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CASES

ILLUSTRATIVE OF THE

CONTAGIOUS NATURE OF PUERPERAL FEVER,

AND

ITS INTIMATE CONNECTION WITH ERYSIPELATOUS AND
PHLEBITIC INFLAMMATION.

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(Read before the Edinburgh Medico-Chirurgical Society.)

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CASES, &c.

My principal design in communicating the following series of cases is to bring forward proofs corroborative of the opinion advocated by many medical men, that puerperal fever is contagious when generated under certain circumstances; and, at the same time, to draw attention to the singular and intimate connection or association which that dreadful malady has with erysipelatous and phlebitic inflammation.

The distressing circumstances in which I have been lately placed by the occurrence of these cases convinced me of the propriety, nay, duty of communicating to the profession facts, which, while important in a pathological respect, may perhaps contribute in some degree to avert hazard from a most interesting class of patients, and at the same time preserve to the medical man that peace of mind and prosperity in practice which might otherwise be interrupted. While candour has required this course, I rest assured of obtaining sympathy on account of the painful situation in which I have been placed; and though to some extent the unfortunate medium of spreading a fatal disease, I feel assured that no larger share of blame will be imputed to me than what seems due after the history of these melancholy cases has been carefully and impartially considered.

CASE I.—On the 2d September I attended Mrs S., aged 32, at the delivery of her third child. For a month previous to her confinement she was weakly; suffered from pain in the lower part of the abdomen, so much so at times as to induce the belief that labour had commenced; and, according to her calculation, she was a month beyond her time. Her mind, too, had long been much depressed, and a presentiment of approaching death hung over her. The labour terminated at half past four o'clock P. M.; was very easy, lasting only a few hours, detaining me about an hour and a half, and requiring nothing more than the ordinary management. She did well until the morning of the third day, when a severe rigor occurred, followed by violent headach and febrile symptoms. This she attributed to seeing several people during the previous afternoon; conversing with them so long as to produce considerable excitement; and to a night of much fatigue (the nurse having deserted her) with her child, which had been very fretful. The pulse from the first was soft, and ranged from

120 to 150; respiration rapid, sighing, and laborious, as the disease advanced; complexion sallow, with dark leaden-coloured areolæ of the eyes; countenance expressive of much anxiety; eyes pellucid; tongue at first pale and rather œdematous, gradually becoming red at the tip and along the middle and edges, then successively dry, brown, purple, and moist; the forehead, which at first was severely pained, became easier as the abdominal symptoms were developed; and the mind was much disquieted but never unhinged. On the fourth day diarrhœa took place, which continued throughout the illness; and the abdomen, which was but slightly tender from the first, had a doughy feeling, then became tympanitic, and about twelve hours before death enormously distended, at which time also, vomiting of large quantities of dark green matter began and continued to the end.

On the day of the rigor the uterus was felt to be flabby and reaching nearly to the umbilicus; and on examination *per vaginam*, the os was wide open and the cervix puffy. Except for a few hours on the fifth day, the lochia was copious, but unusually dark and offensive. Milk was secreted abundantly, and the breasts went on enlarging until the sixth day, when they became shrivelled, and the secretion much diminished and creamy. The urine was from the beginning scanty, high coloured, and having an acrid odour. No free perspiration occurred until the hours of sinking; but the skin and muscles were peculiarly soft and lax from the commencement of the attack.

Never having attended what I considered a true case of puerperal fever, (although I have had upwards of 500 accouchements since I commenced practice,) it was not until the sixth day that I could persuade myself that this case was more than a severe ephemera, arising from excitement and fatigue on the third day, and the want of careful nursing; and at this time the idea of contagion did not occur to me, for I considered the case at worst to be a sporadic one, elaborated from causes within itself and certain to terminate with itself.

The treatment pursued in this case was at first, gentle aperients, then calomel with Dover and James's powder; afterwards frequent doses of Dover's powder by itself; and the *liquor acetatis ammoniæ* with the solution of the muriate of morphia, and brandy and camphor were given, when the pulse began to indicate a tendency to failing of the circulation. The local applications were hot fomentations, poultices, and twelve leeches to the abdomen, and latterly a large blister. Warm water was also frequently injected into the vagina to cleanse away the fœtid lochia; and the catheter was employed at intervals of about six hours to prevent irritation from mechanical distension. Death occurred on the morning of the 10th, the eighth day from her confinement.

I may here state that in the management of this case, as well as in cases third, fourth, and fifth, I had the benefit of the skilful advice and unwearied attention of Dr John Scott.

CASE II.—On the morning of the 7th September I attended Mrs W., aged 23, a poor woman, for a medical friend who was out of town. It was her first child, and she was a pale, thin, and weakly person. Her pains began about five A. M., were by no means severe, requiring no interference, and the child was born at half-past nine, three-quarters of an hour after I was in attendance. On the following day I found her quite well, and resigned her to the care of my friend for whom I had been attending. In consequence of a mistake as to her residence, and the difficulty of finding it, she was unfortunately not seen until the evening of the 11th, when she was found to be in a sinking condition, the most prominent symptoms being a draining diarrhœa, tympanitic bowels, and a rapid pulse; and in spite of the most energetic means then employed, she died on the morning of the 13th, the sixth day from her accouchement.

