

THE DULL WIRE CURETTE IN GYNECOLOGICAL PRACTICE.

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SINCE the discovery by Récamier in 1850¹ of the presence of "intrauterine fungosities" as a cause of metrorrhagia, and his recommendation of the curette with subacute edges known by his name for their removal, the majority of gynecological text-books have mentioned these growths and their operative treatment. Only in Meigs (1851), Churchill (1857), and Hewit (1872) do I find no reference to the curette, the latter merely speaking of "fungus-like vegetations on the surface" as a cause of profuse menstruation. When I say that all these authors describe Récamier's subacute curette, I would not, however, have it understood that they all recommend or approve of it. Indeed, some authors were so loud in their condemnation, and others so faint in their praise, as almost to abolish the use of the instrument. And no wonder, for Récamier himself reported three cases of perforation of the uterus and death resulting from its use, a misfortune which caused Aran² to denounce the curette as a barbarous instrument, which merely shaved off portions of the normal mucous membrane, and was productive of benefit only in those exceptional cases where real vegetations existed, a verdict entirely concurred in by West,³ and without the extenuating exception by Scanzoni,⁴ who curtly dismisses the curette "as an instrument based on entirely erroneous theories, and therefore devoid of all practical utility." On the other hand, men like Trousseau, Nelaton, Maisonneuve, Nonat, and others, princi-

¹ Mémoire sur les productions fibreuses et les fongosités intrautérines
Univ. méd., Juin 1850.

² *Maladies de l'utérus.*

³ *Dis. of Women*, 3d edition.

⁴ *Krankh. der weibl. Sexualorgane*, 1867.

pally of the French school, employed and recommended the instrument. The most prominent of recent French gynecological authors, Courty,¹ however, says, that the danger attending its use and the possibility of accomplishing the same result by less perilous remedies (leaving the solid stick of nitrate of silver in the uterine cavity?) have induced him almost wholly to discard it. Notwithstanding this verdict, Nœggerath, as recently as 1871, at a meeting of the New York Obstetrical Society,² stated that he had used Récamier's curette about twenty times, and had had no unpleasant results therefrom, although he admits expecting such at any time. He had even performed the operation at his office. At the same meeting, however, Chamberlain reported a case of hysterical tetanus resulting therefrom, in which recovery occurred. Peaslee mentioned a death from collapse, and Nœggerath himself referred to a case of Dr Thomas, in which the patient almost died from the same symptom following the use of the curette. Budd also expressed his disapprobation of the instrument, having seen cellulitis follow its use.

While Barnes, Schroeder, and other recent authors mention Récamier's curette, they do not specially recommend it, but rather warn against its free use. Only Hegar and Kaltenbach, in their excellent work on Operative Gynecology,³ speak of "the curette of Récamier" as an instrument which (with the sharp spoons of Simon) they have had frequent occasion to use in disease of the endometrium. But the figure given by them on page 264 as Récamier's curette clearly represents, not Récamier's instrument, but that of Marion Sims, to which latter, therefore, the statement of these two authors must be held to apply.

Sims's curette has almost completely supplanted its predecessor, but its positively sharp cutting edges and inflexible steel shank render it an instrument scarcely less dangerous for use in the cavity of the uterus proper than the latter, the injury inflicted by which must have been caused more by its point than its subacute edges. Dr Fordyce Barker tells me that he knows of three cases of peritonitis following the use of Sims's and one that of Récamier's curette. And Thomas, in the last edition of his book published in 1874, seems to restrict the sharp steel curette of Sims to the removal of Nabothian follicles from the cervical canal only; Récamier's instrument he does not even mention. Loombe Atthill, in his practical little book on Diseases of Women,⁴ speaks of the curette (Récamier's) as "an unscientific instrument ill adapted to attain the object in view," which has to be employed entirely at random, and therefore must often prove inefficient, as proved by Récamier himself deeming it necessary to cauterize the uterine cavity with nitrate of silver after the withdrawal of the curette.

¹ *Traité des mal. de l'utérus*, 1866.

² *Trans. N. Y. Obst. Soc.*, 2d May 1871; *Am. Jour. Obst.*, vol. iv. 3.

³ *Die Operative Gynäkologie*. Erlangen, 1874.

⁴ *Chir. Lect. on Dis. of Women*. Dublin, 1873.

Colucci,¹ in a recent article, wholly condemns the use of the curette (doubtless Récamier's also, for he mentions no name) in endometritis, apparently, however, entirely on theoretical grounds.

