PROVINCIAL MEDICAL JOURNAL

And Retrospect of the Medical Sciences.

No. 162.]

LONDON, SATURDAY, NOVEMBER 4, 1843.

PRICE SIXPENCE.
[Stamped Edition Sevenpence.

MALIGNANT

P U E R P E R A L F E V E R .

A STATEMENT OF FIVE FATAL CASES, INVOLVING THE QUESTION OF CONTAGION.

WITH REMARKS.

By N. B. FISHER, Esq., of Bungay,

Member of the Royal College of Surgeons, London.

Next to the publication of these cases of puerperal fever—"that plague of the lying-in chamber"—which are intrinsically valuable, my object has been to fix the attention of the obstetric practitioner on the subject of *contagion*. Some writers, such as Drs. Campbell and Mackintosh, and Mr. Hey, believe the disease to be purely inflammatory, and non-contagious; and yet, with strange inconsistency, style it "puerperal fever." Others speak of its being contagious only when epidemic, and not when occurring sporadically, as in my examples. But I would beseech the profession, for the sake of humanity, and as they would escape the deep regret of being accessory to the death of their patients, to profit by my experience, and take the utmost precaution in every instance.

CASE I.—Mrs. S., aged thirty-eight, a fine healthy woman, was delivered on July 28, 1843, at half-past three, a.m., of her eighth child, after a three hours' easy natural labor. During the day had usual after-pains; pulse quiet, and very comfortable.

29. Ten, a.m. Pulse still quiet, and proceeding most favorably.

Nine, p.m. Pulse quickened; breathing frequent; skin hot and moist; but no pain or tenderness in uterine region; lochial discharge natural. Ordered aperient draught and effervescent.

30. Nine a.m. Bowels freed six times; no abdominal complaint; washed with perspirations; breathing hurried; pulse 120, full, and soft; breasts flaccid; had had some sleep; lochia continued. Learnt that a rigor took place the previous afternoon. To have effervescent draughts, with tincture of digitalis and nitrate of potash every four hours.

Nine, p.m. Symptoms unabated; abdomen anxiously examined, but no pain on pressure, or any complaint referred to that part; has wandered during day; watched carefully for development of inflammatory mischief, but in vain. Ordered salines to be continued, and gave five grains of mercury with chalk, with three grains of extract of henbane, in a pill, every four hours.

31. Symptoms and treatment much the same as yesterday.

August 1. Called up at half-past four, a.m. Attacked with severe pleurisy of left side; pulse 145, full, and compressible; breathing catching and

hurried, and extremely painful; reeking perspirations; at times delirious; lochia present and not offensive; bowels several times acted on. Had a dozen leeches to side, which afforded great relief. To continue pills and mixture, and take immediately fifteen grains of Dover's powder; to have arrow-root and sago.

Nine a.m. Pleuritic pain has increased. Ordered a blister to side. Has been delirious at short intervals; evident great want of power. Suggested consultation, but not acceded to by patient. As the day advanced the pleuritic action became even more fearful; pulse feebler, and feels exhausted.

Half-past ten, p.m. Visited in consultation with Mr. W. Henchman Crowfoot, of Beccles. Abdomen carefully examined; found rather distended, but soft, and without either pain or tenderness; lochia present; the respiratory murmur audible all over the chest. Prescribed by Mr. Crowfoot five grains of calomel and one of opium every six hours, and twenty minims of tincture of digitalis in a saline, with camphor mixture at same time. Prognosis most unfavorable; some *latent* uterine inflammation suspected.

2. Ten, a.m. Seen again with Mr. Crowfoot. Had slept through the greater part of the night, and expresses herself as feeling better; but we feared it arose from soothing effects of opium, as the pulse was 140; still reeking perspirations; breathing anxious and hurried; and a good deal of delirious excitement. To continue pills and mixture.

Four, p.m. Pleuritic inflammation seized front of chest, with aggravation of former symptoms. Applied a dozen leeches; to be followed by a blister.

Ten, p.m. Strength rapidly failing, and becoming drowsy; surface clammy; pulse 150. Medicine withdrawn, and as much brandy and arrow-root given as patient can swallow.

Midnight. Comatose, and unable to swallow; vomited several times; respiration very labored, but no crepitation.

Expired at half-past three, a.m.

Death took place by way of coma.

Throughout the illness the patient had an unshaken presentiment of her death.*

CASE II.—Mrs. H., aged twenty-six, was delivered, one, p.m., on August 5, of her fourth child, after a short, easy labor.

6. Doing well; has milk, and child has sucked.

7. Three, p.m. Learn that last evening she felt something like a stitch in left side, and rather more after-pain, but had a tolerable night. Had taken some aperient pills this morning without effect, and

* Mr. Fisher informs us that he had a wound on his hand covered with sticking plaster whilst he was attending these patients. The wound healed well enough, and he does not attach any importance to the circumstance, but wished it to be just alluded to.—*Eds.*

the pain has gone on increasing up to the present time. Abdomen rather full, and extremely tender and painful, especially left iliac region; pulse 140 small, and compressible; perspiring profusely; countenance flushed and distressed; tongue nearly clean. Placed with difficulty in sitting posture, and bled to twelve ounces; almost fainted, during which pulse became so rapid as hardly to be counted. She was ordered calomel and Dover's powder, of each ten grains directly, and in three hours a black draught; effervescent draughts every two hours; and abdomen to be diligently fomented until next visit.

Nine, p.m. Learn that, at five o'clock, on rising to take something, had a chill. Blood healthy-looking, but crassamentum loose; pain had been relieved by bleeding, but was increasing; abdomen still impatient of pressure and painful, particularly on left side; bowels unrelieved. To take a black draught; a dozen leeches applied to left iliac region, and hot poultices used; and after the bowels had acted freely, to take five grains of calomel, one of opium, and a quarter of a grain of tartar emetic, every four hours.

8. Eight, a.m. Abdomen soft, less tense, and much easier; bowels acted six times, evacuations dark and offensive; pulse 138, small, and compressible; surface hot, and reeking with perspiration; lochial discharge continues; breasts flaccid; she expresses herself as better, and has slept three hours; has been extremely thirsty, and frequently called for effervescent draughts. Has taken four pills, which are to be continued; abdomen to be kept covered with a hot, dry flannel.

Two, p.m. Has been quite easy; lies upon her sides with the legs straight out; abdomen soft, and only slightly tender; respiration frequent; the bowels very frequently acting. To omit the pills and draughts, and take five grains of mercury with chalk, one of powdered opium, and ten of chalk, every three hours; to have arrow-root and sago frequently.

Ten, p.m. Feels easy, and frequently dozes.