I may here notice, in regard to this case, that besides being a very delicate individual, she had had so strong a presentiment of death as to prevent her making the necessary preparations for herself or child; and besides being unprescribed for on the first appearance of unfavourable symptoms, she was totally neglected by her nearest relations, and left without any sort of assistance for two or three days.

I was not aware of the progress or fatal result of this case until the 15th, the day after I had delivered my next patient; and although Mrs W.'s case was not considered at the time as one of puerperal fever, I believe it must have been one presenting in some measure the characters of the gastro-enteritic type.*

CASE III.—Mrs K., aged 25, a pale and very delicate person, was delivered by me of her second child at half-past nine P. M. on the 14th September. She had been for some time previously in low spirits, and the cause continued to prey on her mind equally after the labour was past. The labour itself was natural, very easy, requiring only the usual attentions, and not such as necessarily to produce subsequent exhaustion.

On the 15th she appeared to be doing well, but on the 16th complained of languor, sleeplessness, and severe pain in her head and eyeballs; and although there had been no rigor her pulse was 100. On the following morning the pulse had risen to 120; and the case after this period went on presenting nearly the same features as that of Mrs S., Case I., and proved fatal at half-past

* "Puerperal intestinal irritation" of Locock.

eight A. M. of the 21st, seven days after the date of her confinement. The treatment adopted was very nearly the same as in Mrs S.'s case, only, when the pulse was not so high, and of greater firmness, and as the pain in the region of the uterus was more decided, blood was taken from the arm to the extent of twelve ounces, as well as withdrawn topically, which practice seemed for a time to produce a beneficial effect. Instead also of a blister being employed, fomentations with warm turpentine were had recourse to.

The occurrence of these cases, the death of two patients and the seizure of a third, naturally caused me to reflect seriously on my position, more especially as on making inquiry, whether any epidemic prevailed to which these might be ascribed, I could hear of no cases at all similar. I therefore felt it my duty, immediately on the appearance of fever in Mrs K., to consult with several medical friends, in whose judgment and advice I could confide, whether I ought for a time to cease from performing obstetric engagements. On considering the circumstances in all their bearings, and while there was a hope that Mrs K. would recover, I was advised that there was no sufficient reason why I should not comply with the next call, but at the same time that every possible precaution should be adopted to prevent the further transmission of the virus. Having used these precautions I subsequently delivered a lady in Portobello on the 19th of the month, another patient in Stockbridge on the 22d, and a third in Rose Street on the 25th, all of whom recovered without showing any disposition to fever. This was all the more satisfactory and encouraging that the first and third of these patients were rather delicate, and the second was sister to Mrs S., (Case I.,) who had died only twelve days previously, and with whom she was much in contact during the fever; and more than this, there must have been here a very strong constitutional predisposition to the reception of the malady, for she was by that event thrown into a state of the most enervating alarm in the prospect of her own approaching hour of trial, gave herself up as lost, and could and would make no preparations for her own necessities. This excitement too, let it be added, brought on labour prematurely, being nearly a month before the expected period.

The precautions which I used while attending these patients were sprinkling and washing carefully with the solution of the chloride of lime after every visit to Case III., and washing again and putting on a different suit of clothing, not forgetting even a change of gloves and handkerchief, before every visit to my other patients. This was no easy task, considering the attention these patients required, and my numerous other engagements at that time; but it was never on one occasion omitted. As these

patients evinced no tendency to the disease, I felt disposed to view the occurrence of the three consecutive cases of fever as one of those singular coincidences with which medical men occasionally meet, or that, if they really resulted from infection, the strength of the virus had been now exhausted or overcome by the use of the precautions adopted. These sanguine hopes, however, were soon most distressingly disappointed by the occurrence of the two following cases in rapid and confounding succession.

CASE IV.—Mrs T. aged 29, resided a few doors from Mrs K. (Case III.) with whom she was very intimate. She was with Mrs K. on the evening of her delivery, and continued to render her to some extent the assistance of a nurse until the 16th, when the fever showed itself; and although strictly prohibited from exposing herself longer, she visited Mrs K. again on the 18th, and gave assistance in making some changes of clothing, and about the bed. I have no doubt that this visit was the occasion when the contagious fomites were obtained by Mrs T.; but even after this period she might have received the virus, for mutual friends were constantly visiting the one after sitting at the bedside of the other.

Mrs T. was taken in labour (at her full time) on the morning of the 26th September. It was her second child, and the labour was very easy, lasting altogether about four hours, during one of which only I was in attendance, and terminating at twelve o'clock noon. In the evening she seemed well, and talked with apparent cheerfulness, yet her mind evidently dwelt much upon the fate of her late friend. I unfortunately did not see her next day until about four P. M. having been detained from five A. M. until one P. M. with Case V., next to be related, and afterwards at an examination before the Sheriff in a case of lunacy. On calling at that hour I found that, at twelve o'clock,—precisely twenty-four hours from the time of her delivery, she had been seized with a violent rigor, that ever since there had been extreme cephalalgia, heat, and restlessness. Her pulse was 120, firm and strong; and there was very considerable tenderness over the lower part of the abdomen, where the uterus was felt to be large and rather hard.