Another sharp steel curette with strong inflexible shank, in different sizes, was devised by Simon,² but its use was by him restricted to the scraping or gouging of large cancerous growths of the cervix,³ vagina, rectum, and other cavities, of ulcerating lymphatic glands, carious bone, etc.; but, to my knowledge, he never advised its application to the endometrium itself.

While the majority of authors thus appear to condemn Récamier's curette as a dangerous instrument by reason of its powerful and inflexible build, it must be equally evident to all familiar with Sims's likewise inflexible sharp steel curette, that its employment is by no means entirely devoid of peril, and that it is, to say the least, in the larger proportion of cases an unnecessarily severe measure, and one likely to produce more injury and be followed by greater reaction than desirable. The immunity from danger, therefore, apparently enjoyed by Hegar and Kalténbach is rather exceptional, and speaks well for the caution observed during their manipulations. It certainly is a safe rule in uterine surgery to restrict the use of the sharp cutting curettes to neoplasms of the cervix and its cavity, and to employ them in the cavity of the body of the uterus only when the size, dense character, or firm attachment of the growth calls for a powerful instrument, and its dangerous nature justifies the running of some risk in its removal. Under such conditions, the operator may be held guiltless, even though he be so unlucky as to perforate the uterine wall and lose his patient, as happened to Spiegelberg⁴ while curetting an encephaloid cancer of the corpus uteri.

Influenced by these considerations, and recognising the need of a safer and equally efficient instrument in the majority of the cases where a curette is required, and furthermore, as he himself told me, warned by the narrow escape above referred to (on which occasion Sims's curette was used), Dr T. G. Thomas devised the dull curette of flexible copper wire described in his work on Diseases of Women, 4th edition, 1874, pp. 273 and 609. Although Récamier's, Sims's, and Simon's curettes are, as stated, mentioned in all the modern text-books on gynecology, only in the inventor's own book, and in a short footnote to an abstract of an article by Olshausen of Halle on "Chronic Hyperplastic Endometritis," prepared by Dr M. D. Mann for the *American Journal of Obstetrics*, November 1875, p. 562, is Thomas's curette described, and I do

¹ "Della Endometrite," *Il Morgagne* Jan.-March 1877.

² "The Scraping out of soft Sarcomatous and Carcinomatous Tumours from Cavities of the Body," *Beitr. z. Geb. u. Gyn.*, Berlin, I., 1872.

³ Mundé, "Treatment of Cancer of the Uterus with the Sharp-edged Scoop, or Curette," *Am. Jour. Obst.*, v., August 1872.

⁴ *Arch. f. Gynäk.*, vi. 1, 1874.

not think that I am far wrong in assuming that, outside of the United States, that instrument is scarcely known or used. Even here in America its use is chiefly confined to New York and Brooklyn, in which cities our instrument-makers inform me that they sell many Thomas's currettes, while but very few are disposed of in other sections of this country. It would seem that the profession at large have not as yet realized the frequency with which this simple little instrument is required, and the benefits resulting from its use,—benefits so marked and attended with so little risk, as to render the popularization of the instrument, to the exclusion of the ineffectual internal remedies and harsher local measures, highly desirable.

With this object in view, I had for some time contemplated again calling the attention of the profession to it, when a report by Gallard to the Scientific Congress at Hâvre in August 1877¹ met my eye, and confirmed me in my purpose. On that occasion Gallard records his observations on the pathological anatomy, growth, and treatment of vegetations of the uterine mucous membrane, and mentions the case of a woman, sixty-five years of age, with menorrhagia of two years' standing, who, after ineffectual treatment by cold injections, intrauterine injections of perchloride of iron, and Canquoin's paste, was finally cured by curetting the uterine cavity with Récamier's instrument and the subsequent application of Canquoin's paste (chloride of zinc). The curette removed a saucerful(!) of pulpy matter ("d'une sorte de bouillie"), which was nothing else than mucous vegetations. No inflammatory reaction followed the treatment. Basing on this case, Gallard retracts his former verdict that curetting is "a detestable operation,"² and believes that in certain cases the curette may be of real service. Now, when a man like Gallard thinks it worth while to detail a case (called a "remarkable case" by the reporter), the like of which (perhaps in a lesser degree) is to my certain knowledge met with in New York almost weekly, and rapidly relieved in a few moments by the wire curette, without any one of the severe measures first employed by the eminent French gynecologist, I cannot help thinking that it may not be superfluous to point out, in as forcible a manner as possible, how frequent such cases are, and how much more readily and safely they can be cured than by the Récamier's curette and the paste of Canquoin.

