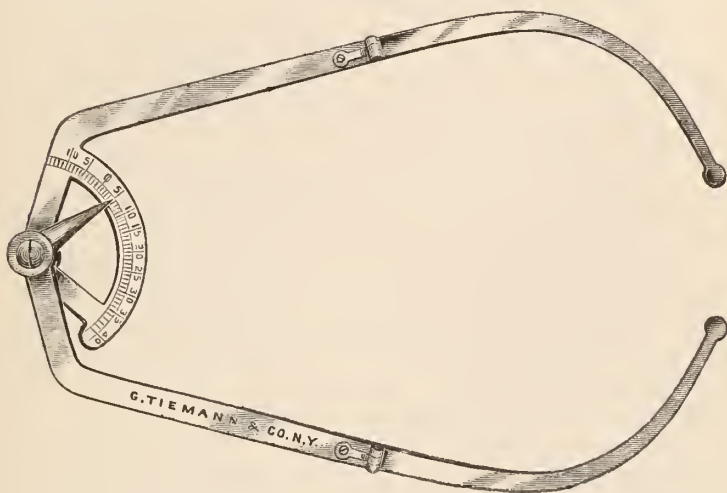
He agreed with Dr. Grandin with regard to the manner of giving an anæsthetic. In hospitals it was the custom to allow the recent junior to administer it, instead of an experienced anæsthetizer.

The PRESIDENT referred to the paper of Dr. J. H. Etheridge, on Renal Insufficiency, read last spring at the meeting of the American Gynæcological Society, which pointed out clearly the importance of estimating the quantity of urea in the urine in treating women, and its relation to the quantity of water drunk. He also recalled his remarks on that occasion to the effect that we should not rush our operative cases into the hospital and do important surgical work without acting upon the kidneys and skin, thereby seeking to establish the just balance of excretion. He said it was his custom to prepare his patients for a week against shock by giving them stimulants to a point of tolerance; he thus had the opportunity to meet the point suggested by Dr. Emmet—to stimulate the urinary secretion before operation and test it for disease under such circumstances.

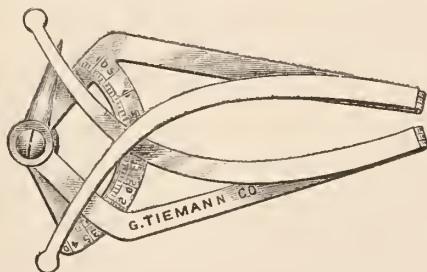
Dr. R. L. DICKINSON presented

A Modification of the Harris Pelvimeter to make it Portable.

The adjective "portable," as applied to those pelvimeters which the writer has seen, is a misnomer. To be conveniently carried, the instrument must go into an ordinary pocket or into the small hand-bag, and anything over seven or eight inches long and four inches wide is an annoyance, and can not be said to be easily carried.



Dr. Philander A. Harris, of Newark, N. J., in his careful and interesting comparison of the various forms of pelvimeter, has shown that they are almost all of them lacking in one or two important points,



such as ability to span sufficiently in fat women. His own instrument has given me such satisfaction that I have made two very simple modifications, which experience proves to be great additions. By in-

roducing a hinge half way up each arm, to admit of the points being bent backward toward the main joint, the folded instrument, as the cut shows, takes up but six inches by three and three quarters by one inch. It thus goes into any pocket or into a small every-day bag. A catch near the hinge serves to make the arms rigid when in use.

The addition of a negative scale, permitting a reading when the points are crossed to take internal measurement, is of some utility.

DISCUSSION.

Dr. COLLYER said Dr. Harris had admitted that his (Dr. Collyer's) pelvimeter was more compact than his own, and possessed other advantages. The speaker's objection to this improvement upon Dr. Harris' instrument was the same as the one made to the original—that it took up too much room. In addition, it was faulty, because the joints were likely to become more or less loose, and thus make the reading on the dial erroneous.

Dr. DICKINSON said that while he appreciated the value of Dr. Collyer's instrument, and admitted that it was the lightest one in the market, yet he objected to its length, for it was length which caused it to project from one's pocket and interfered with putting it into the instrument bag.

Dr. H. N. VINEBERG related the following case :

Large Serous Exudate Encapsulated, Due to Secondary Peritonitis resulting from Salpingo-oöphoritis Sinistra in a Patient on whom Cæliotomy had been done Eighteen Months before for Pyosalpinx Dextra.

The case has a twofold interest: first, in so far as it bears on the still open question of conservative surgery upon the annexæ; and secondly, on the rarity of such a large encapsulated accumulation of fluid resulting from a pelvic peritonitis.

Mrs. F., thirty-four years of age, married six years, had one child five years ago. Since then has never been pregnant. Eighteen months ago was operated upon in the New York Woman's Hospital by Dr. G. Kletzsch for right-sided pyosalpinx. The left tube and ovary were apparently normal and were not removed. She made a slow recovery, owing to a large mural abscess. She had enjoyed good health until four months prior to the operation, when she was suddenly seized with symptoms of pelvic inflammation.

For the past six months, until her present illness, she began to regain her former good health and had been gaining steadily in weight and strength. I saw her in consultation on September 30, 1895. Ten

days before this she began to suffer with pain in the left side of the abdomen, and consulted her physician, Dr. S. Rapp, who, on finding a resisting mass on the left side of the abdomen and noting some temperature (101°), put her to bed. The temperature continued to range from 99.5° to 101° , the pulse 90 to 110, but the pain had disappeared, unless when she made a movement in bed. At the time of my visit the patient had rather a haggard expression, though her general condition was fairly good. The abdomen was very large, but decidedly more protuberant on the left side, below the level of the umbilicus. The walls were very thick from a heavy deposit of fat, making an examination very difficult and unsatisfactory. On careful palpation, a resistance could be felt corresponding to the protuberance on the left side. There was slight tenderness over this region, but the note was tympanitic over it as well as over the remainder of the abdomen. On bimanual examination, the uterus was found pushed up against the pubis by an elastic tumor which bulged against the vaginal vault and rectum. In order to make a more satisfactory examination, the patient was anæsthetized. It was then found that the upper boundary of the tumor reached the umbilicus and was situated chiefly to the left of the median line. It was immovable. Under aseptic precautions an aspirating needle was passed into the tumor through the vaginal vault and about six ounces of clear serous fluid withdrawn. This under the microscope showed some blood cells, but nothing else. It contained a large percentage of albumin, but did not coagulate on standing. The pathologist, to whom the specimen was sent for examination, could not give a definite opinion as to whether it came from an ovarian cyst or from a peritoneal effusion.