As the combination of a very mild antiphlogistic with the diaphoretic and stimulant plans of treatment had proved unavailing in the former cases, I was induced, in accordance with the recommendation of several eminent authors* on puerperal fever, to try the effect of free venesection in this the early stage of the disease. The practice seemed the more feasible in Mrs T.'s case, as she was not a weakly person. I accordingly drew blood to about twenty-two ounces, when syncope occurred. I then gave eight

* Mackintosh, Campbell, Lee, and others.

grains of calomel and fifteen grains of Dover's powder; and in the evening, when reaction was established, the pulse strong, and a return of pain being felt in the iliac regions, I ordered one dozen of leeches to be applied to the seat of the pain, and warm poultices to be continued throughout the night. When I called next morning the pulse was 130; and from this period the case assumed a similar aspect, and took a similar course, as noted at length in Case I., with the exception of a longer delay in the affection of the general peritoneal lining. The fatal termination occurred on the 30th at seven P. M., the 5th day after her confinement.

CASE V.—On the 27th September, at five A. M., I was called to attend Mrs T. aged 23, of her first child. The delivery was completed at twelve o'clock noon, the precise time when Mrs T.'s (Case IV.) rigor occurred. The first stage of labour was very easy; the last tedious,—the child's head being arrested in the pelvis nearly four hours, owing to an immense accumulation of fæces in the rectum, which was removed by enemata. I may here notice that in this case there was a much larger quantity of blood lost, (but not beyond the average amount,) with the expulsion of the placenta, than in the others, in all of which the loss was very trifling; and another circumstance which I observed in this as in all the other cases, was, that after the placenta was expelled, which process was accomplished naturally, the uterus remained of much larger size, and with much less hardness and firmness than is usual; and that the os remained very wide open, and the cervix without the tendency to contraction, which is usually felt on examination at this stage. These facts may perhaps point to some important guides in tracing the steps by which the poisonous agent producing puerperal fever gains admission to the system; and to an understanding of the primary effect exerted on the uterus itself, as shown by the degree of enervation and relaxation produced in the vascular apparatus and muscular textures. But I stop not to speculate. In the evening I found her dull, restless, complaining of slight headach, and general soreness; and there was something in her general appearance and expression which filled me with apprehension for her safety. I endeavoured to shake off these fears as imaginary—originating in the distressing impressions of recent events, and the serious aspect which Case IV. had assumed that day, and tried to entertain the hope that these symptoms proceeded merely from the excitement which often exists, to a considerable extent, from six to twelve hours after delivery, and which terminates in a healthful reaction. On visiting, however, next day at eight A. M., I found my worst fears realized. She had become more and more restless since the previous night; and about an hour and a half previous to my visit had shivered

severely. There was now slight headach; considerable heat of skin, with a soft and powerless feeling of the muscles; pulse 98, full and strong; countenance dirty-looking, with patches of yellow, brown, and red, and with great anxiety of expression; tongue white; considerable thirst; breathing conspicuous;* abdomen painful on pressure in the region of the uterus, which organ was felt to be large and as if doughy. The lochia was profuse, but dark and rather offensive for the short period since parturition. Milk was appearing in the breasts.

Taking the pulse as my guide to practice, and not yet being in the possession of a decided experience as to the effect of bleeding in Mrs T.'s case, I opened a vein until about fourteen ounces were drawn, and syncope was threatened. The remaining progress of this unhappy case was marked by no difference in symptoms from the preceding ones, excepting that it was attended with very little abdominal tumour or tenderness, with incessant vomiting of dark-coloured fluid so early as the morning of the 29th, and that it ran its course with fearful rapidity in spite of the early and well-sustained efforts which were made to support the strength. Death took place on the 30th about 3 A. M.—the third day from the period of delivery not yet having been completed.

The history of symptoms in these five cases has been very briefly detailed, because this form of puerperal fever being a combination of the adynamic type, with a slight degree of the metropéritonic, is no novelty, and has been ably delineated in all its features by Gooch, Moore, Ferguson, Loeock, Rigby, and others. Nor has any minute account been given of the treatment employed, because it embraced nothing new, but consisted of a selection and combination of the plans and suggestions of those who have had the most extended acquaintance with this most intractable and malignant malady, and applied according to the indications of each case. The main object of the present communication is to draw attention to the strong evidence in proof of the extraordinary subtlety of the morbid influence which generated the fever in these cases, and was transmitted, independently of locality,† from one unfortunate sufferer to another with so much rapidity and insidiousness. It took me, as appears from the foregoing narrative, entirely by surprise in Cases I, II, and III, before there was an opportunity of benefiting by the warnings of experience; and after most assiduous precautions and lapse of time had secured the safe delivery and recovery of three individuals, and lulled anxious fears into security regarding the propagation of the

* This breathing reminded Dr Scott very much of the breathing which he had seen in the last stage of cholera.