Before proceeding to a description of Dr Thomas's instrument, the manner of its employment, its indications, and the conditions requiring its use, I wish to say that this purely clinical paper is not designed to discuss the etiology and pathological anatomy, or all the clinical features of intrauterine vegetations, or the other conditions calling for the curette. These shall be touched upon only so far as appears necessary to my purpose; for a fuller description of the vegetations I refer the reader to the abstract of Olshausen's

¹ *Arch. de. Tocol.*, Oct. 1877.

² *Leçons cliniques sur les maladies des femmes*, p. 242.

complete and valuable paper above mentioned, or to the original in the *Archiv für Gynäkologie*, vol. viii., No. 1, entitled "Chronische Hyperplastische Endometritis." It is, so far as I am aware, the only contribution to medical literature specially devoted to that subject.



Description of the Instrument.—Thomas's "copper-wire curette without cutting edge" (as he himself calls it) is an instrument 9 inches long, $3\frac{1}{2}$ inches of which form the wooden handle, made of soft copper wire $\frac{1}{6}$ inch thick near the handle, and tapering down to $\frac{1}{2}$ to $\frac{1}{16}$ inch in thickness at $\frac{1}{2}$ inch from the end, where it is bent into an elliptical loop $\frac{1}{4}$ inch broad, the wire at the loop being flattened on the scraping surface. The wire at the inception of the loop is so soft and flexible, that any greater than a superficial pressure will cause it to bend, whereby a deep injury to the uterine mucosa is absolutely avoided. Besides, at the junction of wire and handle, the former is grooved, so as to bend easily at the point, also with the object of preventing firm pressure. The breadth of the loop mentioned above, $\frac{1}{4}$ inch, is the usual size; but there are two other sizes made, one larger and one smaller, in proportion to the patency of the cervical canal.

It may seem that this flexible blunt loop of wire is too frail to be of real service, but experience has amply shown that it fully answers the purpose for which it was intended, and that gently drawing it over the uterine mucous membrane suffices to detach the projecting vegetations or granulations and to cure the case, without requiring or subjecting the patient to the danger accompanying the use of a stiff sharp steel scoop.

Indications.—There is really only one indication for the use of the curette, and that is pathological uterine hæmorrhage; menorrhagia, or metrorrhagia, which has resisted all other remedies, and for which no physical cause, constitutional or local, can be detected by the usual means of exploration. In such a case we are compelled to look for the cause of the hæmorrhage in some intrauterine disease, not distinguishable by the ordinary digital and specular examination. The curette will then give us the required information, for by it we shall either remove a portion of the *fons et origo mali*, or receive a negative result at least, in the assurance that the uterine cavity is empty and healthy. The first and chief use of the curette, therefore, is as a *means of diagnosis*, and as such it must be employed in almost every case until its withdrawal shows the presence or absence of an exciting cause.¹ The unirritating nature of

¹ Although I have repeatedly heard Dr Thomas mention this diagnostic use of the curette, in no text-book or paper do I find it recorded except in that of Hegar and Kaltenbach (*l.c.*), who make precisely the same use of Sims's curette (or Récamier's, as they call it). With Sims's instrument, however, the operation can evidently be neither so gentle nor so innocuous as with the wire curette, which latter answers every purpose.

the operation with the wire curette renders this procedure entirely justifiable and harmless, while sufficiently effective. Having thus ascertained by means of the curette what the cause of the hæmorrhage is, if located in the uterus, we find that it is one of three *conditions requiring the therapeutic employment of the curette*. These are, taking them in the order in which they are commonly met with:—1. Chronic hyperplastic endometritis or fungous degeneration of the uterine mucous membrane. 2. Retention of adherent placental villi after miscarriage. 3. Diffuse sarcoma of the mucosa of the body of the uterus.

1. Endometritis hyperplastica chronica or polyposa (Olshausen), fungous degeneration of the uterine mucous membrane (Thomas), fungosities uterines (Récamier), endometritis chronica (Hegar and Kalténbach), metritis hæmorrhagica (Weber, St Petersburg), metritis villosa (Slavjansky), manifests itself by three separate anatomical conditions: (*a*) diffuse, low granulations, developed in patches eroded and ulcerated by chronic catarrh, or spread over the whole mucosa, similar to granular conjunctivitis (Atthill); (*b*) a uniform general hyperplasia of the whole mucosa of the uterine body without polypoid formations, “an unhealthy pulpy condition of the mucous coat” (Tanner); and (*c*) numerous polypoid fungous vegetations scattered over the hyperplastic mucosa, the endometritis polyposa of Olshausen. In this last category might be included mucous polypi, which, however, are rare in the cavity of the uterus proper, and generally confined to a limited portion of the endometrium.