2. Called up at three this morning. The pain returned at midnight, chiefly in left iliac region, which pressure aggravates, but neither pain nor tenderness very distressing; abdomen rather full; breathing extremely hurried, almost panting; restless; countenance anxious and sunk; skin cooler, but very moist; pulse 146, and feeble; the bowels had been running; head unaffected, and mind clear. The mercurial powders to be left off; a dozen leeches applied to seat of pain; abdomen afterwards covered with a blister, to be removed as soon as the skin is red. Thirst intolerable, and craved for effervescent again, which had been discontinued from looseness of bowels; unaffected by mercury; has vomited, and feels very sick. Ordered five minims of diluted hydrocyanic acid, and half a grain of muriate of morphia, every four hours.

Ten, a.m. Blister acting well; patient more tranquil; breathing better; but aspect not less perilous. To have farinaceous nutriment, with a teaspoonful or two of brandy, every half hour.

Eleven, p.m. Condition the same.

10. Half-past eleven, a.m. Mr. Crowfoot did me the favor to see the case. Advised a continuance of same remedies. He remarked that he should not have

thought so unfavorably of her state, but for the death of first patient, seeing how easy and tranquil she lay.

Eleven, p.m. Pulse weak and fearfully rapid; stomach inclined to reject all that is taken; frequently passing offensive watery motions; surface clammy, and hands cold; abdomen flaccid, rather full, and not tender; tongue coated white, and moist; mind calm and clear. To have nutriment, with brandy, diligently given. She has hitherto lain in any posture; now lies on her back powerless, and evidently fast sinking. Ordered ten grains of sesquicarbonate of ammonia in camphor mixture every two hours; two one-grain opium pills, to be given each hour; and if the bowels are not stayed, to have five and twenty drops of laudanum in a teacupful of arrow-root thrown up the rectum twice, at an interval of two hours. Waited until one, a.m., to see the remedies properly administered.

11. Seven, a.m. Had vomited and purged incessantly; pulse scarcely to be felt; skin cold and clammy, with a clear consciousness of rapidly approaching dissolution. Her state bears the aspect of a person dying of Asiatic cholera. She continued vomiting almost without intermission until she expired at half-past one, p.m.

Death took place by way of asthenia.

CASE III.—Mrs. F., aged thirty-seven, was delivered of her fifth child on August 5, at two, p.m., after a three hours' natural labor.

6. Reported to be doing well.

7. Half-past three, p.m. Learn that she was attacked at nine, a.m., with a shivering, followed by purging and vomiting, and severe abdominal pain; has passed a large quantity of feculency, clayey-looking, with some relief to the pain; pulse 130, full, and soft; tongue loaded with a yellowish-white fur; sweating profusely; pain extends across the upper part of abdomen, and over chest; epigastrium acutely tender; countenance distressed; the slightest motion aggravates pain; breasts flaccid; and lochia natural. With difficulty got into sitting posture, and twelve ounces of blood drawn, almost producing syncope, the pulse becoming much more rapid and thready. Gave immediately ten grains, each, of calomel and Dover's powder; ordered diligent fomentation for six hours, and left her six pills, each containing two grains of calomel, one of opium, and a quarter of a grain of tartar emetic, to be given one every two hours. Much easier before I left her.

Ten, p.m. Pain ceased soon after I left, and now lies comfortable, turning in bed at pleasure, and bears any amount of pressure; pulse 125; extreme thirst; blood buffed and slightly cupped, clot loose and easily broken down. To have effervescent draughts ad libitum, and take five grains of calomel, one of opium, and a quarter of a grain of tartar emetic, every four hours.

8. Nine, a.m. Has been totally free from pain; disregards pressure; frequently dozing; pulse 126, and perspiring profusely; tongue has a thin yellowish white fur; seems narcotised. The pills to be given only every eight hours.

Half past ten, p.m. Mr. Crowfoot called in. She had vomited several times, and could with difficulty retain anything; pulse 130, weak; no pain or tenderness on pressure anywhere. Mr. C. prescribed a

tablespoonful of milk every half hour to allay sickness; support; soothing, and effervescing draughts, which were craved after; omit pills. Prognosis more favorable than in Case II.

9, Ten, a.m. Stomach and bowels irritable; tongue has a broad red line down its middle; feels faint and exhausted; has distressing neuralgic pains shooting through left arm and side of trunk, and over chest; breathing hurried; lochial discharge natural. Gave a one-grain opium pill, and left another to be given in an hour, to quiet the stomach; to have half a teacupful of arrow-root or sago, with a teaspoonful of brandy, every half hour.

Two, p.m. Keeps nothing down. To have diluted hydrocyanic acid and hydrochlorate of morphia, in camphor mixture, every two or three hours.

Nine, p.m. Vomiting frequently, and bowels relaxed; the tongue beefy-looking; and has difficulty in swallowing, from soreness of fauces; thirst intense; pulse 145, and feeble; she is restless, and the countenance has an anxious, collapsed appearance.

10, Ten, a.m. Again visited with Mr. Crowfoot. Gastro-intestinal canal had been quiet during the night; had slept at intervals; but this morning the vomiting returned, with alarming increase of weakness. To repeat the morphia mixture, which had been discontinued during night. Evidently sinking; calm, and intellect unclouded.

Three, p.m. Saw her again with Mr. Crowfoot. In articulo mortis.

Expired at a quarter past seven, p.m. Death took place by way of asthenia.

Dissection the following Morning.

(Present, Mr. Crowfoot: Mr. Davy, of Beccles; and myself.)

We found a pint of serum in the peritoneal sac; peritoneal lining of abdominal muscles generally vascular, especially over the epigastrium and hypochondria, where lymph was effused, also on the serous covering of the liver, producing adhesions, which were easily broken up. Here, it will be recollected, the pain was most severe; and, from the albuminous exudation, of a more sthenic kind. In the pelvis the fluid was sero-purulent, and in the folds of the broad ligament of the uterus two or three ounces of pus were found; ovaries partly coated with lymph; the Fallopian tubes very vascular; and the uterus of a normal size, one side having patches of lymph, but its substance firm and healthy, and interior natural. No inflammation or pus could be traced in the uterine or iliac veins.

CASE IV.—Mrs. R., aged thirty-five, delivered of her fifth child on the 7th of August, after a natural labor of four hours' duration.

8, Three, p.m. Very comfortable, and pulse quiet. She informs me she has suffered, as usual in her former pregnancies, from erysipelas of the face and leg for the last fortnight.