† Case I. was in the new town, Case II. in the old town, Cases III. and IV. in the west end, and Case V. in the south side of the town.

disease further, it was brought back to me in all its virulence by Case IV, who had retained it about her person and clothing from Case III—with whom she had so much intercourse, and was then unconsciously conveyed by me to Case V, in whom it was developed with so fearful a rapidity of action as to show itself almost from the moment of parturition, and destroy its victim in a shorter time than the individual from whom it was communicated.

The distress which these unfortunate cases occasioned to me will be readily understood by any right-thinking and feeling individual; and I am confident that, from what has been and yet remains to be stated, the occurrence of them will not be imputed to me as a matter of blame, but regarded in the light of a misfortune.

On the death of the last patient, (Case V,) I immediately abandoned practice, and on consulting with professional friends, determined to allow a fortnight to elapse before resuming obstetric engagements, and during the interval, to adopt means, such as a change of air, ablutions, &c., to free myself from the contagious virus. I may here observe that I have nowhere met with any author who says that more is necessary. Being much indisposed from fatigue and anxiety, and affected with sore throat, I was confined some days at home, taking medicine, the warm bath, &c.; and at the same time the clothes which I had worn while attending these cases, were exposed in a very airy chamber, and frequently sprinkled with the chloride of lime in solution. I then resided several days at the sea side, and afterwards went on an excursion of four days into Perthshire and Stirlingshire, wearing all the while the affected clothing. Before returning to the duties of practice, and being called to another accouchement,—a fortnight less one day intervened; and as this very melancholy case has been viewed by some,—who I admit are well able to judge in such matters, as a species of contagious puerperal fever, I shall record minutely its features, so that others may have the means of forming an impartial opinion as to its true nature. I may say, however, that, after the most close and careful consideration, I am inclined, from the special circumstances in the condition of the patient, and from the total dissimilarity in type and progress from the preceding cases, to regard it rather as a remarkable coincidence of fatal disease subsequent to parturition than as a case of puerperal fever. Had I met with it in practice entirely unconnected with such a series of cases, I should never have supposed it as belonging to this class.

Mrs M., aged 30, was under my care in May last, (the fourth month of her pregnancy,) on account of a diarrhœa, which lasted for a number of days; and again in July, on account of troublesome palpitation, and fluttering sensations about the heart, with tendency to fainting and giddiness. She was an anæmic subject; and on careful examination of the heart at this time,

I was of opinion that a considerable dilatation existed. During the whole month of September I attended her several times daily on account of excessive diarrhœa, evidently betokening the existence of ulceration, there being sometimes as many as eight or ten evacuations in the twenty-four hours, mixed with mucus, blood, and purulent matter. This condition was much aggravated by the cardiac symptoms, and was attended with extreme prostration of strength, a pulse seldom under 100 during the day, and much higher at night, when feverishness generally increased and passed off again in a few hours with considerable perspiration. At this time I despaired of her recovery, and looked forward to her approaching accouchement with the most apprehensive anxiety; and her own spirits were all along much depressed. For more than a fortnight, however, previous to labour, her bowels were opened only two or three times in the day; and she had recovered so much strength as to enable her to leave her bed, and walk from one room to another. On the forenoon of the 12th of October, a sudden fit of vomiting ruptured the membranes, and from time to time, until next forenoon (the 13th) a slight pain only was felt, and at five P. M. the same day, after a few hours' labour of ordinary severity, during which time I was in attendance, she gave birth to her child. There were no unfavourable symptoms until the third day (the 16th,) when she complained of tingling sensations over the whole body, but no distinct shivering. She was anxious about herself, and was restless and agitated. In the forenoon of that day there was considerable heat of skin, but towards evening a copious perspiration occurred; and when Professor Simpson saw her with me then, her condition was the following;—tongue clean; slight thirst; no headache; pulse 100, pretty full, but soft; no tenderness or swelling of the abdomen; uterus large and flabby, reaching nearly to the umbilicus; skin soft, covered with a copious perspiration; muscles in general relaxed; bowels once gently opened that day; urine in ordinary quantity, and easily voided; lochia pale-coloured and scanty, (but it must be remembered that she was an anæmic subject,) and the breasts were large, firm, and secreting a tolerably good flow of milk. Dr Simpson regarded the perspiration as favourable, and recommended that it should be gently kept up by the exhibition of frequent small doses of Dover's powder as long as the pulse and other symptoms indicated the existence of febrile action, and to avoid equally any stimulating or depleting remedies. Viewing the case also at this period as suspicious of the phlebotic form of puerperal fever, Dr S. declined, for obvious reasons, another consultation. From this period,—the evening of the 10th, until the morning of the 21st, she continued to improve; the pulse lower each successive morning, but never under 88, and rising again each night,