The patient not improving, I performed a cœliotomy on her this afternoon. On cutting through the peritonæum I found a large cystic tumor reaching to the umbilicus, and everywhere adherent. On puncturing it a large quantity (two litres) of clear serous fluid escaped. The walls of the tumor were very thin and were continuous with the left broad ligament and fundus of the uterus. Inside the tumor there were a number of small cysts containing also a clear serous fluid of coils of intestine. The upper boundary of the cavity was formed by the intestines, there being no other wall. Closely adherent to the side of the uterus was an irregular mass the size of a hen's egg, constituting the left tube and ovary matted together. When the latter was removed and the several adhesions broken up the uterus was so bared of peritonæum that it was decided best to remove it, which I did. The patient was in good condition at the end

of the operation, though it was a very difficult and tedious one. This formed the third case within the past eighteen months in which I had to do a secondary laparotomy for subsequent disease of the remaining tube and ovary. In the three cases the original operation (one by Prof. Martin, of Berlin, one by myself, and the above) was done for one-sided pyosalpinx, the other tube and ovary being apparently healthy at the time of operation. This experience, though I recognize its limitation, would teach me that when there is a decided collection of pus in one tube the other tube and ovary had also better be removed at the same time, though to the eye they show no marked changes.

[*Note*.—The patient is making an uneventful recovery, October 26, 1895.]

DISCUSSION.

Dr. R. A. MURRAY said a discussion had taken place a few years ago before the Society—opened by Dr. Charles Carroll Lee and continued by Drs. Hanks, Cleveland, and others—on the question whether, where one ovary and tube were taken out for disease, the other healthy ovary and tube should also be removed because of likelihood of future disease. He believed the opinion seemed to prevail that the patient should be given the benefit of the doubt, and allowed a second operation should it ever become necessary.

Dr. COLLYER said he had a woman at present under treatment on whom a member of this Society had operated, removing one ovary presumably for cystic disease, leaving the other. The patient suffered subsequently for about a year and a half from intense pain, but she was relieved by non-operative treatment, and was now six months pregnant. He thought it was very desirable, if one ovary was not diseased, to leave it.

OFFICERS FOR THE YEAR 1895-'96.

President, HENRY C. COE, M. D.

First Vice-President, J. RIDDLE GOFFE, M. D.

Second Vice-President, A. PALMER DUDLEY, M. D.

Recording Secretary, ARTHUR M. JACOBUS, M. D.*

Assistant Recording Secretary, GEORGE W. JARMAN, M. D.*

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THE STATUS OF GYNÆCOLOGY ABROAD.

The Treatment of Complete Inversion of the Uterus; Vaginal Hysterectomy.

FRANCE.

VERCHÈRE of Paris, (*Nouv. arch. d'obstet. de et gyn.*, No. 9, 1895), in the case of an inverted uterus, when all known means have been used for its reduction and failed and the question of an amputation arises, is of the opinion that it is best to perform vaginal hysterectomy.

The ovaries and tubes are removed at the same time and no stump is left to cause complications. In performing the hysterectomy the author advises a median vertical incision into the posterior *cul-de-sac*. One finger is then introduced and passed to the front of the uterus. This acts as a guide, and upon it an anterior vertical incision is made. The uterus is now suspended by the lateral ligaments. Attempts at reduction should again be made, and these failing, the hysterectomy should be completed by clamping the broad ligaments with forceps.

Peritoneal Adhesions separated by Posterior and Anterior Colpotomy.

BOISLEUX of Paris, (*ibid.*), has, since 1891, practiced vaginal section by making a vertical incision into the posterior *cul-de-sac*. By this means he avoids injuring the utero-sacral ligaments. The utero-sacral ligaments, according to Schultze and Winckel, are the strongest supports of the uterus, and it is therefore of great advantage to preserve their integrity.

By posterior colpotomy adhesions may be broken up by introducing the finger into the peritoneal cavity, pus accumulations may be evacuated, malpositions fixed by adhesions may be corrected; diagnoses in doubtful cases may be established and ovariectomy may be performed through this incision.

Anterior colpotomy (Dührssen-Mackenrodt operation) consists in making a longitudinal incision in the median line of the anterior wall of the vagina, commencing about an inch from the urethra and extending to the vagino-cervical junction. By careful dissection the bladder wall is separated from the anterior wall of the uterus until the vesico-uterine pouch is reached. This pouch is then opened and the uterus anteverted, the fundus appearing in the incision. Two sutures are now passed from the anterior vaginal wall on the left

side of the incision through the fundus of the uterus, coming out through the right side of the anterior vaginal wall at a point opposite its entrance on the other side of the incision. These sutures are then tied, and the uterus is thus prevented from again falling backward.

This operation also permits of the examination of diseased appendages and the removal of small fibroids. It is not applicable to cases of retroversion with adhesions. In these cases the adhesions are broken up by posterior colpotomy, the uterus placed in a position of anteversion and the operation then performed as described.

Excessive Œdema of a Normal Ovary caused by Torsion of its Pedicle.

GEYL (*Cent. für Gyn.*, No. 36, 1895) reports the case of a patient eighteen years of age who was weak and chlorotic. Her menstrual periods were irregular and painful, with scanty flow. She complained of almost constant pains in the abdomen, which at times were very severe.

When seen in one of these attacks the abdomen was so sensitive that no examination could be made. Morphine and cold applications reduced the tenderness so that an examination was made two days later. Above the brim of the pelvis, on the left side, a round mass was felt. Its mobility was surprising. It could be moved all over the abdominal cavity. Its long pedicle could be distinctly felt. Upon opening the abdomen, the tumor was found to be an enlarged ovary attached by a long pedicle. The pedicle had three twists in it. The coalescence of the torsions had not been completed and could be partly overcome by turning the ovary. When the ovary was cut into, an amber-colored fluid exuded which quickly coagulated. The ovary was found to measure a hundred and five millimetres in length and eighty millimetres in width, and the greatest thickness was forty-five millimetres. Upon microscopical examination, it was found that the ovary contained no new growth but had degenerated by a chronic œdema, caused by torsion of the pedicle. The right ovary was somewhat enlarged and was very movable. The patient made a good recovery.