9, Five, p.m. On my way to visit my patient I met a messenger coming for me. Learn that up to three, p.m., she remained comfortable, when, while in the act of relieving her bowels from some castor oil taken, she experienced a dreadful shivering fit, and violent abdominal pain. Pulse is 156, small and feeble; face purple, and skin reeking with perspiration; most agonising pain in uterine region, with utmost impatience of pressure; breasts full of milk; lochia

natural; bowels well freed. With difficulty raised in bed, and bled until the pulse became very rapid and hardly perceptible; eight ounces drawn. Had immediately ten grains each of calomel and Dover's powder; ordered a pill with five grains of calomel, one of opium, and a quarter of a grain of tartar emetic, every four hours; effervescent draughts, containing nitrate of potash, at pleasure; and applied twenty-four leeches to hypogastrium, to be followed by repeated hot poultices.

10, Half-past eight, a.m. Pain and pyrexia abated, but great want of power; can turn at pleasure; pulse 135; hypogastrium still painful at intervals, and very tender. Ordered a dozen leeches; pills and mixture to be continued. Bowels have acted several times. The blood drawn had a very remarkable appearance; its surface was perfectly green, and the whole mass almost black, and of the consistence of cream, the crassamentum being dissolved, and without the usual separation.

One, p.m. Visited in consultation with Mr. Crowfoot. She is so much relieved that she can turn and lie in any position; pain nearly gone, and pressure borne; respiration natural; pulse 118; skin very moist, and expresses herself comparatively well; the blood drawn by leeches unusually liquid. To continue pills and mixture.

Ten, p.m. Has some intermitting pain; pulse 118, and weak; perspiring very much; bowels frequently acting. To go on with pills, and take chalk mixture after each evacuation.

11, Eight, a.m. Had a disturbed night from harassing diarrhoea, and feels exhausted; has some pain of a griping character. To omit pills and mixture; bowels to be quieted by aromatic confection, and twenty drops of wine of opium, in camphor mixture, every two, three, or four hours; to apply hot oil of turpentine, by means of rag, every four hours; have half a teacupful of arrow-root, beef tea, and wine whey, alternately, every half hour; and rub a drachm of strong mercurial ointment into the thighs, alternately, every four hours, lodging a piece each time in the arm-pits.

Three, p.m. Feels revived by nutriment; bowels quieter; abdomen flat and soft, and only tender in left iliac region.

Ten, p.m. About the same as last reported; gets refreshing sleeps. To have nutriment assiduously administered, and keep up the inunction.

12, Nine, a.m. The symptoms about the same; pulse weak and varying, sometimes for a few hours rising to 135, and then lowering to 118. To persevere during the day with turpentine application; inunction; astringent, soothing mixture, and nutriment.

Eleven, p.m. To continue remedies unremittingly.

13, Ten, a.m. Diarrhoea, with griping, most troublesome during night; pulse 135, and weak; perspiring much; tongue clean and injected; abdomen flat and flabby, and impatient of pressure only in left iliac region; feels much weaker, but lies tranquil, and breathes naturally. To omit mixture and wine whey, and take of each a grain of acetate of lead and opium every three hours, or oftener. Persevere with inunction and nutriment. Applied a blister over seat of tenderness.

Ten, p.m. Bowels stayed by pills; pulse 125;

gums tender, and face swelled and painful. To omit the inunction.

14, Eight, a.m. Passed a more comfortable night, but unimproved; passed the day with an interchange of restlessness and composure; extremely rapid pulse and quieter circulation.

Ten, p.m. Pulse 150; restless, and distressed with more feverish reaction than had been observed for last three days; bowels frequently acting, occasioning a death-like sinking. Had an injection of forty drops of laudanum in two ounces of thin arrow-root, but not retained; repeated in half an hour, but came away. At midnight had again the benefit of Mr. Crowfoot's presence. Pulse down to 125 again, and more tranquil; tongue red and rather glazed; passed while we were with her a motion, scybalous-looking. Mr. C. advised the bowels to be washed out with a pint of arrow-root. Prognosis full of danger.

15. To-day complains of wandering pains all over the body, which she attributes to the mercury. Had an ounce and half of infusion of cinchona every four hours; the nourishment, with half an ounce of port wine, every half hour or hour, and acetate of lead and opium pills; but must soon sink.

16. This morning the wandering pains caused her to scream out and moan most piteously, and she could scarcely bear to be touched. Pulse has risen to 160; tongue aphthous, and a morbid acuteness has arisen, so that she speaks out, asks for porter, &c., and talks rationally about every minute occurrence. As the day advanced, jactitation came on, and the stomach rejected everything. A drachm of wine of opium was given to allay pain; but delirium and extreme restlessness speedily brought about a fatal issue.

She expired the following morning at two o'clock. Death occurred by asthenia.

Dissection the next Morning.

(Present, Mr. Crowfoot and myself.)

The ovaries and Fallopian tubes were found vascular, and the former partly covered with lymph. The uterus enlarged, its substance thin and soft, and its lining membrane exceedingly inflamed, with some patches of albuminous secretion. The liver pale, and its texture friable; and the heart pale, enlarged, its parietes attenuated, and easily torn. No effusion or peritoneal inflammation present; and, after careful search, no phlebitis could be discovered, nor pus in the veins.

CASE V.—Mrs. B., aged twenty-seven, was delivered August 14, at half-past three, a.m., of her fifth child, after an easy labor of four hours' duration. Her husband and children are now convalescent from continued fever, and she herself has felt lately indisposed, suffering from headache and feverishness. During the day had a good deal of after-pain.

15, Ten, a.m. Find she had a rigor at four, a.m., succeeded by distressing headache, and some abdominal pain; pulse 135, contracted and compressible; skin hot and perspiring; face covered with large drops of sweat; severe gravitating pain across forehead; countenance depressed and anxious; abdomen very tender over uterus. Had her shoulders raised, and abstracted twelve ounces of blood, which caused syncope; ordered diligent fomentation, and gave a scruple of calomel, followed in two hours by a black draught, to be repeated in two hours more.

Three, p.m. Blood not unhealthy-looking, and clot friable; has passed six feculent motions; headache gone; intermittent pain in hypogastrium, which is prominent and tender; feels much relieved. To have flannels wrung out of boiling water, and sprinkled with oil of turpentine, applied every four hours.

Half-past eleven, p.m. Skin hot and very moist; pulse 130, small and weak; countenance depressed; abdomen uneasy; cheeks flushed; has had some pain in left hip, reaching up to margin of ribs, with catching, difficult breathing. To have six leeches applied over seat of pain, and take three grains of calomel, and eight of jalap, every four hours.

16, Ten, a.m. Passed twelve motions; pulse 136, and feeble; has still pain of side; feels very ill and restless, and complains of having had no sleep since delivery. To have arrow-root and sago, with a teaspoonful of brandy, frequently; to take ten grains of Dover's powder directly, and repeat it in four hours.