but never attaining beyond 100 ; and all the while there was a very free state of the skin, it being easily and powerfully acted on by the Dover's powder, when any increase of fever had taken place. The flow of milk and urine was copious, but the lochial discharge was pale and in sparing quantity. The bowels were naturally opened every day ; the tongue was clean ; thirst considerable ; appetite very moderate ; head quite free from pain ; mind not confused but still depressed ; uterus, which on the 16th was large, gradually diminished until it was not to be felt on the 21st above the pubes ; and the abdomen was never affected with the slightest degree of pain or tympanitis, but rather seemed more collapsed than is usual at so short a period after parturition. On the morning of the 21st, however, a slight rigor occurred, followed by a hot and sweating stage of a few hours' duration ; and in the evening of the same day another paroxysm recurred, rather more severe, and lasting altogether nearly twelve hours. From this period an improvement took place in every respect, and her condition at mid-day on the 23d was the following :—pulse 84 ; tongue clean ; head free from pain ; spirits for the first time elevated ; natural appetite returned ; alvine and urinary evacuations natural and free ; lochia rather more abundant, and redder ; skin pleasantly warm and moist ; abdomen without the slightest tumour or pain on being subjected to pressure ; and the inferior extremities were without swelling, pain, or uneasiness in the course of the veins. In fact, I considered her out of danger, and spoke of her being out of bed in a few days, and taking some management of the child. On the afternoon, however, of this day, —the tenth from her confinement, she was unhappily subjected to considerable mental irritation and excitement, and soon after discovered symptoms of restlessness and discomfort. At 11 P. M. she had a violent rigor, which lasted about twenty minutes ; and the heat was succeeded by some confusion of head ; pulse gradually rose to 120, full and soft ; but, notwithstanding the most assiduous efforts during the night, by means of hot poultices to the abdomen, Dover's powder, warm drinks, &c., the perspiration, which formerly was so easily brought out, could not be produced. As the morning advanced, the confusion of head increased, she became more fretful, wandered a little, and at 9 o'clock, with a sudden shout of laughter, fell into a violent convulsion, in which she continued without any remission until about half-past twelve in the forenoon, when death relieved her struggles.

Eleven days had thus elapsed from the period of her accouchement to this sad event. Dr Alison, I may notice, saw her shortly before her death ; and I would gladly have availed myself sooner of the benefit of his advice, or of that of some other eminent practitioner, but for the rapidity of the illness, and the prospect until

the convulsion occurred, of a timely diaphoresis bringing with it relief and recovery.

A *post mortem* examination of this singular case was very desirable, but could not be obtained, in consequence of the peculiar ideas and feelings of the relatives. With regard to inspections of the other cases, I may here state that for several reasons I made no applications to obtain such, — 1st, because, from the report of numerous cases, it seems well established that such examinations are extremely dangerous for the propagation of the disease ;* 2d, because all the cases occurred in that station of society, where an autopsy is almost invariably refused, unless death has been very sudden, or unless there has been some dispute or mystery about the cause ; and, 3d, because there have unfortunately been a sufficient number of *post mortem* inspections in cases of puerperal fever to exhibit all that dissection can discover. In many hundreds of autopsies, conducted by the most able men of past and present times, † it has been abundantly ascertained, that in those cases partaking of the purely inflammatory type of the disease, the structural changes are, various degrees of softening and disorganization of the substance of the uterus, purulent matter found in the veins in some instances, and as often not ; ‡ thickenings and depositions of lymph on the peritoneal covering of the uterus and that of its append-

* Dr R. Lee, in the Medical Gazette, August 1843, relates the case of a practitioner in London in 1831, who had three cases of puerperal fever, shortly after opening the body of a person who died of the disease ; that he himself in 1835 had two cases immediately after an autopsy, notwithstanding the greatest precautions ; again in 1836, he had one case, and another in 1839. Dr Merriman had one case of puerperal fever on the morning following an inspection in a similar case, even although he did not touch the body, (vide Provincial Journal, No. 166.) Many like instances are well authenticated, and several have been stated to me by medical friends, — among the most singular of which was the occurrence of three cases to Dr Paterson of Leith from simply touching a portion of the uterus in the possession of Professor Simpson, of a person who had died of puerperal fever ; and the danger of such autopsies is made yet more apparent by the fact that, while Dr Simpson obtained this preparation at an examination of one of the five fatal cases recorded by Mr Sidey in this Journal for 1839, Dr Simpson himself had four cases of puerperal fever immediately following.

† Leake, Hulme, Hunter, Hey, Armstrong, Gooch, Lee, Tonuellé, Clarke, Meckel, Ribes, Dance, Arnott, Collins, Lee, Mackintosh, Campbell, Hall, Ferguson, Looock, &c. &c.

‡ Mr Moore, who has perhaps written the best monograph on puerperal fever, says, when alluding to the relations of French and German pathologists regarding the detection of purulent matter in the veins, “ In this country, however, *post mortem* examinations, not excepting those conducted by our best anatomists, have generally failed to detect purulent matter in the veins.” — Enquiry into the Pathology, &c. of Puerperal Fever, p. 69.

“ Phlebitis or any other local inflammation cannot be considered the cause of that malignancy which puerperal fever evinces, since that character is exhibited with nearly equal precision when associated with either of the various conditions before-mentioned, (effusion into the peritoneum, &c.), proving that *structural derangement is but an accident of its course.*” — Ibid. p. 79.