All of these pathological conditions are well known to produce hæmorrhage, which is arrested only by the removal of the exciting cause. The masses removed by the wire curette in class *a* will generally possess more the character of fine shreds and turbid bloody mucus without actual distinct pieces of tissue, the curette merely crushing and obliterating the flabby granulations; in class *b*, soft pale slices and irregular patches will come away; and in class *c*, distinct, flattened, polypoid vegetations, varying in size from a millet-seed (the usual size) to a pea or a bean, and soft and pulpy in consistence.

Occasionally all of these neoplasms are combined, and removed in the same case.

The vegetations or fungosities (according to Dr M. D. Mann, pathologist to the New York Obstetrical Society) consist histologically of structureless basement substance, containing great quantities of small round cells and nuclei, and portions of uterine follicles and vessels. Granulations have no follicles.

Olshausen states that endometritis polyposa strongly resembles the broad-based molluscum of the corpus uteri described by Virchow, the great difference being, however, that in the latter affection large masses of dilated glands are found, which are absent in the former. A microscopical examination will usually be required to determine the exact nature of the masses removed, should there be

any doubt on the matter. It should further be stated, that endometritis polyposa is limited strictly to the cavity of the uterus proper, stopping at the os internum, below which commences the region of enlarged Nabothian follicles and mucous polypi, for the removal of which Thomas himself recommends Sims's sharp curette.

Endometritis polyposa is not confined to the married or parous woman, but occurs also not unfrequently in the single female, even after the menopause. It generally owes its origin to a chronic catarrh of the endometrium, the ordinary muco-purulent discharge of which has gradually become sanious or pure bloody, accompanied by profuse menstrual flow, and gradually increasing anæmia and general debility. The previous existence of a profuse chronic leucorrhœa will therefore convey a suspicion of the presence of this affection. The local symptoms are often slight, generally merely the ordinary pelvic weight and dragging met with so commonly in uterine disease. The cervix is usually soft, the external os often more or less gaping, and the cervical canal and internal os patulous. The finger passed into the uterine cavity could feel the mucous membrane swollen and spongy. To detect the vegetations themselves by the touch would scarcely be possible, owing to their scattered site, small size, and pulpy consistency. No one portion of the endometrium seems particularly favoured by these growths, for I have removed them with the curette from either surface. The number of vegetations removed may vary from two or three to a dozen, or a whole teaspoonful or more, their size from a millet-seed to a bean, the latter being rarely met with.

When we consider how easily the diagnosis of this affection is now made by the curette, we must wonder at its having been so rarely recognised and so little appreciated, as it undoubtedly has been since its discovery some twenty-eight years ago. The explanation given by Olshausen for this neglect is probably the correct one, namely, that the sharp curette having been proscribed, the only means of diagnosis of the affection was by the finger, after opening the canal by laminaria or sponge tent (still the only method advised by Atthill in 1873); the former of which flattened out the growths and rendered them impalpable, and the removal of the latter destroyed them.

After what has been already said in this article, it seems scarcely necessary to remark, that constitutional treatment is of no avail whatever for the cure of this affection, and consists only in remedies designed to support and restore strength. Topical applications of caustics (argenti nitras, tr. iodine, liq. ferri persulph.), have by long experience been found but temporarily beneficial in arresting the hæmorrhage; stronger caustics, such as nitric and chromic acids, will, it is true, convert the whole surface of the uterine mucosa into an eschar, and thus probably cure the disease. But as, in any case, the disease, with its exciting cause, is liable to recur, and the use of these strong caustics is always

attended with more inconvenience, pain, and danger than are ever found to result from the simple operation of the wire curette, the latter instrument should invariably be preferred to caustics in these cases.

2. *Placental villosities* are very frequently detected *in utero* after a miscarriage, particularly when the placenta was expelled alone, after the birth of the embryo, or was manually removed. These patients generally continue flowing after the miscarriage for a longer or shorter time (often profusely), until their weakened state finally obliges them to seek medical advice, usually after the fruitless employment of a variety of constitutional hæmostatics. Should the cervical canal still be sufficiently patent, the finger will readily detect an irregular rough circumscribed spot on the endometrium, or what is equally positive and more applicable, through the generally contracted os. The curette makes that discovery, and at once removes a fragment, the macro- and microscopical appearance of which readily assures the diagnosis, and points out the immediate cure of the hæmorrhage by the removal of its exciting cause.