Three, p.m. Has had refreshing sleep, and feels much relieved.

Eleven, p.m. Pulse 130, feverish; moist skin. Powders of calomel and jalap to be repeated until four motions have passed.

17, Nine, a.m. Seen by Dr. Lubbock, of Norwich, who very kindly came over at my request. Pulse 140, small and feeble; tongue rather dry, and brown in middle, but edges moist; countenance very depressed; abdomen painless, rather prominent, but bears pressure; side relieved; has passed five motions. Dr. Lubbock prescribed two grains of disulphate of quinine, and half a drachm of compound bark tincture, in camphor mixture, every four hours.

Half-past eleven, a.m. Visited again in consultation with Dr. Lubbock, who calls the disease "pitiless" puerperal fever. Ordered a grain of calomel and half a grain of opium every four hours.

Ten, p.m. Symptoms much as last reported.

18, Eight, a.m. Pulse 150, and free from pain; retains all she takes; bowels unmoved; getting cool; sinking rapidly.

Two, p.m. Mr. Crowfoot was so obliging as to see the case with me; particularly struck at finding her so calm and rational, answering every question promptly, and yet so near death.

She expired at half-past three, p.m. Death occurred by way of asthenia.

Some Facts and Circumstances connected with the Occurrence of the Cases.

Two were attacked on the second day after delivery, and three on the third. Two lived five days; two four days, and one eight days.

In detailing these cases, it will be observed that I have generally given two reports in the twenty-four hours, but I saw them nearly every six hours.

Ever since August, 1842, continued fever has prevailed extensively in our town and neighbourhood; and even now it continues in some localities. To form an accurate estimate of its prevalence, I may state, that the population of Bungay is 4000, and I think I shall not be extravagant in putting down the number of fever cases at 250. Its type has been generally mild, the cases extremely protracted, and, happily, the rate of mortality low, not averaging more than one in fifteen.

On the 28th of July, the patient, Case I., was de-

livered, and the following day I attended another midwifery case, which did well. On the 3rd of August Case I. died, and on the 5th I delivered Cases II. and III., within little more than an hour of each other. On the 7th I attended Case IV., and Cases II. and III. were seized while I was with her; indeed, one of them sent for me while I was detained in the house. Case V. I attended most reluctantly on the 14th inst., and not until I had put on my winter clothing, and washed my hands in a strong solution of chlorinated lime. It ought also to be observed, what I have before noted down, that Case V. was ill, at the time of delivery, with symptoms indicating the approach of fever, which had been in her house for three months; so that it does not follow, necessarily, that I communicated the disease to her, as she was in a condition, to say the least, much predisposed to be affected by any epidemic tendency to puerperal fever; perhaps she even contracted the disease before delivery.

As bearing upon the vexata questio of *contagion*, I must remark, I delivered only one other patient after Case I., and that was on the following day, before Case I. was attacked, and she did well, simply, as I apprehend, because I could not be the medium of communicating contagious effluvia I had not received. And what further countenances the very painful impression of *my* having transmitted the deadly poison is, that the women attacked were residing in detached, and in two cases remote, situations, where I could trace no connection whatever with a puerperal fever case beyond myself; and, up to this period, the disease had been unknown for many years in the town and neighbouring district, except a solitary case here and there, which attracted but little attention.

While the patients were under treatment, I kept accurate notes of the cases, which I submitted for Mr. Crowfoot's approval or correction, and he returned them with the following obliging communication. For the remarks I have annexed I hold myself solely responsible.

"Beccles, Sept. 25, 1843.

"MY DEAR SIR,—I have read over the statement of the cases of puerperal fever, which I had the opportunity of seeing with you, and have much pleasure in bearing my testimony to its correctness, as well as to the kind and unwearied attention your patients experienced from you.

"I quite agree in opinion with you that this most fatal puerperal disease is a malignant fever, *sui generis*, and that it is highly contagious; but whether the inflammation, which is generally present in some tissue or another, be a cause or an effect, I cannot say; it, however, commonly forms so important a feature in the disease as to require especial regard in the treatment; and if it cannot be obviated or subdued during the first twenty-four hours after the commencement of the attack, the fate of the patient is, for the most part, sealed, and the after treatment is comparatively of little importance. I believe that, in the very beginning of the disease, one bleeding from the arm to syncope, in the *recumbent* position, followed by free leeching of the anus or vulva, and an active calomel purge, together with turpentine stupes to the abdomen, will give the best chance of recovery to the patient; the after treatment to be regulated according to circumstances. I am persuaded, however, by sad

experience, that malignant puerperal fever will be frightfully fatal under any treatment; and that those writers who have flattered themselves with the belief that they had discovered the certain means of controlling it, have either been so fortunate as not to have met with this particular form of the disease, or have been called to treat it when on the wane.

"Believe me to remain, my dear Sir,

"Yours very faithfully,

"W. HENCHMAN CROWFOOT.

"To N. B. Fisher, Esq."

REMARKS.

My *chief* object in recording a careful and minute detail of these melancholy cases, has been to state faithfully what I have been called upon to witness of the ravages of a disease, the nature of which has hitherto baffled men of the most distinguished talents, and defied the most skilful administration of remedies; and I hope they will not be unworthy of the attention of my professional brethren. As regards the nature and extent of my remarks, I can only say, that I have been tempted to write something about which I have thought and felt much, however uninteresting or imperfectly expressed. I have thought independently, but differed with humility.

The *nature* of puerperal fever has given rise to the most contradictory and perplexing opinions, by writers of equal ability, experience, and veracity; and the only fair deduction is, that each has recorded honestly and treated skilfully what he has seen, but that they witnessed different diseases: those that were successful, treated simply puerperal peritonitis, or puerperal fever of a sthenic type or constitution; and those that lost their patients, had to combat a malignant or contagious principle in active operation, which, by its "shock" to the nervous system, and consequent vitiation of the blood, proved speedily destructive. Dr. Blundell says, "I have known men boast of always curing puerperal fever; and yet, when it has really occurred, they have lost five or six cases in succession."—*Lectures on Midwifery*, p. 177.

And now let us consider the peculiar condition of a female who becomes the subject of the disease. The uterus after delivery is in a state which has been very aptly and forcibly compared to a stump after amputation—one of heightened sensibility; and the system is, as it were, upon the alert to sympathise deeply with any injurious impression made on its most vulnerable part. Again, if we review the diseases attending the puerperal state, is it not remarkable that we have uniformly *morbid sensibility*,* shown by shivering, or chills, and rapid pulse, evidencing how seriously the nervous system suffers? Indeed, so convinced am I of the fact, that I have long been accustomed, upon visiting a lying-in patient, after addressing her, first to feel the pulse, which never fails to indicate the least derangement in the uterine system. I do not, by these observations, intend it to be understood that I am a neuro-pathologist, but only to give to the nerves that share in morbid phenomena they certainly deserve; and I think the remarks will be found to bear upon the disease in question.