“ To believers in the identity of peritonitis and puerperal fever, we can show puerperal fever with a perfectly healthy peritoneum. To those who insist on inflammation of the uterine veins as constituting puerperal fever, we can show the genuine disease without this condition.” — Dr Ferguson on Important Diseases of Women, p. 81.

ages, as also of the general lining of the abdominal cavity, with adhesions of various strength, and effusions of fluid more or less albuminous, serous, bloody, or purulent, and the same depositions now and then in the cavities of the pleura and pericardium. And then, again, in cases of the type to which the present series more properly belong, the same appearances have been discovered, but generally to a much smaller extent. Sometimes even the existence of inflammatory action more especially as regards the uterus, being scarcely traceable;* but when there is effusion into the abdominal cavity, it is generally turbid, and peculiarly glutinous;† and the intestines are usually inflated with very fœtid gas.

Autopsies, I believe, can do little more in clearing away the difficulties which surround the consideration of the nature of puerperal fever, or in leading to a better means of cure. They have as yet discovered no pathognomonic mark by which to recognise the malady—nothing but variety of appearances. The symptoms during life are far more distinguished and characteristic, and point out the disease, seldom to be mistaken from other affections. And the reason why local changes and lesions of structure have been so little explanatory is, that they only occupy a secondary place in the diseased action, the general febrile disturbance being the proximate cause. The words of Mr Moore well express the bearings of the subject. He says, “The most legitimate conclusion to be deduced from the fact, that these varieties arise under the same circumstances, would appear to be, that the specific and essential malady, denominated puerperal fever, depends not for its origin or maintenance on the inflammation which in its progress may exert a disorganizing influence on those structures to which it happens to be directed. The fever and the inflammation probably result from a common cause, which acts directly on the vital functions associated with those organs affected, either by an impression produced immediately through the nervous system, by the propagation of morbid matter from without, or by the circulation of deteriorated blood.”‡

In connection with the case which I have last detailed, I may add, that, although not persuaded of its identity with the preceding instances of distinctly contagious disease, yet I have refused all requests for attendance in labour since its occurrence; and I consider it my duty, since there is a doubt regarding its nature, to abstain from obstetric practice for a considerable time to come.

In bringing this long, and I fear tedious paper to a close, I shall not trespass upon your time by offering any speculations re-

* Dr Collins of Dublin, in describing the morbid appearances in thirty-seven cases examined by himself, says, “The uterus was in the great majority quite natural in appearance; in some it was soft and flabby; and in a few unhealthy matter was found in the sinuses.

† Noticed by Dr Collins.

‡ Enquiry into the Pathology, &c. of Puerperal Fever, page 84.

garding the nature of puerperal fever. Facts at all times are infinitely more valuable than theories; and had the many distinguished writers on the subject theorized less and confined themselves more to facts, there might not perhaps have been so much bewilderment at the present day, both regarding its nature and treatment; for certainly on no subject in the whole range of medicine do we find advanced more conflicting opinions, or more partial and prejudiced statements. The reasons of this, however, are obvious. Particular epidemics of this disease differing from each other most materially in character and consequences, just as in the epidemics of other maladies;—the occasional occurrence of sporadic cases as varied in their features and relations; and the sudden advent of a series of cases originating from contagion or under special circumstances, and almost always malignant, have each in its turn been made the pivot on which to balance a favourite theory. Were I therefore to attempt the deduction of theoretical inferences from the few cases with which I have had the misfortune to meet, I would be committing the same error that has occasioned the confusion and uncertainty to which I allude.

There are, however, a few topics which naturally spring out of the consideration of these cases, which, if time permitted, might afford matter for much interesting and instructive discussion and remark. For example, I might seek to inquire concerning the nature of this extremely subtle* and powerfully concentrated virus, which propagated itself so fatally from one victim to another in spite of the great precautions adopted; and inquire in what way it got admission to the system, whether by direct inoculation, by simple contact with person and clothing, or by the inhalation of an impregnated atmosphere. I might also speak of the strong confirmation which these cases afford to the generally admitted opinion that debility of constitution, as also mental disquietude and despondency, present a very great attraction and predisposition to the reception of this, as well as any other specific poison exerting a contagious influence; and the support which these cases afford to the opinion that puerperal fever, when resulting from contagious influence, is propagated in its own sphere of action with more undeviating certainty and more deadly power, than the same disease when occurring in the course of an endemic or an epidemic, and infinitely more so than when it happens to have a sporadic origin. I might also notice the peculiar malignancy of this type of fever—its intractableness (as all

* Some years since Dr Allen of York, after having a long list of fatal cases of puerperal fever, had no other instance of it until two months subsequently, when a patient attended by his assistant in a pea jacket, worn last by Dr Allen when in attendance during a whole night on a case of the fever in an advanced stage, was seized with it.—*Provincial Journal*, No. 166.

who have ever met with it acknowledge) to the appliances of art, however varied and judicious they may be.* On such topics, however, I shall not enter, but pass on to show, in a very brief narrative, the singular connection, or at least association, which these cases had with erysipelas and phlebitis, an alliance which has been frequently pointed out by writers on this subject.†