SWEDEN.

Spontaneous Disappearance of Peritoneal Adhesions.

M. SALIN (*ibid.*) communicates the case of a patient upon whom he did laparotomy at the end of October, 1895, and in whose abdominal cavity he left inadvertently a gauze napkin. The foreign body

was expelled about thirteen months later through a fistulous opening, which appeared as the result of an abscess following the operation.

Shortly after the napkin was expelled, fæces passed through the wound, which, however, soon healed up. The patient remained well for more than three years, when she developed some disease of the lungs to which she succumbed in March, 1894. At the post-mortem, a fibromyoma as large as a fist, which had been noticed at the ovariectomy, was found to have formed attachments to the anterior abdominal wall and to the mesentery. From the portion of gut, where the perforation had formerly existed, two very narrow adhesions, a centimetre in length, stretched out to an attachment at the lower angle of the wound; but the intestines themselves were everywhere free and the peritonæum smooth and of normal appearance. The author considers the separation of the adhesions, which undoubtedly must have been present at the time of the abdominal abscess, to have been due to the peristaltic action of the intestines.

The Significance of Retrodisplacements of the Uterus.

M. SALIN (*ibid.*) expresses the opinion that neither retroflexion nor retroversion of the uterus are of any importance and that they need no treatment, especially no operative treatment. The symptoms ascribed to these deviations from the normal direction have other causes, frequently entirely apart from the genitalia, and the results of treatment directed to the cure of these lesions should properly be ascribed to the effect of *suggestion*. In support of this opinion, the author gives the histories of twenty-five patients, all of whom had suffered from retrodisplacements of the uterus and had been under the author's observation from five to fourteen years. According to the author they are now free from their various symptoms, although the displacements of the uterus were not treated and remain unchanged.

[If Dr. Salin would acquaint himself with the gynæcological literature of America, the country where modern gynæcology had its birth as a scientific specialty and where it arrived at a high degree of development before European surgeons dreamed of giving the subject the attention which they now devote to it, he would find an explanation, in our opinion the only rational one, why retroflexion and retroversion are not important *in themselves*, so far as symptoms go, and why, moreover, without any appreciable change in the position of the uterus, the symptoms which usually accompany these conditions frequently entirely disappear after a lapse of years. It is not *the bending* in the uterus but the prolapse or the opposite of this which causes the symp-

toms. The uterus, in analogy with every other organ in the body, has an *individual plane* at which it is normally suspended in the pelvis. Depress or raise it from this plane, and there is immediate interference with the blood supply and consequent subjective symptoms. The truth of this fact is capable of very easy proof, if one will take the trouble to raise any movable uterus, by means of a finger against the cervix, or to depress it by means of a tenaculum, while the patient is lying on her back or is in the erect posture. If our author would first cure the congestion or inflammation of the uterine ligaments which generally accompanies these displacements and, in the case of retroflexion, always precedes it, he would find that, by the introduction of a properly fitting pessary, all symptoms referable to the conditions under discussion would at once disappear, as the uterus was thus raised and its normal circulation restored. It is also not difficult to understand that, in the course of years, the pelvic circulation will come gradually to adjust itself to an unchanging alteration in the position of the uterus and that with this readjustment the former symptoms will disappear. An analogue to this is frequently found in other organs, a familiar instance being that of a slow-growing uterine fibroid which, though it may cause subjective symptoms while within the uterus and while closely attached to it, will after a time, when its pedicle has lengthened and it has found a free space in the abdomen, frequently cease to cause any trouble to the patient.—ED.]

Ovariectomy in a Patient Eighty-four Years of Age. Recovery.

L. KRAFT (*ibid.*) reports that the patient had noticed her condition for seven years. She had been tapped several times and six months before the operation had been obliged to take to her bed on account of its size. The ovariectomy lasted twenty minutes and an unilocular cyst, containing 4,000 c. cm. of clear fluid, was removed. Her highest temperature (rectal) was 38.2° C. Eight days after the operation she was out of bed and at the time of writing, eleven months later, was well and took long walks.

The Technique of Sacral Operations.

BORELIUS (*Cent. f. Gyn.*, No. 34, 1895) has endeavored, by means of two modifications of the Rehn-Rydygier method, *i. e.*, "the anterior and posterior sacral section," to restore the bony pelvis as well as the ligaments, as far as possible, to their normal condition; also to avoid paralysis of the bladder and rectum. He attained the latter object by means of an oblique resection from the lower border of the third

sacral notch on the one side to the lower border of the fourth sacral notch on the other. In this way he preserved the function of the important fourth sacral nerve on one side. By this method he has operated upon three cases of cancer of the rectum and upon four cases of uterine carcinoma, which could not be removed *per vaginam*.

OBSTETRICS.

AMERICAN.

Anencephalous Monster.

J. M. PERKINS (*N. Y. Med. Record*, October 5, 1895) delivered Mrs. H., multipara, aged twenty-seven, March 5, 1891, after a four-hour labor (there being a large amount of liquor amnii), of an anencephalous monster, which he thus describes :

There is no sign of a neck, except a depressed ring all round the place the neck should have occupied. The body was rather short, about two thirds of the ordinary body of a well-formed fœtus, legs very long and sturdy, arms long and slender, male organs well developed, anus closed, mouth very large and opened like the mouth of a bullfrog. Eyes well developed but closed, nose flat and broad, ears back at point of scapulæ or nearly so ; no occipital or frontal bones; eyes ran back to origin of optic nerve, the course of which could be traced with the index finger, as there were no orbital bones.

On August 9th, prior to the birth of this monster, a picnic was had at which a brother of the mother of this monster drank too much and became engaged in an altercation with another intoxicated man, with the result that he was terribly whipped. Both eyes and the top of the head were bruised almost to a jelly and he was also shot. I was called to dress the wounds of both men, and when I finished my work the mother of this monster arrived from home, and seeing her brother in this terrible plight, fell on his neck and went into a fit of hysteria. I at that time did not know she was pregnant or I should not have allowed her to see him. My opinion is that the impression made on the mother at this time was the cause of the non-development of the fœtus, as both the mother and father had always been healthy.

On the Survival of Superstition in Obstetrics.