After perusing carefully some of the best writers

* I use the phrase "*morbid sensibility*," instead of the less definite word "*irritation*."

on puerperal fever, the reader cannot but be struck with the evident leaning there is to regard the disease as essentially one of the "plegmasiæ," the pyrexia, being symptomatic of local inflammation. And Dr. Robert Lee ("Cyclopædia of Practical Medicine," article, Puerperal Fever), amongst the most recent, elaborate, and trustworthy authorities on the subject, adduces numerous dissections, carefully made by himself, where he invariably found inflammation affecting either the peritoneum, uterus, or uterine veins. Hence, Dr. Gooch and others have gone so far as to term the disease "peritoneal fever," "puerperal peritonitis," "inflammation of the uterus and its appendages in puerperal women;" names calculated to mislead, and originate erroneous practice, if founded upon incorrect pathological views. And this bias is not to be wondered at, when we remember that the inflammation, so frequently present, is almost the only point the practitioner can attack.

Now, it is remarkable how variable the seat of inflammation is found to be—sometimes in the lining membrane of the uterus, its muscular substance, appendages, and veins, but more commonly in the peritoneum; and even should these parts be exempt from inflammation, and only a pleurisy exist, no variation will be seen in the general symptoms. Is there not here, to say the least, a vagueness, and strange deviation from the ordinary conception we have of pleuritis and peritonitis, with the accompanying pyrexia? Suppose I were to say a patient had died of pleurisy, and upon dissection the chest were found to be sound, but, on further examination, extensive peritoneal inflammation were discovered; or, more appositely, were I to assert that a patient had died of puerperal peritonitis, and inflammation of the lining membrane of the uterus were afterwards ascertained to exist, the peritoneum being free from disease, would it not sound most contradictory and absurd? But the objection admits of being put still more strikingly. Dr. Gooch examined the bodies of some, who died of what he strangely designated "peritoneal fever," and could discover no morbid appearances ("On Peritoneal Fevers"), which Dr. R. Lee thinks arose for want of a more minute examination. But still later, even subsequent to Dr. R. Lee's publication, Dr. Locock states:—"After Dr. Lee's researches into these subjects were known, several cases, similar to those related by Gooch, occurring in our own practice, and that of others, convinced us that in these something might be found: but the most careful search was made for morbid alterations of structure in the veins, the absorbents, muscular structure, and the lining membrane of the uterus and the adjacent parts, and nothing could be found to explain the cause of death."—*Lib. of Med.*, Vol. I., p. 350-351. That Dr. Locock's testimony deserves confidence, every one must feel who has read his extremely judicious articles in the "Cyclopædia and Library of Practical Medicine." His only fault is that of having written so little.

In one of my dissections (Case IV.) the mucous coat of the uterus was the only part inflamed, attended with vascularity of the ovaries and Fallopian tubes, although the uterine veins and other structures were carefully inspected. The softening of the liver and heart in this case, as well as the uterus, could

only, I apprehend, have a constitutional origin. And in others recorded, the morbid appearances have been confined to an ovary or Fallopian tube—effects not sufficient to account for death—and yet the symptoms were precisely those of puerperal fever.—*Dr. Conquest's Essays, Blundell's Lectures. &c.*

Dr. Collins also gives the morbid appearances in thirty-seven of the fifty-six women, who died in the Dublin Lying-in Hospital, where a few ounces of glutinous-feeling serum in the abdominal cavity; vascularity of the peritoneum, but which in some was healthy; a little pus in the serum, or deposited in the uterine ligaments, in some, and a softening of the ovaries and uterus in others, constituted all the visible effects of disease. In most cases the uterus was sound; and in several a little serum in the peritoneal sac, and some vascularity of the serous membrane, was all that could be seen to account for death. In some he found effusion into the chest. I will give the appearances in case marked No. 95—certainly the most favorable to my view—in his own words:—"On dissection, not more than two or three ounces of bloody serum were found in the abdominal cavity, without lymph; the serous membrane exhibited little, if any, vascularity; chest healthy; no other morbid appearances."—*Treatise on Prac. Mid.*, p. 449.

These observations, I think, at least countenance a construction of the disease directly opposite to the more generally received one, of making it a pure inflammation; that of classing it amongst the "*febres*," and regarding the local inflammation only as an effect of the *febrile disease*. And if we compare the phenomena of puerperal fever with those of ordinary typhus, they will be found to have some striking features in common. First, we have the nervous system affected, shown by the chill, or shivering fit; then the succeeding reaction, indicated by a hot, dry, or moist skin, and quick pulse, from a seeming effort of nature to throw off some noxious or poisonous agent; and during this tumultuous excitement, the spoiling of some part by inflammation which may be more congested than the rest from the loss of nervous influence. Then the varying seat of the local lesion; the vitiation of the blood; the character of both; and, lastly, should the attack issue in death, that will generally be found to result, either from exhaustion, or the mischief done to some vital part by inflammation. The two causes combined may also produce the result. And here may not the two diseases be fairly said to have had an origin, progress, and termination in common?

And if we examine some of the phenomena of the two diseases more closely, we shall not, I think, find the difference observable at all to weaken our position of analogy, but to arise out of the dissimilar states of the two constitutions at the time of seizure. The one—that is, the puerperal constitution—characterised by morbid sensibility, and a condition of the womb rife for diseased action; the other a comparatively quiescent state.

The different course of puerperal fever will be found to consist, mainly, in the pulse, seat of inflammation, and short duration of attack. And may not the characteristic rapidity of pulse be caused by the morbid sensibility peculiar to a puerperal patient; the dif-

ferent seat of inflammation, by the uterus being at that time the most vulnerable part of the body, and the peritoneum so immediately contiguous; and the quick termination of the attack result from the shock to the nervous system and the wear and tear of such tremendous arterial action, which probably also accounts for the speedy development of inflammation, with its morbid products, serum, lymph, pus, and even gangrene. Or the poison might be too strong for a system so circumstanced to bear up under long.