When the first case of puerperal fever happened in my practice, I was visiting a gentleman twice daily with erysipelas, spreading from sinuses which surrounded the right hip joint, and had their origin from a mismanaged bubo and a much impaired constitution. This case was the most malignant one of the kind I ever witnessed, proving fatal on the 16th September, after his body had for some time become deeply jaundiced, and large purulent deposits, attended with considerable emphysema, had formed in the right knee and left shoulder joints, as also among the muscles of the right forearm. After applying the usual dressings to this case, there being a very copious discharge of dark-coloured foetid matter from the sinuses, I was on every occasion most careful in attending to ablutions, for the sake of personal comfort, not from the remotest idea of averting bad consequences from those with whom I might come in contact; and it was only the progress of events which suggested to my mind the probable relation which this malignant case bore to the subsequent disastrous cases in the accouchement chamber; and after this idea occurred, and was stated to some medical friends, it was confirmed by cases very similar in many respects, which I find related in an interesting, able, and candid paper, by Mr Storr of Doncaster,‡ and which happened both in his own practice and in that of others.

During attendance on this individual I delivered Cases I., II., and III. But in order to show what weight is to be attached to evidence of an animal poison being conveyed from this case of gangrenous erysipelas to the labour cases, it is proper to mention that I delivered another patient on the same morning as Case I., and that I continued to visit her from day to day until the 10th of the month. While attending Case III. I had only another patient affected with erysipelas, but of a mild character, in the case of

* "It may appear presumptuous to recommend any course of treatment in a disease which, as far as we know, has always been fatal, &c." Locock, Lib. Pract. Med., vol. i. p. 361.

† Gordon of Aberdeen, Gooch, Nunnely; and vide also the excellent paper of Mr Sidey, in the Edin. Med. and Surg. Journ. 1839. p. 138.

‡ Mr Storr had a long list of fatal puerperal fever cases, from the dressing of a case of gangrenous erysipelas with subsequent abscesses. He also relates that Mr Reedal of Sheffield had five fatal cases from attendance on a sloughing bubo, with erysipelatous inflammation; that Mr Slight of Hull had three fatal cases from attending a case of erysipelas; that Mr Hardey of Hull had seven fatal cases from attending a case of erysipelas with sloughing abscess; and that Mr Allen of York had a long list of fatal cases originating from one of erysipelas.—Provincial Medical Journal, No. 166, December 1843.

a boy, from whom I had removed a finger much injured by machinery. During attendance, however, on Cases IV. and V. I had four cases of erysipelas under my care, two of them of the head and face, mild and recovering well; but the other two, those of a brother and sister, were distinctly contagious, of the worst type, and terminated fatally.

These cases, I believe, for reasons already stated, had no influence in generating the puerperal malady; but, as the last two are of interest, as bearing on other points connected with the subject of this paper, namely, the remarkable combination of erysipelas with phlebitic and peritonitic disease, I make no apology for briefly introducing them here. Both patients were advanced in life, the brother, a man of a gross habit of body, affected with hemiplegia some weeks previously, but apparently doing well, and the sister, a very thin and delicate individual. Having come from the country to nurse her brother, and being exposed to much cold and fatigue in her attendance, on the 17th September she became affected with an erysipelatous sore throat, from which the inflammation spread along the lining of the nares, and thence extended over the head and face. So far her case, although severe, appeared to be progressing favourably, when she was seized with phlebitis in the left leg, where there was a slight varix of long standing. It began with excruciating pain of the whole limb, and was speedily followed by a tense colourless swelling, — which subsequently became purple; it was attended with muttering delirium; and death took place on the third day from its occurrence. The brother, who lay in an adjoining apartment, had had a seton introduced in the nape of his neck, two days prior to the appearance of erysipelas in his sister. The same attendant who nursed the sister dressed his neck and assisted him otherwise; and in a few days erysipelas appeared in the neighbourhood of the seton, spread quickly over the greater part of the head, face, neck, and shoulders. This seemed to injure him so little, notwithstanding his previously weak condition, that I cherished the hope of benefit springing out of it for the remedy of his paralytic affection, when suddenly he was seized with peritonitis, attended at first with considerable pain and great general uneasiness; and he sunk on the third day from its occurrence, (1st October,) the abdomen being enormously distended with air and fluid.

What was the precise amount of morbid influence which any or all of these cases of erysipelas exerted in *communicating disease* to any or all of my puerperal patients, or whether the first case of fever originated from causes elaborated in itself, and was propagated to the other sufferers, I shall not pretend to decide; but I shall go on to state some other cases of disease which occurred to

me at the same period, of the same character, and which, singularly enough, *was distinctly generated from* puerperal fever, affording a clear additional—a reflex proof, of the mysterious connection which appears to exist between these affections.