3. *Diffuse sarcoma of the uterine corporeal mucosa* is a very rare disease, only sixteen instances of which have, according to Schroeder, been recorded in literature. It should not be confounded with sarcoma of the parenchyma of the uterus, which is decidedly more frequent, and resembles in its microscopical characteristics the ordinary fibroid tumour of the uterus. Diffuse sarcoma of the mucous membrane is confined almost exclusively to the body of the uterus, only two cases of its occurrence in the cervix being recorded (both by Spiegelberg), and appears as a soft, flabby, villous growth, spreading over a greater or lesser surface and rapidly assuming an irregular polypoid shape. It is in its early stages only that it is amenable to treatment by so simple an instrument as the wire curette; later on, the sharp scoop or the galvano-cautery are required. The differential diagnosis between diffuse sarcoma, unusually prolific vegetations, and retained placental fragments, can as a rule be made with certainty only by the microscope, and is then easy enough, the distinctive histological features of each of these masses being sufficiently characteristic. The symptoms of diffuse sarcoma in the early stages resemble those of endometritis polyposa, but the hæmorrhage is generally more profuse, and alternates with watery discharges frequently mixed with shreds, and there is often more or less pelvic pain.

Another class of cases in which the wire curette can be advantageously and safely used are those of carcinoma of the cervix, in which, after amputation, the sharp scoop, or cauterization, fresh readily-bleeding granulations spring up. These I have repeatedly removed off-hand with Thomas's curette, applied nitric or chromic acid, or bromine, or sol. ferri persulph., and sent the patient home. Large masses of cancerous tissue would, however, require a more powerful instrument, like Simon's sharp scoop, the use of which

should be attended by all the precautions employed during and after a serious operation.

Manner of using the Wire Curette.—As a rule, it is not necessary to anæsthetize the patient—indeed I have never done so, for nearly all my cases were operated on at my office or at the dispensary, the patient being dismissed to her home immediately after, with the direction to remain quiet for twenty-four hours, and to avoid exposure to cold. Still, in exceptionally sensitive or nervous patients it may be advisable to do so.

It is doubtless possible to introduce the curette into the uterus, and scrape over more or less of its cavity though a bivalve or cylindrical speculum, or without a speculum, on the finger only; but such a procedure can be at best incomplete (then truly performed “almost at random,” as Atthill says), because the narrow field afforded by the specula named prevents free movement of the instrument. An inflexible steel curette can doubtless accomplish its purpose when simply introduced on the finger, and I have repeatedly removed both carcinomatous masses and large masses of placenta in this manner with Simon’s scoop, guarding uterus and instrument with the other hand on the abdomen. But the only true way of operating with Thomas’s curette, and the only way in which he uses it, is through Sims’s speculum in the left semi-prone position. It is true this speculum requires the presence of an assistant, but almost every adult person will suffice for the purpose in so simple and rapid an operation; and the comfort and advantage obtained by the use of this, really the only perfect speculum, is incalculable.

The patient having been placed in Sims’s position, and the cervix being exposed with Sims’s speculum, the operator seizes the anterior lip of the cervix with a tenaculum, draws the uterus gently down, thereby straightening its canal, and holding it steady, introduces the sound or probe to ascertain the direction and length of the uterine canal. Bending the shank of the curette, in accordance with the information thus obtained, he passes it into the cavity of the uterus, which he carefully explores by drawing the curette gently over the whole mucous membrane, always in the direction from the fundus to the internal os. Should the vegetations be large or very numerous, or the mucosa much hypertrophied, a certain feeling of resistance or a rough grating sensation will be imparted to the finger of the operator, revealing to him the presence of the neoplasms. In case of adherent placental remnants, this grating sensation is particularly distinct, and can even be faintly audible to the bystander. A very slight flow of blood accompanies this operation, never more than a tablespoonful or two. Having completed the tour of the uterine cavity the curette is withdrawn, bringing with it blood, and, if present, vegetations, placental fragments, or carcinomatous masses. These are easily secured and detected by wiping out the vagina with dry cotton, on which the small, pale, flat, elongated, homogeneous-looking vegetations, or

the firmer particoloured placental fragments, are readily discernible amid the coagula. The detection of sarcoma will devolve on the microscope. If the operator wishes to make sure that all neoplastic formations have been removed, the curette may again be introduced, and the vagina then tamponed with cotton soaked in glycerine, and the patient dismissed. In severe cases I have seen Dr Thomas order a dose of morphine after the operation ; but as a rule no other immediate after-treatment than rest is required. I have been in the habit of painting the whole of the uterine cavity, immediately after cleansing it with cotton, with Churchill's tincture of iodine, as a styptic, and caustic (although really not needful as such), and chiefly as a disinfectant and alterative, to ensure the thorough destruction of the neoplasms and the absorption of the hyperplastic tissue ; in protracted cases, where the number of vegetations was great or the hæmorrhage profuse, I have left a tent of cotton soaked in iodine in the uterine cavity, allowing it to be expelled by uterine contractions after several days. I have never seen the least ill effects from this treatment, but do not deny that I may be mistaken in considering it more efficacious than the simple painting of the cavity.