The varying seat of inflammatory action, and its occasional absence, in puerperal fever, will be found to correspond with what we see in continued fever. Some instances of typhus fever are met with where, on dissection, no marks of inflammation can be detected. But I will again avail myself of Dr. Locock's evidence, far more valuable than my own. He remarks—"From our own researches into the writings of others, and from personal experience, both in private practice, and as attached for nearly eighteen years to a very large lying-in hospital, we are inclined to doubt the propriety of considering puerperal fever as merely symptomatic of *local inflammation*. But, if this were admitted, we have records of so great a variety in the seat of the inflammatory action, as proved upon dissection, that it will be found impossible to select any one part as peculiarly affected. We find in other fevers a liability to particular local lesions, equally varying; the brain, the chest, the mucous membrane of the stomach and bowels, have been, in different epidemics, the seats of the disorganising process; but it has been too much the fashion to put down all the morbid appearances as exclusively the cause, and not the result, of the constitution affection."—*Op. Cit.*, p. 349.

The unhealthy appearances of the blood in puerperal fever and typhus are remarkably uniform, and have been noticed by almost all writers; indeed, its dark color, a coagulum loose and easily broken down, with slow and imperfect separation of serum, are mentioned by some as contra-indicating further depletion. In one of my cases this was very striking, and there the clot was *dissolved*, with a green hue upon its surface, no separation of the serum, and the whole mass was of the consistence of cream, as seen twelve hours after being drawn. And what is further remarkable, as may be seen by reference to the case (Case IV.), this woman, up to the very moment of seizure, felt perfectly well, and the blood was taken only two hours after, which really favors the idea of the change in the blood having been going on silently prior to the attack.

That continued fever is contagious, no unprejudiced observer now doubts; and a careful perusal of the five cases of puerperal fever I have recorded, with their attendant circumstances, confirmed as they are by numerous instances published, even more striking, can surely leave no doubt on the mind as to classing it with the generally acknowledged contagious diseases. That it is not always so, is only what we find to be the case in small-pox, scarlet fever, &c., where there is the same want of uniformity. But I shall revert to this part of the subject again.

In filling up the analogy, I may likewise mention that puerperal, as well as continued fever, is either sporadic or epidemic. The two are also sometimes

prevalent at the same time, and both will have petechiæ. Some fatal cases of puerperal fever occurred in the Westminster Lying-in Hospital during the spring of 1838, where petechial eruptions appeared precisely similar to the *spotted* fever, then so prevalent in the London hospitals.—Locock, *Op. Cit.*, p. 349.

Another remarkable circumstance is, that not only are the two diseases epidemic at the same period, but the contagion of typhus has *seemed* to generate puerperal fever. Dr. Collins states the following interesting facts (*Op. Cit.*, p. 381):—"This disease"—that is, puerperal fever—"has become epidemic in our hospital upon several occasions when typhus fever prevailed in the city, and at other periods when erysipelas was frequently met with. When Dr. Labatt was master of the hospital, puerperal fever commenced its attack on one occasion in the following striking manner:—A patient was admitted at a late hour at night into one of the wards, laboring under a bad form of typhus fever, with petechial spots over her body; when observed next morning, she was removed into a separate apartment, where she died shortly after. The two females who occupied the beds adjoining hers, while she remained in the large ward, were attacked with puerperal fever, and died. In October, 1827, when I was resident as master, an occurrence precisely similar took place. A patient in typhus fever was admitted at night into one of the labor wards, where she remained for some hours; the ward contained four beds; the three women occupying the other beds were attacked with puerperal fever, of which *two* died." Again, "It has been known likewise to appear with great violence, at precisely the *same period*, in situations very remote; for example, in the year 1819, it was epidemic in Vienna, Dublin, and Glasgow; in the two first-named to a frightful extent. In 1829, in Paris, it was extremely fatal, while at the same time, in London and Dublin, it was prevalent to a considerable degree."

The last feature of resemblance I will mention is that of the softening of the solids in both fevers. In one of my dissections (Case IV.) the uterus and liver were found to be easily broken down, and the walls of the heart were attenuated and softened; indeed, these organs appeared almost *rotten*.

The occurrence of uterine phlebitis, and consequent presence of pus in the veins, in some cases of puerperal fever, has been held by Dr. R. Lee to explain the nature of the disease in its most fatal forms. But Mr. Gulliver could discover pus in the veins of only one patient dying of puerperal fever; he likewise found it in confluent small-pox, erysipelas, swelled leg from ulcer, tubercular phthisis, &c.—*Trans. Roy. Soc.* In my two dissections, although search was made, no phlebitis could be discovered. And if pus were found in the veins in no other disease but puerperal fever, the same objection would lie against it for want of uniformity—its absence in some cases—as applies to the intestinal essence of continued fever, and the peritoneal essence of puerperal fever.

I cannot, therefore, believe that the inflammatory appearances observed in *genuine* puerperal fever are sufficient to account for its frightful fatality, seeing that, in some dissections, no morbid effects have been detected; in others, only an ovary or Fallopian tube

has been found inflamed. And it does seem to me to be as reasonable to adopt the exploded theory of continued fever being inflammation and ulceration of the mucous glands of the ilium, as to make puerperal fever peritonitis, or hysteritis, or any other *itis*. It was said by some more judicious observers, when the Broussaisian notion of fever was in fashion, if we can find only one well-marked instance of fever to occur without any trace of a morbid action having been going on in the mucous follicles, that instance would, of course, suffice to overturn the theory. And does not this test well apply to the reputed local habitation of puerperal fever?—and is not the theory as completely overturned by it, when we have the clearest evidence of puerperal fever ending fatally without a vestige of structural disease being discovered by dissection? And if the specific poison manifests its elective affinities by settling on the uterus or its serous membrane in a large proportion of the puerperal fever cases, have we not the same election in the prevailing lesion of the intestinal mucous follicles in typhus. Again, admitting that extensive disorganisation is frequently found in the abdomen in puerperal fever, I question if the cerebral, thoracic, and abdominal complications of continued fever, will not yield as great an aggregate of structural disease of a similar kind, differing only in its seat.

To recapitulate briefly, so far as I have been enabled to understand the disease, from carefully watching five cases, and some patient thought, I am led to regard puerperal fever to be, in its essence, a "primary fever," produced by some morbid poison, which, by its "shock" to the nervous system, causes the blood to become vitiated; to be frequently attended with inflammation, regulated in its seat by the elective affinities of the poison for particular nerves, those of the uterus and its adjacent parts suffering, because the most obnoxious; to be uncontrollable and frightfully mortal, because at present we have no means of eliminating or neutralising the poisonous influence, or removing its effects; and to be communicable from one person to another.