Mrs W., a respectable ladies' nurse, who had been a good deal with my puerperal case, No. III., giving enemata, &c., was seized with fever on the 25th September, the day previous to the accouchement of Case IV., whom also she had daily visited up to the time of her own indisposition. At first the fever was complicated with a hernia brought on by severe retching. This I reduced, although the symptoms of strangulation were urgent, and the fever went on in a very usual course until the 30th, when her right forearm exhibited symptoms of acute phlebitis. At first it was simply painful as if rheumatic; it then, without any change in colour, became more and more swollen and tense. She died delirious on the 2d of October.

From this arm I drew blood, when considerable abdominal pain was felt some hours after the hernia was reduced; but the arm was not marked by hardness or pain at the part, or in the course of the vein opened.

Another nurse, advanced in life, who had visited Case III. several times, and had waited on Mrs W., the ladies' nurse, during the first day of her illness, (the 25th,) and had likewise visited Case IV. once on the afternoon of her confinement, (the 26th,) was seized on the 27th with erysipelas of the head and face, and recovered with difficulty.

Another case of fever occurred at the same time that Mrs W.'s was going on, in the instance of an old lady from the country, who had just taken lodgings in the same house. This case, however, was mild, and she made a good recovery.

I may here also state that it was remarked that almost every individual who had visited the house of Case III. during her illness, was soon afterwards affected with ailments of one kind or another, particularly with slight feverishness and sore throats; and it was after my attendance on this patient that I too suffered in a similar way.

As it has been stated by several writers on puerperal fever that a great many of the infants of those who have been affected with it, more especially in lying-in-hospitals, perish soon afterwards, and most commonly of erysipelas, I may mention that, although two of the offspring of my patients died soon after birth, neither were affected with that disease. It is remarkable, however, that the child of the sister of Mrs S., (Case I.) who was confined under such unpromising circumstances, died of erysipelas affecting the genitals.

Viewed even by themselves, these cases prove a great deal;

but when taken in connection with the already published facts and opinions regarding the contagion of puerperal fever, they afford a weight of evidence enough to carry conviction to the minds even of those most inclined to doubt.

The principal points which the facts in this paper serve to prove are the following :

1. That a specific virus, of an animal nature, is produced under certain circumstances, and in turn generates a peculiar form of fever in the puerperal state.

2. That that virus frequently originates from erysipelatous inflammation.*

3. That, when once generated, it may be communicated from one lying-in patient to another with extraordinary virulence, quite independently of locality, either by direct intercourse or through the medium of a third person ; and that this is more likely to happen when the predispositions of a weak body and a depressed mind exist.

4. That it may produce disease of various kinds in non-puerperal individuals, more especially of an erysipelatous and phlebotic character.†

5. That treatment, whether directed by theoretical opinions or the indications of physical signs, is of little avail ; but that if any theory is to be entertained respecting this type of puerperal fever, it should be that something of a specific and morbid nature requires to be thrown out of the system,‡ and the powers of life sustained ; and that the practice which holds out the greatest prospect—small at best—of this being accomplished, will be the employment of the diaphoretic and stimulant plans of treatment, according to the stage of the affection.

6. That the principal concern of the medical man, seeing that a cure is so difficult and so very rare, should be to adopt every conceivable precaution against the occurrence of a single case of

* Cases of *typhus fever* and *gangrene* also appear to have generated this virus, and communicated it to puerperal patients, occasioning a succession of fatal cases. *Provin. Med. Journal*, No. 166. Dr Collins mentions the occurrence of two cases in the Dublin Lying-in Hospital, from a typhus patient being put into an adjoining bed.

A very curious case is stated in Mr Storr's paper, of three surgeons in the same town, after being engaged at an autopsy of an individual who had died of gangrene, having each of them several cases of fatal puerperal fever in rapid succession some days after the inspection.

† *Peritonitis* also appears, from well authenticated cases, to have been communicated to visitors and attendants of those affected with puerperal fever, and that, too, even in the case of males. *Provin. Journ.*, No. 166 also.

The case recorded at page 92 of this paper is an example of the association of peritonitis with erysipelas,—or perhaps, to speak more correctly, its translation. Dr Abercrombie states that the peritonitis, under such circumstances, is quite different from the ordinary peritonitis, more allied to that of puerperal fever. *Dis. of Stomach and Bowels*, p. 197, &c.

‡ This opinion may be held without assenting to all the absurdities of the humoral pathology.

it, or to lessen the risk of its propagation when once established. And to attain these ends, patients in childbed should either not be attended at the same period with cases of malignant or severe erysipelas, or that proper caution should be observed as to ablutions, &c., more especially after contact with any discharge from them; and that when a puerperal fever case does occur, lest it should be something more than sporadic, chlorinated ablutions and change of garments are first required; and then should a second case occur, it would be the safest plan for the practitioner to abandon the practice of midwifery for a time, two or three weeks if possible, and in the interim attempt, by removal into the country, warm baths, and other alterative and purifying means, and by the exposure of the clothes to a free atmosphere or to a high temperature, (150° dry heat,) as Dr Henry recommends, to rid himself of the subtle virus which adheres to him so tenaciously.

Having already trespassed too long on your time and patience, I shall now conclude with expressing the hope that, as good often springs out of evil, so my sad experience may prove beneficial in the practice of others.