H. GIFFORD (*Wilkinson's Clinic*, September, 1895) says that few convictions are more deeply rooted in the minds of many medical

men, and of the majority of the laity, than that of the need for abstinence from all obstetrical work for a long time after attending a case of puerperal fever. This conviction arose from an ignorance of the nature of puerperal fever; now that its origin in the infection of the uterine cavity with some pathogenic germ is recognized, there is no reason why the ordinary rules of asepsis should not apply in the prophylaxis of puerperal fever. A surgeon does not hesitate to pass from an operation on infected tissues to one which should be aseptic, simply taking pains to thoroughly disinfect the hands and perhaps change an apron. The germs commonly causing puerperal fever are not especially tenacious of life nor are they particularly hard to remove from the hands. Henke (*Abst. in Centralblatt f. Chirurgie*, xv, 10) has demonstrated this by numerous experiments. In view of these facts, the popular opinion that a case of puerperal fever should debar a doctor from any obstetrical cases may be ranked as a superstition. *Thorough* disinfection, as thorough as for a laparotomy, should be the rule for every physician attending an obstetrical case or examining a pregnant woman. And such examinations should be as infrequent as possible, to avoid the carrying of germs from the vagina high enough into the cervical canal to cause mischief. It has been shown that it is a practical impossibility to rid the vagina of all germs, but Kroenig and Menge have recently shown that the secretions of the vagina, particularly during pregnancy, whether of acid or alkaline reaction, have the faculty of killing off most of the pathogenic germs when these have been artificially introduced, and they therefore decry the use of the vaginal douche; but, even admitting the doubtful utility of the douche, yet in cases where intra-uterine proceedings are necessary, ordinary surgical principles require a thorough disinfection of the vagina, and even more especially of the external genitals and also of the skin of the perinæum. With these precautions the idea of abstinence can be laid aside and the attention of obstetricians devoted to thorough disinfection of the physician and patient.

Evil Practices of the So-called Midwife.

GEORGINA GROTHAN (*ibid.*) says, in view of the advances made in antiseptic surgery and obstetrics, it is an indisputable fact that obstetrics is practiced to-day in a most careless manner, aseptic measures often falling far short of the mark. The resulting evils lie at the door of the careless physician and ignorant midwife. Midwives exist under many phases; some are graduates of recognized schools in that branch but far larger numbers have received no instruction

whatever. They have no knowledge of even a normal presentation and are grossly ignorant of all the dangers that surround the lying-in woman and her infant. Innumerable are the unfortunate cases that confirm this statement. Statistics by Dr. Rosenberg, given in the *N. Y. Med. Record*, vol. xliii, No. 8, and facts reported in the *Am. Surg. Bulletin*, August, 1893, show that in New York city there are about 50,000 births per annum. In 1891, 24,123 birth returns were made by midwives, this being nearly half of the whole birth returns (allowance should be made for unreported cases). The largest proportion of stillbirths and maternal fatalities were under the care of midwives; the maternal death-rate is reduced, however, by the fact that most of the serious cases fall late into the hands of physicians, who issue the death certificates. Berlin reports three per cent. stillbirths, while New York has eight per cent. Germany and France provide for the education and regulate the practice of midwives. They are taught to recognize abnormalities and compelled to call in physicians promptly. Physicians practicing in our cities and larger towns have come to associate the midwife with puerperal fever, and regard her as an evil of great magnitude. The State of Minnesota was one of the first to pay attention to this important matter. Its law compels all graduates in midwifery to present their diplomas to the State Medical Board, and procure a license for one year only, which can be revoked for improper conduct. If not graduates, they are subjected to an examination before license is given. In Illinois the State Board of Health issues licenses for practice in midwifery to graduates, and those passing examinations before the same board. In the State of Washington any one practicing midwifery without a license can be prosecuted. In Nebraska no provision is made for the admission of midwives to practice. The law states that any person not possessing qualification for the practice of medicine, surgery, or obstetrics who shall engage in such practice, shall be found guilty of misdemeanor, etc. The State is divided into districts with a secretary in each, who shall have power to prosecute all who engage in illegal practice in his own district. Often men of true science and ability are obliged to stand aside by popular opinion and view the malpractice of the ignorant midwife, who undertakes the care of two lives with all their perils. It is to the medical profession that we must look for a reformation—our silence means a perpetuation of the present conditions. Wherever this subject has received attention and strict legislation has been enforced, the results have been most gratifying to both the profession and the people at large.

Hæmorrhage during Labor.

GEORGE N. ACKER, before the Washington Obstetrical and Gynæcological Society, January 4, 1895 (*Am. Jour. of Obstetrics*, October, 1895), reported a case of hæmorrhage during labor occurring in a multipara, aged thirty-five years, at the end of her sixth pregnancy. Directly after luncheon and the climbing of two flights of stairs she was seized with severe pain in the abdomen and "felt something give way," which was followed by a gush of blood and water. The writer reached the patient twenty minutes later and found the bed and floor wet with blood and water. The cervix was dilated to the size of a silver quarter of a dollar, edges thick and soft, pains frequent and very severe, hæmorrhage moderate and recurring at intervals, patient very apprehensive. No evidence of placenta prævia could be found by examination under chloroform. Fœtal heart inaudible. Seven hours later she was delivered without assistance of a stillborn child, followed by large dark clots; the placenta followed immediately. Uterus contracted promptly. Subsequent history uneventful. The writer raises the question whether it was a case of accidental hæmorrhage from a partial detachment of a normally implanted placenta, or placenta prævia marginalis. *In discussion*, Dr. H. L. E. Johnson considered the case one of accidental hæmorrhage and thought that its occurrence during labor indicated disease of the uterus. He advised vaginal tamponing with careful asepsis. Dr. A. F. A. King thought that the expectant plan was of late taking precedence of the more radical method of rapid delivery. Dr. H. L. E. Johnson thought that delay was dangerous, owing to the possibility of concealed hæmorrhage.

Puerperal Eclampsia.