Should the neoplasm be discovered to be sarcoma, the cavity of the uterus would have to be thoroughly opened by laminaria, and nitric acid or the galvano-cautery applied.

As a rule the external os is, even in nulliparæ, sufficiently patent to admit the curette, and the same may be said of the internal os, which the profuse hæmorrhage has tended to dilate. Occasionally, when even the smaller-sized curette will not pass, I dilate the internal os with Ellinger's steel two branched dilator, and then experience no further difficulty. Thomas says that dilatation with tents is rarely required. Surely this is a great advantage ! The pain attending the ordinary operation of curetting, as above described, is usually but slight ; it occupies barely five minutes, and the reaction is *nil*.

Dr Thomas tells me that he has performed the operation "hundreds upon hundreds of times," and has never seen the least ill effects therefrom. As a rule, however, where feasible, it may be advisable to avoid all risks, and perform the operation at the house of the patient or in a hospital, and keep her in bed for twenty-four hours afterwards. The simple introduction of the sound has produced cellulitis and metropéritonitis ; it cannot be denied, therefore, that the wire curette *may* at any time (although thus far it has not done so), in a peculiarly susceptible patient, light up a similar trouble. But an ordinary diagnostic exploration of the uterus with the curette, and the removal of a number of vegetations, is really an almost innocuous procedure, and not likely to be followed by evil consequences, even if performed in the physician's office.

It must be borne in mind that, if the diagnostic curetting does not detect any cause of the hæmorrhage, at all events no harm has been done, and the negative answer is in itself valuable information.

Cases are even met with in which the curetting, while not detecting any neoplasm, still cures the metrorrhagia apparently by its alterative stimulant action on the relaxed uterine mucous membrane. And this is doubtless the manner in which it benefits cases of granulation and diffused tumefaction of the endometrium without vegetations.

If the uterine mucous membrane is healthy the wire curette will not injure it, and no shreds will therefore be removed; with the sharp curette, however, even the most delicate and practised hand could scarcely avoid shaving off slices here and there, the depth of which lesions cannot always be foreseen. It is this latter diagnostic curetting which must be termed harsh and "unscientific."

Counter-indications do not really exist, except such as would equally prohibit the introduction of the sound, viz., acute or moderately recent pelvic or uterine inflammation, which should first be allayed by appropriate means before hazarding the curette.

The following 25 cases, taken from over 1200 gynecological cases met with in my private and dispensary practice during a period of three years, since which time I have been using the instrument, are briefly reported in illustration of the innocuousness and curative value of Thomas's dull wire curette, and of the frequency with which its employment is called for:—

1. M. R., 28 years, married, two children. Bilateral laceration of the cervix. Seen 9th December 1874. Metrorrhagia for some time; no assignable cause. Curette, removal of a number of vegetations. When seen again, 14th December, hæmorrhage had entirely ceased, and did not return.

2. A. F., 27 years, married, two children, miscarriage four months previously. Seen 18th December 1874. Flowing since miscarriage. Curette, removed a number of firm fleshy masses; found under the microscope to be placental villousities. Strong tr. iodine to uterine cavity. No return of hæmorrhage.

3. B. K., 26 years, married, two children, one miscarriage 9th January 1875. Flowing since then; not arrested by hæmostatics. 9th March 1875, curette, placental fragments. Cure.

4. M. G., 33 years, married, seven children, miscarriage 2½ months previously. Flowing for two weeks when seen 10th May 1875. Curette, placental fragments. Iodine. Cure.

5. A. T., 40 years, married, five children, four miscarriages at three and four months; last ten weeks before. Seen 22d October 1875. Flowing profusely since miscarriage, almost exsanguinated, waxy complexion; uterus anteverted. Curette, twice, followed by tr. iodine on cotton plug left in uterus, at intervals of a week. Removal of large quantity of placental villousities and real vegetations at first curetting; a smaller number at second. First curetting at patient's house, second at my office. Complete cessation of hæmorrhage, and rapid recovery.

6. E. E., 28 years, married, one child, one miscarriage at three months, one month before seen. Flowing since miscarriage. Uterus

retroverted. Ergot, etc., ineffectual. 17th February 1876, curette, placental fragments. Iodine. 21st, no hæmorrhage. Discharged cured.

7. F. F., 38 years, married, seven children. Flowing since last delivery four months before. February 1876, curette, placental villousities and vegetations. Iodine. Cure.