The *predisposing causes* of the disease are as obscure as its nature. Those usually assigned were none of them present, so far as I could judge, in my cases, for all the labors were easy and natural, and the placenta were thrown off by the unaided contractions of the uterus. And it has been observed, that the disease as frequently occurs after easy as difficult parturition. I have often been astonished to see the undisturbed and speedy recoveries after protracted and instrumental labors; indeed, experience has encouraged me to allay my patient's fears with the prospect of well-doing under such circumstances. Noxious exhalations are likewise mentioned. And here I am tempted to quote another fact, showing the common origin of typhus and puerperal fever:—"In the spring of 1838, when puerperal fever was remarkably prevalent, and more fatal than was ever before known, in the lying-in hospital, it was discovered that there was an open sewer, 200 yards in length, immediately at the side of the building, which had become exceedingly foul and offensive. The hospital was closed for several weeks, but the first cases readmitted were attacked with fever, and there was no remedy but again to close the hospital, and take

measures to cleanse and enclose the sewer. The suddenness and fatality of the fever was precisely like that form of typhus fever which often arises from exposure to similar miasmata, the effect of which on the nervous system is well known. The hospital was re-opened in the first week of November. From that time to the 1st of August, 1839, 142 cases were admitted; seven or eight cases of decided puerperal fever have occurred, and a few of abdominal pain and tenderness. All the cases recovered."—Locock, *Op. Cit.*, p. 358. And I may mention, *simply as a fact*, that my first patient resided in a part of the town where fever had been most rife, and I could describe some nuisances on the spot highly injurious to health. Contagion is, I have no doubt, an *exciting* cause.

The *symptoms* of the disease are unsatisfactory. Three of my patients had a shivering fit at the onset; one had a chill, and in another the chill was felt eight hours after the attack. Three were seized with agonising abdominal pain; in one it reached across the epigastrium, hypochondria, and over the chest; in another it affected chiefly the left iliac region, and in a third was limited to the uterine region, afterwards affecting the left iliac, but with more tenderness than pain. In one the pain was shared between the head and hypogastrium, but in neither part was it severe. In all the pain almost ceased after the first eight hours, and in one it quitted instantly after the bleeding, and neither pain nor tenderness was afterwards experienced—the firmest pressure could be borne—and yet, on dissection (as may be seen by reference to Case III.), we found general peritonitis, with lymph and adhesions, and serum and pus in the peritoneal sac. In Case I. no abdominal symptoms were ever discovered beyond a fulness, and the only source of suffering was a transient pleurisy on the third day after the attack. In two the abdomen was flat to the last; three had some distention. The comparative freedom from symptoms of inflammation, after the first eight hours, was a remarkable feature in the malady, and has been observed by others. All but one had rapid pulse, reeking perspirations, and hurried breathing; and that patient had the same pulse and skin, but respiration was tranquil.

The freedom from pain and suffering, and the hopeful expressions of the patients, as the disease advanced, were particularly striking, and might have deceived even the medical attendant, but for the pulse remaining all the while fearfully rapid. I found the nurses and friends continually making a wrong report; and in one, under the false hope, the patient was even taken out of bed, and on my arrival I was greeted with the account that she had "got the turn;" the pulse, however, foretold of approaching dissolution.*

* I have not filled up my description with the more inconstant, yet collectively important—symptoms, such as a pale, ghastly countenance, great prostration of strength, &c.—all of which vary according to the particular type of the fever—because I am not writing a regular treatise on the disease. Nor have I, for the same reason, mentioned the diagnostic symptoms of simple puerperal peritonitis—such as abdominal pain and tenderness, a hot dry skin, hard pulse, and inability to move at ease out of the recumbent posture with the legs drawn up—where the lancet is the anchor of hope. But I would caution the practitioner against confounding with puerperal fever, or even with atonic peritoneal inflammation, an assemblage of

The only two *uniform* symptoms were rapid pulse and profuse perspirations. My impression is, that the *pulse* is the only symptom, in any stage of the disease, to be depended on. And if I were called to a patient during the first week after delivery, having a weak pulse, ranging between 120 and 160, even without abdominal symptoms, and there were no assignable cause elsewhere, if the pulse did not become reduced very much in frequency after free purgation, or the lapse of twelve hours, I should suspect I had a case of puerperal fever. But if the attack were ushered in with severe abdominal suffering, and the pulse did not go down materially upon subsidence of pain, I should feel no hesitation as to the nature of the disease. And if a vein had been opened early, with the patient in a sitting posture, and the extraction of a few ounces of blood produced syncope, the blood exhibiting feeble powers of coagulation, the opinion would be further confirmed. Hence the value of Dr. Gooch's sagacious remark, that the effects of remedies afford the best guide as to the nature of the malady. If, also, at the commencement, the pain had been excruciating, after some alleviation the patient would not, as in ordinary puerperal peritonitis, continue to lie on her back, but would recline on her sides and turn in bed at pleasure; if the pain had been less severe, this unrestrained posture or restlessness would have been observed from the beginning, for the pain seems of a mixed character, partly inflammatory and partly nervous. And I would venture to recommend every practitioner, when required to visit a puerperal female in whom the disease is suspected, most attentively to watch the pulse, position in bed, and effects of remedies, as affording the *clearest* diagnostic marks. Some authors speak of what are usually denominated typhoid symptoms being present, but in my cases it was the tongue of exhaustion, clean, red, and apthous, and nothing like stupor was seen; in only one was the tongue brown and dry. The frequent absence of the typhoid state in the disease may arise from the patient's dying too soon for its development—in the first week of continued fever. In most cases tympanitis, or effusion, comes on at last; I only saw the latter, and that in but one case. "There are often cases of a more protracted nature which attain a certain approach to convalescence, but linger on for many days, and eventually sink. There are others where the whole disease appears to be chronic or subacute, and such cases are often met with, where there are no other suspicious symptoms than a look of anxiety, great sense of exhaustion, and a rapid pulse. These cases are insidiously dangerous; and it is a safe rule always to be on the watch when the pulse keeps up above 100 for any number of days after parturition."—Locock, *Op. Cit.*, p. 360.

If the nature of the disease is perplexing, and the symptoms are unsatisfactory, the subject of *treatment* is deplorable. And here there is no difference of opinion among those who have *really* seen the dis-

ease; all are agreed in its frightful fatality under every kind of treatment. Dr. W. Hunter stated in his lectures, long ago, "Treat the disease as you will, three out of four will die." And during the last puerperal epidemic fever in Edinburgh, "the disease spared neither high nor low, rich nor poor; those delivered in the hospitals, in the city, nor in the environs; neither the gay and dissipated, nor the most retired and domestic."—*Edin. Med. and Surg. Journ.*, July, 1824.

All my patients died. And but for the very able and kind adviser I had in Mr. Crowfoot, who saw all the cases, and the sanction of Dr. Lubbock, who very kindly came over at my request to visit the last patient, together with the sad experience of other men, I should have felt the sorrow of being singularly unsuccessful. But humanity urges us almost "to hope against hope," and to lay under contribution the resources of our art in all cases, with an energy and perseverance proportioned to so formidable a disease, trusting that our patient may be the occasional sufferer who escapes amidst such fearful havoc.