W. L. FREEMAN (*Denver Med. Times*, October, 1895) reports a case of eclampsia occurring in a multipara, aged thirty-eight years, at the eighth month of her ninth pregnancy. For three days previous to convulsions, swelling of face and feet were noticed, with headache, vertigo, amblyopia, and nausea. Patient unconscious when first seen and at the end of her fourth convulsion. A few labor pains had occurred but ceased. Artificial delivery was accomplished under chloroform by means of forceps after manual dilatation of the cervix. During dilatation and delivery a severe convulsion occurred, lasting fully three minutes. After delivery (including the placenta) no convulsions occurred. Patient remained comatose for several hours then became somnolent. Consciousness returned thirty-two hours after delivery sufficiently for

patient to talk, but her memory was impaired for four days, when it fully returned. Urine was found after delivery (first examination) to contain a large amount of albumin.

Medication.—Chloral hydrate and potassium bromide by rectum, and jalap and potassium bitartrate as a cathartic, until albumin disappeared from the urine. The infant was fed artificially until the third day, when it was put to the mother's breast and thrived.

Childbed Fever.

G. LAW (*Denver Med. Times*, October, 1895) reports a fatal case of puerperal fever of obscure origin from which he derived facial erysipelas (?). Patient was a primipara delivered by forceps applied at outlet under careful aseptic conditions; a slight laceration of the perinæum occurring, it was repaired at once. Placenta came naturally and in perfect condition. On the evening of the fourth day a slight temperature rise occurred, the bowels having been moved that day by Epsom salts. Odor of stools very offensive, but lochia free from odor or color. Muroid in appearance. The next day temperature was 103° F. The uterus was washed out with hydrogen dioxide but not curetted. On the seventh day, while opening a bottle of hydrogen dioxide for the purpose of douching the patient, the bottle exploded, a few fragments scratching the face of the writer, who paid no attention to the matter other than to wash his face. Forty-eight hours later he was seized violently with facial erysipelas and confined to his bed for three weeks, ten days of which he was unconscious. His patient died meanwhile. As Dr. Law had not seen a case of erysipelas for several months, he could not attribute his infection to any other source. He raises the question whether he was infected by the patient or she by him but fully believes in the former view.

The origin of her infection is obscure considering the cleanliness of the case and the absence of odor or discharge. A prominent feature of her case was obstinate constipation and frequent vomiting of green serous fluid. Her temperature ranged from 103° to 105° . The nurse was aseptic, so far as could be ascertained. He cites in instance a case in his own practice of facial erysipelas occurring in a parturient woman, which developed two days after delivery, in which the affection was wholly confined to the face, head and neck, the patient making a good recovery.

Eclampsia after Labor.

D. A. YORK (*Atlanta Med. and Surg. Journal*, October, 1895), reports severe eclampsia occurring in a primipara eight hours after a natural labor. Treatment at first, a quarter of a grain of morphine and one one hundred and fiftieth of a grain of atropine hypodermically, and thirty grains of chloral hydrate by rectum. After repeating the hypodermic injection, with no abatement of the convulsions, three minims of Norwood's tincture of veratrum viride were given hypodermically, and two minims more in thirty seconds. Convulsions ceased after the second dose of veratrum. Subsequently three minims of veratrum were given hypodermically and thirty grains each of chloral hydrate and potassium bromide by rectum. Patient's urine contained a trace of albumin but was abundant in quantity. Convalescence was uninterrupted.

FOREIGN.

Antisepsis in Obstetrics.

G. LEFOUR, of Bordeaux (*Nouv. arch. d'obst. et de gyn.*, No. 9, 1895), carefully outlines recent preventive antiseptic measures which he has introduced into the service of the lying-in hospital of Bordeaux, based upon suggestions found in Prof. Tarnier's book. All pregnant women, on admission, are taken at once to the *undressing room*, where they are stripped nude. Their washable garments are sent to the laundry, the remainder to the oven for sterilization. The women are immediately taken into the *bathroom for the newly admitted*, where they are thoroughly lathered with soap and immersed in a bath containing two hundred and fifty grammes of sodium carbonate; they are then dressed in sterilized garments and sent to the dormitory. Every few days, until confinement, they are given two baths alternately, one containing two hundred and fifty grammes of sodium carbonate, the other fifteen grammes of corrosive sublimate. In addition to this, they are sent every day to the "examining room," where they are repeatedly examined, their family and personal history taken, and they receive a careful vulvo-vaginal toilet of soap and hot solution of corrosive sublimate (4 to 1,000). Since the introduction of these measures there has been a great improvement in the sanitary condition of the hospital. Occasionally mammary lymphangitis occurs, although boric-acid dressings are applied to the breasts of every recently delivered woman who nurses her infant; but this complication occurs

usually in those women who were admitted while in labor, and therefore not subjected to repeated bathing. Purulent ophthalmia happens *only* to those infants whose mothers entered while in labor and were therefore not thoroughly disinfected. The greatest number of those subjected to the process of skin disinfections showed indications of mercurial poisoning of the skin, erythematous patches covered with vesicles containing turbid serum, found chiefly in regions covered with hair and rich in sudoriferous glands, above the breasts and articular folds, the effects being quite different from those produced by the internal use of the drug. Investigation showed that instead of tartaric acid being used in the sublimate solutions in the proportion of five grammes to each gramme of sublimate, as ordered, the druggist, for economical reasons, had substituted ammonium hydrochlorate. When it is remembered that the patients were first given an alkaline carbonate bath and then a mercurial bath containing ammonium hydrochlorate, the problem of the local poisoning is solved, for corrosive sublimate in the presence of ammonium hydrochlorate and sodium carbonate is converted into amido-chloride of mercury. This latter salt, deposited in the pores of the skin and gland ducts, under the influence of the body temperature, is decomposed, giving free mercury, the local action of which is well understood. On the contrary, where tartaric acid exists in excess in a corrosive-sublimate solution it neutralizes all alkaline carbonates with which it may come in contact, forming soluble salts. Besides, tartaric acid prevents alkaline carbonates from decomposing the sublimate, because it converts the carbonates into tartrates, which do not act on dilute solutions of mercuric salts, leaving the latter in their purity.

This was subsequently proved most conclusively when tartaric acid was used in the sublimate solutions as first intended, the alkaline baths being given in conjunction as before. No local poisoning has occurred since.

Neglected Shoulder Presentations.