8. F. M., 26, married, five children. Flowing since six weeks, probably miscarriage. 23d Oct. 1876, curette, placental villousities. Iodine. Cure.

9. F. M., 40, married, ten children. Menorrhagia for four years. External os gaping. 1st Nov. 1876, curette, but no vegetations nor other cause for hæmorrhage found. No reaction. Finally cured by repeated intrauterine application of tr. iodine.

10. B. G., 23, married five years, sterile. Chronic endometritis; profuse muco-sanious discharge and menorrhagia every three weeks, lasting seven days, for nearly one year. Iodine and tannin to endometrium ineffectual. 5th Dec. 1876, curette, large number of polypoid vegetations removed. Iodine. Cure.

11. S. V., 25, married, one miscarriage. Anteflexion; cervical canal patulous; bloody discharge. Menorrhagia since miscarriage, two months previously. Curette, without discovering placental fragments. Cured by iodine locally, frequently repeated.

12. H. M., 24, widow, one child. Profuse menstruation. Uterus three inches deep. Chronic endometritis. Long ineffectual local treatment by iodine, ferri persulph., etc. 13th Feb. 1877, curette, over one dozen vegetations removed. Iodine repeated at intervals of one week for several weeks. Cure of endometritis and menorrhagia.

13. K. K., 33, married, four children, six miscarriages; last four months previously. Probable retention of portion of placenta. Since miscarriage profuse menstruation, lasting sixteen days. 1st March 1877, curette, large number of placental villousities and polypoid vegetations removed. Tr. iodine. Cure.

14. Mrs T., 35 years, multipara. Patient of Dr L. Weber. Reputed miscarriage in third month six weeks before; no physician present. Since then flowing profusely, and quite exsanguinated when seen in consultation, 23d March 1877. Had been curetted once before, but flowing still continued. Uterus enlarged, cervical canal wide open, blood oozing from gaping os. Wire curette, removal of nearly half a cupful of placental villousities, some as large as a bean. Tr. iodine. No further hæmorrhage. Rapid recovery.

15. A. B., 30, married, three children, one miscarriage six months before. Uterus three inches deep, anteflexed. Since miscarriage profuse menstruation every two to three weeks, with offensive coagula. 15th March 1877, curette, large number of placental shreds and vegetations. Iodine plug. 10th April, slight muco-purulent discharge; otherwise well. Last menstruation normal.

16. F. W., 30, married, three children, one miscarriage eleven

weeks before. Flowing since, although nursing last child. 26th March 1877, curette, placental fragments. Iodine. Cure.

17. A. T., 42, same patient as case 5. Has had two miscarriages since then ; last nine months before. Now flowing since two weeks, probably miscarriage at six weeks. Uterus $3\frac{1}{2}$ inches ; external os gaping. Ergot and other hæmostatics in vain. 12th April 1877, curette, small villous masses removed, of doubtful nature, from posterior wall of uterus, probably placenta at very early stage. Tr. iodine repeated at intervals. Cure.

18. P. N., 38, married, six children, two miscarriages ; last $4\frac{1}{2}$ months before. Menstruation profuse for several years, frequently lasting ten to fourteen days. Cervical canal gaping, containing enlarged Nabothian follicles. Uterus $2\frac{1}{2}$ inches deep, enlarged ; ovaries congested. 9th July 1877, curette, about two dozen large polypoid vegetations removed ; tr. iodine. 19th July, iodine repeated. No further menorrhagia.

19. B. F., 44, married, ten children, last five years before. Since then menorrhagia every two weeks. 16th July 1877, curette, vegetations. Iodine. Cure.

20. F. L., 35, married, five children, last thirteen months before. Since ten months, menorrhagia every two weeks. External os gaping, internal os narrow. 30th July 1877, curette, about half a dozen vegetations removed ; iodine. Next menstruation still profuse. 23d August, curette repeated, several more vegetations removed. Cure.

21. B. M., 27, married, twins, four years ago. Since three years, profuse menstruation, lasting the greater part of the month. 21st August 1877, flowing, external and internal os patulous ; curette, about one dozen vegetations removed, one as large as a pea ; iodine, 23d August. Hæmorrhage has entirely ceased. 27th, still no hæmorrhage. Cure.

22. M. G., 25, married, one child five years old. Since three months, menorrhagia, cervical canal gaping. 1st October 1877, curette, only two vegetations removed ; iodine. Next menstruation moderate.

23. A. M., 38, married, five children, last $1\frac{1}{2}$ years ago. Since then profuse menstruation, lasting nine days and longer ; in the intervals leucorrhœa. Uterus retroverted and enlarged when first seen 10th December 1877. Mucopurulent discharge, bilateral laceration of cervix, eversion of lips. The curette removed a large quantity of pulpy shreds ; tr. iodine. Next menstruation just over, lasted only ten days, and was moderate. Operation of cervix advised.