KEHRER, of Heidelberg (*ibid.*), asserts that in neglected shoulder presentations the *vis a tergo* acting upon the head and breech of the fœtus produces a kypho-scoliosis. The thorax and abdomen of the fœtus form a cone, which, crowded through a dilated cervix uteri, is impacted in the true pelvis. The treatment, if the infant is alive, consists in forcing the flexed portion back toward the fundus uteri to straighten it, then to push it toward the side where the head lies, in order to grasp a leg and draw down the breech—viz., to perform po-

dalic version. If the fœtus is under seven months or dead, and the incurvation is located at the level of the last dorsal vertebræ, the thorax should be opened on one side by dividing seven or eight cartilages, and through this opening the contents of the chest and abdomen removed; then an attempt should be made to displace the apex of the angle of flexion toward the breech following the mechanism of spontaneous evolution. If the infant is dead, and the incurvation exists at the end of the spinal column, decapitation must be resorted to.

In *discussion*, SÈCHEYRON, of Toulouse, proposed for the extraction of the head after decapitation the use of tongue-shaped forceps with two arms—one cervico-mental and the other cervico-occipital. If the head has been caught by the chin, this forceps, with traction in the proper direction, will allow the *manipulation of Champètier de Ribes* to be performed.

CHAMBRELENT, of Bordeaux, in case a decapitated head is retained above a contracted brim, uses a hook held by flexible tongs, which allows of better traction in the desired direction.

GRYNFELTT, of Montpellier, has obtained equally good results by the use of a strong *musoux* hook ending in a basiotribe.

CROUZAT, of Toulouse, objects to the large number of forceps needed in Sècheyron's method.

TARNIER, of Paris, has obtained good results by fixation of the head, followed by the application of either the forceps or basiotribe.

Injections of Artificial Serum in Obstetrics.

AUDEBERT, of Bordeaux (*ibid.*), has employed injections of artificial serum—

1. After severe hæmorrhages during or after delivery or abortion.
2. In puerperal eclampsia.
3. In cases of auto-intoxication of variable form, origin and gravity, and of different symptoms, such as vomiting, slight indications of nephritis, etc., with satisfactory results.
4. In newborn infants, premature, feeble or with athrepsia. Results have been good in premature infants, but negative in athrepsia.

He injects from three hundred to one thousand cubic centimetres in adults and from ten to thirty cubic centimetres in infants, selecting the flanks or the recto-trochanteric groove, and makes use of a glass apparatus with atmospheric pressure. He has met with no accidents; only slight pain, a little cerebral excitement, and a rise of half a degree in temperature.

In *discussion*, CORDES, of Geneva, thought that these injections not only increased the total quantity of blood, but facilitated hæmotosis.

TARNIER approved of the use of artificial serum after severe hæmorrhages but was doubtful as to its benefit in eclampsia.

LEFOUR thought the weight of the liquid should vary according to the intravascular tension of the subject. He uses Mariotte's flask, by means of which a uniform pressure is obtained throughout the flow of the liquid.

Eclampsia and Forced Delivery.

ROBERT, of Pau (*ibid.*), reports a case of eclampsia in a primipara aged thirty-six with convulsions increasing in frequency and severity. When small multiple incisions of five millimetres in length made in the cervix allowed the introduction of one finger, then of two and ultimately of the whole hand, which was able after two hours and a half to grasp a foot and terminate the labor with rapidity, the convulsions ceased. Subsequent history uneventful. In three identical cases the writer obtained the same results by similar manipulation.

In *discussion*, Audebert congratulated Robert on his success in those difficult cases but thought that Champètier's balloon introduced and partially inflated, withdrawn and re-introduced with greater inflation would dilate the cervix more rapidly than the hand. Tarnier considered Champètier's balloon difficult to introduce and impossible in a primipara before labor has begun. The hand, as used by Robert, he thought an excellent procedure.

The Ilio-femoral Pelvis ; Diagnosis of Congenital Dislocation of the Hip.

BUDIN, of Paris (*ibid.*), referring to common dislocations, makes use of data supplied by Paul Richet. The normal distance between the sole of the foot and the articular boundary line of the knee is equal to that separating the latter line from the superior trochanteric region. A line passing the two spines of the os pubis also crosses the epitrochanteric line. In dislocation of the hip the epitrochanteric line lies above the two spines of the os pubis and may reach the iliac spine ; it also lies higher on the sacrum than normally—viz., the junction of sacrum and coccyx.

In *discussion*, RAPIN (of Lausanne) calls attention to a symptom of congenital dislocation often neglected—viz., the approximation of the posterior-inferior iliac spine to the crest of the sacrum on the affected side.

Budin had studied the measurements spoken of by Rapin, and found some cases where the posterior-inferior iliac spine approached the median line, but this occurred chiefly in Naegele's pelvis.

Streptococcus Infection in the Eighth Month of Pregnancy.

BAR and RENON (*ibid.*) report the case of a woman eight months pregnant who entered the St. Louis Hospital with a high fever and some uterine contractions. Cultures made from her cervical secretion collected before the membranes ruptured contained pure streptococci. Owing to the serious state of the patient, labor was hastened. The maternal placental blood was cultivated and colonies of pure streptococci developed. Cultures made from the infant's (stillborn) liver and lungs, also foetal blood taken from the level of the placenta, liver and heart, all remained sterile. The patient died fifty-three hours after delivery; pus was found in the parametrium. The streptococci appear to have provoked the labor. Although the foetus died, streptococci did not pass the placenta and invade the foetal organism.

Version by the Feet and Extraction in a Narrow Pelvis; also Extraction of the After-coming Head.

E. TSCHERNEFFSKY (*ibid.*) gives the statistics of twenty-four cases of intra-uterine version by the feet performed by him since 1890. The result was eleven living children, to whom should be added two more who were born alive but could not be resuscitated, ten stillbirths and two not born alive. The average weight of the children born alive amounted to 3,851 (grammes?), the maximum weight 4,700. The after-coming head was perforated in three cases. Six of the patients were primiparæ and the maternal mortality was one. The author believes that the head coming after adapts itself better to the conditions of a contracted pelvis than when that part precedes the breech. The delivery of the after-coming head is often accomplished with difficulty, the mechanism of the descent of the head in this position not yet having been determined with sufficient certainty.

PÆDIATRICS.

AMERICAN.

Abscess of the Liver in Children, with Report of a Case of Amœbic Abscess.

R. M. SLAUGHTER (*Virginia Med. Monthly*, October, 1895) reports a case of this rare disease in children, together with a study of thirty-six cases analyzed by Musser, they being the only ones he was able to find in German, French and English literature. Of the thirty-six cases, nine occurred in Great Britain, twelve in Germany, eight in the United States, four in France, two in India and one each in Australia and Africa. The youngest was one year, the oldest fifteen years. Average, nine years.

Causation.—Injury was the assigned cause in nine cases, although it was not proved that the abscess was attributable to injury. Round-worms which had migrated from the intestine into the bile ducts and then set up inflammation were the next most frequent cause. In five cases ascarides were found after death in the abscess cavity or the liver tissue. In the remaining cases the abscess was secondary to a pylephlebitis in four cases, to an umbilical phlebitis in one, to pyæmia in two, dysentery in three, to pelvic peritonitis, perityphlitis, malarial fever and tuberculosis in one each.

No record can be found of a case of abscess of the liver proved to have been of amœbic origin.

Amœbic abscess of the liver is one in which the destruction of the liver tissue and the formation of the abscess is due to the *Amœba coli*, a low form of animal parasite. This parasite finds its way into the human body by way, most probably, of drinking water, and makes its habitat in the colon, where it produces a dysentery known as amœbic, in contradistinction to the ordinary catarrhal dysentery. From the colon the amœbæa migrate into the liver or lung, or both and set up abscesses.

CASE.—B. K., aged seven years, born in Virginia, colored. During the latter part of September, 1894, had an attack of dysentery which apparently yielded to treatment. Later had diarrhœa and loss of appetite. He was given calomel, followed by castor oil and a tonic and apparently recovered entirely. He was next seen January 6, 1895, when he was found to be covered with a cutaneous eruption present-

ing the appearance of varicella. This eruption might have been a coincidence, but the author was inclined to think that it was a primary manifestation of the approaching trouble. Was next seen January 18th. Complained of ill-defined abdominal pains, but no marked tenderness. The pains increased rapidly and were soon referred to the hepatic region; temperature always high— 103° to 104° . Bowels moved three or four times in twenty-four hours, but otherwise normal. Urine increased in quantity and in urates, otherwise normal. Complained of great pain except when under opiates. Rapid loss of flesh and strength. The right lobe of the liver increased in size and by the 28th caused perceptible bulging of the ribs, and the lower border could be easily palpated beneath the ribs. On the 29th there was fluctuation, and with an aspirator six ounces of thick, viscid, chocolate-colored matter were drawn off. Microscopical examination showed pus cells and *Amœbæ coli*. On February 2d an incision was made and a quart or more of a greenish, gray-colored matter discharged. The cavity was washed out and drainage instituted. The temperature fell two or three degrees and he rested more comfortably but grew steadily weaker and died on February 7th.

The autopsy showed the liver enormously enlarged, the right lobe the seat of a large abscess. No healthy liver tissue. Left lobe studded throughout with small areas of necrotic tissue. Microscopic examination showed amœbæ in abundance, as well as characteristic degenerative changes described by Councilman and Lafleur.

This case illustrates the fact that abscess of the liver may occur as a complication of *amœbic* dysentery of any degree of severity and at any time in its course. The amœbæ are to be found in the mucus of the stools at all periods of the disease and grades of severity. The general symptomatology of hepatic abscess are those of abscess formation in other parts of the body—pain, fever, chills, sweats, etc. Distinct tumor may or may not be made out. Diarrhœa is a frequent symptom. Jaundice rare. For treatment the author advises incision and drainage in cases of *single* abscess; but if *multiple*, an operation is useless, although aspiration or puncture may prolong life and relieve suffering.

Local Treatment of the Skin by Ichthyol Ointment in some of the Eruptive Fevers of Childhood.

A. SIEBERT (*Archives of Pædiatrics*) speaks very highly of the use of a five-per-cent. ointment of ichthyol in some of the eruptive fevers of children.

In ten cases of erythema nodosum a liberal inunction of a five-per-cent. ichthyol ointment into and around the infiltrations of the skin, twice daily, practically terminated them in twenty-four hours, the fever and pain subsiding in a few hours after the first application. In five cases of peliosis rheumatica the result was equally as happy, temperature and intensity of the redness of the affected parts rapidly declining.

In scarlatina these inunctions have been followed by most marked effect upon the local condition of the skin, rapid decline of fever and general condition of the child. The swollen, red skin shrinks and turns pale brown, temperature declines three to four degrees within two hours, and the nervous, itching, peevish child becomes quiet and usually goes to sleep. While he does not believe that the treatment has any specific effect upon the character of the general infection in scarlatina so as to change a malignant case into a mild one, he is convinced that the ointment applied in these cases destroys most of the bacteria causing scarlatinous dermatitis and thereby materially aids the patient in overcoming the general infection.

Unna has proved that ichthyol ointment contracts the capillaries of the skin, especially when they are abnormally dilated. And Abel has found that certain bacteria (pyogenic streptococci and the streptococcus of erysipelas) are very susceptible to even weak solutions of ichthyol, while others (staphylococcus aureus and albus, anthrax and others) resist it to a marked degree.

In scarlatinous dermatitis we have abnormally dilated capillaries of the skin, and so far but streptococci have been found; and as ichthyol, according to these authorities, meets both indications, it would seem worthy of extended trial.

Tendon Grafting: A New Operation for Deformities following Infantile Paralysis, with Report of a Successful Case.

SAMUEL E. MILLIKEN, at the meeting of the New York State Medical Association (*Med. Rec.*, October 26, 1895), presented a boy eleven years of age upon whom twenty months before he had successfully grafted part of the extensor tendon of the great toe into the tendon of the tibialis anticus muscle; the latter having been paralyzed since the child was eighteen months old.

The case, which was presented, showed the advantages of taking only part of the tendon of a healthy muscle, which is made to carry on the function of its paralyzed associate without in any way interfering with its own work.

The brace which had been worn since two years of age was left off, the patient walked without a limp, the talipes valgus was entirely corrected and the boy had become quite an expert on roller skates.

Dr. Milliken predicts a great field for tendon grafting in these otherwise hopeless cases of infantile paralysis, who heretofore have been doomed to the wearing of braces all their lives.

FOREIGN.

The Treatment of Perityphlitis in Infancy.