24. R. S., 27, married nine years, ten children, last two years ago. Since then menorrhagia ten days, in intervals, greenish mucopurulent discharge. 18th December 1877, curette, large, number of vegetations and shreds, iodine. Menstruation last week in December, five days, moderate.

25. F. S., 31, married, six children, one miscarriage three months

ago, flowing since. 18th December 1877, curette removed a piece of placenta of the size of a large bean; iodine. Immediate complete arrest of hæmorrhage, which had not returned to date.

It will be seen that only in ten of the twenty-five cases did vegetations prove to be the chief exciting cause of the hæmorrhage, while by chance thirteen instances of adherent placental villousities came under my care. Ordinarily the endometritic products predominate in practice. In five of these cases both placental remnants and vegetations were found, but the cases are classed under the former category, as the hæmorrhage came on shortly after a miscarriage, and the adherent portions of the placenta undoubtedly were the chief exciting cause. In the two remaining cases no cause could be found for the hæmorrhage, and they were cured by the repeated application of iodine. In twenty-one cases tincture of iodine was applied to the endometrium after the curetting. In two cases only was it necessary to repeat the curetting once. All the cases recovered without an untoward symptom. Only one operation was performed at the house of the patient; all the others at my office or in the dispensary.

Besides these cases, I have employed the curette a number of times for merely diagnostic purposes. In no case did ill effects follow its application.

In one case of profuse menorrhagia apparently following chronic endometritis, which came under my care before I was acquainted with the curette, I found myself compelled, after ineffectually applying tr. iodine, liq. ferr. persulph., and pure carbolic acid to the endometrium, to cauterize the latter with fuming nitric acid introduced through a glass tube. This arrested the hæmorrhage permanently, but was attended with considerable inconvenience, such as previous dilatation of the cervix with sponge-tent, confinement of the patient to bed, with iced compresses on the abdomen for several days as a prophylactic measure against inflammatory reaction (which, by the way, I now no longer fear after applying nitric acid to the endometrium), constitutional shock, etc. I am convinced that with the wire curette, the patient could have been cured at once without any preparation whatever, and little or no after-treatment.

In two cases of adherence and retention of the *greater portion* of the placenta for several days after miscarriage at the third month, I found it advisable to remove the ragged and firmly adherent placental fragments by means of Simon's sharp scoop, which, after dulling the edge somewhat, I passed gently over the endometrium until all surface-roughness had disappeared. The uterine cavity was then injected with carbolized ice-water. In another case I removed a large fibrinous polypus formed on the placental site three months after the expulsion of a hydatid mole with Simon's scoop. All these patients recovered without a bad symptom.

These cases I mention merely to show in what instances of

placental retention the use of the sharp curette may be justifiable ; for the removal of the small placental nodules, however, referred to in the cases described above, which, small though they be, are often the cause of severe and uncontrollable hæmorrhage, the wire curette amply suffices.

It will not be denied that cases of menorrhagia, calling for the wire curette, such as I have cited in this paper, are of common occurrence, and that they fall into the hands of the general practitioner even more frequently, certainly at an earlier stage, than into those of the specialist. I trust I have shown that it is not necessary (as to my own knowledge is constantly done) to subject these patients to all kinds of useless internal and local hæmostatic remedies before finally sending them in an enfeebled and discouraged state to the specialist, who easily and speedily cures them by the use of an instrument which could be as easily, safely, and speedily employed by the family physician at the very outset of the case—provided, of course, he possess the requisite amount of gynecological experience to make the diagnosis. I will paraphrase Atthill by saying, that it is the “manifest duty” of the physician “in case of menorrhagia *in an otherwise healthy woman,*” proved by careful examination not to depend on an obvious uterine or vaginal disease, *not* to “dilate the cervix and os internum,” as he advises, but to introduce the wire curette “with the view of determining what the condition of the interior of the womb may be.”¹ That the curette will then remove the difficulty, if found to consist in one of the conditions already pointed out, much more gently and quite as effectually as the nitric acid of Atthill, I have already stated. In my opinion the wire curette should occupy a place in the modern gynecological armamentarium, second only to speculum, sound, and tenaculum.

In conclusion, let me summarize its advantages as follows:—
1. Ease of application, requiring no previous preparation of the parts ; 2. Almost complete harmlessness ; and, 3. Efficiency rendering after-treatment usually unnecessary.

¹ *L. c.*, p. 83.