ARTHUR SCHLOSSMANN of Dresden, (*Münch. med. Woch.*, No. 41, 1895), while admitting that the general outline of the treatment of perityphlitis in infancy differs little from that of the adult, asserts that the general course of the disease and the effect of therapeutic measures is worthy of consideration. At the present time much interest has been directed to this disease because of the active surgical procedures that have been advised for its relief. From time to time cases come under observation that have done badly through medical treatment. Recently Schafer reported a case from Saltmann's clinic in which he justly thinks that perforation of the processus vermiformis, as well as the secondary breaking through of the abscess into the abdominal cavity, was caused by the purgatives and enemata given prior to his admission to the hospital. The author has observed a case in a boy of five years and a half to whom had been given ten doses of calomel of one tenth of a gramme to relieve the existing constipation.

An early diagnosis is essential. If the symptoms are well pronounced this is easily done, but frequently the premonitory signs are difficult of interpretation. Anorexia, vague pains in the abdomen, vomiting, mild diarrhoea or constipation, with slight rise of temperature, may be observed in cases with mild invasion. According to Matterstock, in about thirty per cent. of cases the invasion may be called subacute. In these cases careful abdominal palpation will generally give some information. In all cases presenting indefinite gastric symptoms our attention should be directed to the iliac fossa. If palpation in that region causes increase of pain or a suspicious resistance be felt, then great caution should be taken in the treatment of the case. In those infants who offer resistance to examination by crying and rendering tense the layers of the abdominal wall the difficulties of diagnosis are considerably augmented.

If perityphlitis be present or is suspected, the intestines should

be kept as quiet as possible in the hope of arresting the inflammatory process and of aiding the formation of firm adhesions, thus forming a local abscess instead of causing a general peritonitis.

In childhood necrosis and gangrene of the vermiform appendix occur more frequently and with more rapidity than in adults, as is pointed out by Matterstock and Parker. For fear of causing paralysis of the intestine or inflammation in the attempts to remove the fæcal masses, the use of purgatives and enemata should be prohibited. Opium is indicated. Opinions differ as to the dose that is necessary to quiet the intestines. Because of the well-known susceptibility of children to opium it should be given with great caution, and yet it is necessary in this disease to give doses approximating the toxic limit. It is singular that in inflamed and irritated conditions of the peritonæum opium is well tolerated. The author has been unable to find any record of a case of perityphlitis where alarming symptoms have been produced by opium. It should be given until the pain is removed and the child is upon the verge of narcosis. This is the more important because the child is apt to be very restless and will do itself harm. The fear that harm might come from the obstinate constipation induced by opium is unjustified, because stools often occur suddenly notwithstanding the administration of opium, and if this does not occur constipation lasting several days is not dangerous. If vomiting occurs, the treatment is much more difficult. The medicine may be given with ice or with the addition of a drop of the oil of peppermint. If these means fail, the subcutaneous injection of morphine has been recommended, but with this method the danger is greater and it is not so efficacious as the administration of opium.

Absolute rest must be enforced and cold applications applied. In order to further prevent peristalsis all food has been withheld, but experience teaches us that children waste very rapidly, and as it is necessary to preserve their strength, especially in the event of an operation, this does not commend itself to us. Nourishment should be given in a concentrated fluid form and in small repeated doses. In these cases alcoholic stimulants should be withheld because of their tendency to increase peristalsis.

At the last Congress for Internal Medicine all agreed that the *ultima ratio* was a surgical procedure, but as to when the knife should be employed there was difference of opinion. In view of the rapid course run by perityphlitis in infancy, the author is inclined to the early operation.

Five Cases of Diphtheria cured by Injections of Serum.

MAZARRIDO (*Medico-surgical Chronicle* of Havana, October, 1895) reports the case of a child of three years who was suddenly attacked with high fever (40° C.). A slight epistaxis occurred on the second day. The nasal mucous membrane was found to be inflamed. A sanguineous discharge came from the left nostril on the third day. On the day following this fossa was obstructed by false membrane, a prolongation appearing on the posterior wall of the pharynx. After the first day the temperature continued in the neighborhood of 38° C. An injection of 10 c. c. of serum was given. Twenty-four hours later the fever had disappeared and the inflammation had nearly subsided. A second injection of 10 c. c. caused the disease to disappear entirely in twenty-four hours.

The first injection caused a painful nodule which lasted for several days. Urticaria appeared on the eighth day and lasted for three days.

Montiniani Canizans' case complained of violent pains in the throat. Upon examination, both tonsils and the uvula were found to be entirely covered with white and gray patches. An emetic was prescribed and the patches treated locally. They returned in the afternoon and the urine showed albumin. Twenty-four hours later the temperature was 38° C., pulse 120. The false membrane was again treated but in a few hours returned again. An injection of 10 c. c. of serum was then given in the ilio-lumbar region. On the evening of the same day the voice was clearer, the patches were darker and the general condition better. Twenty four hours later another injection of 10 c. c. was given. By the third night all the patches had disappeared, and the patient was discharged cured a few days later.

De Loma's patient was nine years old, was first attacked with small patches of whitish color and high temperature. The throat was treated with salol and camphor, and a gargle of a weak solution of salicylic acid was given. In eight days the membranes disappeared. Four days later a relapse occurred. This time the membrane was of an opaline hue with no well-defined limits situated upon the posterior wall of the pharynx and upon the left pillar. The same treatment was again ordered but with no benefit. The day following 15 c. c. of serum were injected. Within twenty-four hours all of the membrane had disappeared and never returned.

Dumas' patient was eight years old. Attacked with fever and difficulty in swallowing. The following day a small patch was discovered

on the left tonsil. This was treated locally with lemon juice and salicylic acid but returned and spread to the pharynx and nares. Dyspnoea was pronounced and continued to grow worse. The temperature rose to 40° C. in spite of the treatment; 15 c. c. of serum were then injected and repeated for the next two days, making 45 c. c. in all. At the end of this time all membrane had disappeared and all dangerous symptoms. The patient made a rapid convalescence. From the first injection all other treatment was suspended.

Sanches Inoros' case was ten years of age. Disease began with severe pain in the throat and temperature of 40° C. In twenty-four hours false membrane appeared and extended slowly in spite of local and general treatment. By the third day the membrane had covered the tonsils, the anterior pillars of the fauces, the uvula and part of the pharynx; 15 c. c. of serum were then injected and other treatment suspended. In six hours a distinct line of demarcation was seen and within forty-eight hours all membrane had disappeared. The temperature rapidly decreased and the albumin in the urine disappeared. The patient entered upon an uninterrupted convalescence.

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