All my patients, but one, were bled to approaching syncope within six hours after the attack; and I was particularly struck with the fact, that, after the abstraction of only a very few ounces of blood, and the fainter the patient became, the more fearfully the pulse rose—scarcely to be felt or counted—showing an intolerance of blood-letting. The largest quantity of blood required to be drawn was twelve ounces, and the smallest eight ounces. Two of those bled had also, one thirty-six, and the other twenty-four, leeches applied to the abdomen; and both were blistered. One was only bled; another was bled, and had six leeches over the margin of the ribs. All but one had fomentations diligently used; and two had also hot oil of turpentine, applied by soaking rag, every four hours. Three had a large dose of calomel and opium immediately after bleeding, before I left the house; and this was followed up in these patients, after free purging, with five grains of calomel, one of opium, and a quarter of a grain of tartar emetic, every four hours. One was salivated by assiduous inunction. In one case I bled very early, fomented, and tried free purgation, interposing opiates. My first patient, having no early inflammatory symptoms, was not bled, but had leeches and blisters for the pleurisy which afterwards came on. But I will not follow up the detail of treatment, as my belief is, that the destiny of the patient, so far as active remedies are concerned, is mainly settled in the first twenty-four hours.

The traces of analogy I have pointed out between typhus and puerperal fevers, are not, I think, weakened by a consideration of the treatment of the latter; for, in my estimation, the rational object of treatment in *both* are, to mitigate the urgency of symptoms that cannot be wholly subdued; to redress, as far as art may redress, those dangerous complications which are incidental, but not essential, to the disease; and to aid the conservative efforts of nature, when those manifestly languish and fail.

I should as soon expect to "cut short" typhus with the lancet, as to cure puerperal fever by bleeding. If continued fever be a poison, as I believe, the influence of which at length ceases or passes off spontaneously, in the same manner as the influence of a

symptoms allied to hysteria, and designated by Gooch "false peritonitis;" or with that more common affection, "intestinal irritation;" which might lead to more disastrous results in practice. And I fear these affections, simulating genuine puerperal fever, are too often put down for that formidable disease, giving rise to mistaken views and erroneous reports.

dose of opium will pass away;* and if the great object of art be to preserve the integrity of organs, while nature cures the disease; so, in malignant child-bed fever, if the diseases be analogous, the same observations will apply. Unhappily, however, in puerperal fever, from the delicate and susceptible condition of the child-bed patient, and the tremendous shock the nervous system receives from some cause or other—I believe a poisonous agent—life is extinguished before nature has had time to right herself, or throw off the deleterious influence; therefore the difference in the treatment must mainly consist in observing a *promptness and vigilance corresponding to the astounding rapidity of the course the disease runs*.

Admitting that the analogy I have attempted is loose and fanciful, let me ask why puerperal fever, if in its essence inflammation, proves so destructive to life; and why the solids are found softened or rotten, and the blood vitiated and liquefied; seeing that inflammation will seize the same parts, even in a child-bed woman, and be attended with no such effects, scarcely endangering the patient's safety? I have had cases of puerperal as well as ordinary peritonitis. I have expected to cure by copious depletion, aperients, and calomel and opium, and have not been disappointed. "Were full and free depletion the proper and indispensable remedy in this disease, and were no mistake committed by its advocates, in looking on hysteritis or peritonitis as puerperal fever, the lancet ought to be more uniformly beneficial. It ought not, indeed, to be more useful than in simple peritonitis or enteritis, but, if early and vigorously employed, it should not be much less so. Is this the case? Many cases of hysteritis and simple peritonitis I have seen alone and in consultation, and of the benefit of the lancet in these never entertained a doubt; but there is a malignancy in puerperal fever which seems as yet, in most cases, to baffle every remedy."—Burns' *Midwifery*, 6th edit., p. 565. It may be objected that, after being at some pains to justify my classing this malady among the "fevers," I have myself advised for its cure bleeding and mercury, the remedies for inflammation. To which I answer, that, generally speaking, with our present imperfect knowledge, the practitioner who watches the most carefully for the earliest indications of inflammation in any organ, and who subdues it at the least expense of strength, will treat typhus fever the most successfully.

The more I contemplate the disease, the deeper is my conviction that the organic nervous system is primarily and most materially involved; and that its lesion affords the most satisfactory explanation of the peculiarities in the nature of the disease, and the want of success in its treatment.

If it were my painful duty again to be called upon to treat so formidable a disease, with my present views, I should carry out the same principles that guided me before, only depleting with a more sparing hand. I should be inclined to dispense with general

* "All this passes off, we know in a definite time, as we know the dough ceases to rise when all the particles inflamed by the leaven have gone through their process of decomposition. So ends small-pox, measles, scarlatina, typhus, plague, synocha petechialis, &c.—Billing, "Op. Cit." p. 57, 1838. A revival of the humoral pathology of our forefathers, for ages ridiculed, but lately made popular by the great Liebig with the light of his profound chemical researches.

bleeding, even where inflammation was the most distinctly expressed, and rely upon free leeching; and if pain or much uneasiness continued, apply hot oil of turpentine, by means of rag or lint, every four hours. Use no mercurial preparation internally, except ten grains of calomel, with the same quantity of Dover's powder, at the commencement, followed by a black dose or two, to obtain free purgation; but rub strong mercurial ointment into the thighs and legs most diligently, lodging a piece each time in the arm-pits, every second, third, or fourth hour, until the system were, if possible, brought under its influence: if borne, I would rub it into the abdomen also. Give muriate of morphia throughout the disease, in doses large enough to soothe and calm the patient under such exhausting morbid sensibility; and from the evident tendency to death, in most cases, by asthenia, conjoin sulphate of quinine with the morphia from the first, because I think Dr. Billing is right, when he states that tonics are not stimulants. Administer nutriment every half hour, in small quantities, if borne by the stomach;—and, on the earliest indications of collapse, give wine and brandy, with nourishment, liberally. The patients I saw had all intense thirst, and greedily swallowed effervescent draughts, until diarrhœa forbade them. The whole primæ viæ became irritable as the disease progressed; and I thought the grey powder, as well as calomel, though guarded with opium, increased the wasting diarrhœa, which is the reason for my not giving it by the mouth. I may just mention, that the harassing looseness of bowels was best commanded by a grain each of acetate of lead and opium every three or four hours.

To the question of contagion I must again revert, because it is full of fearful interest to both patient and practitioner. The great majority of writers believe in contagion. Dr. Blundell says, "I would rather a friend or relation of mine was delivered in a stable, without any assistance, than she should be attended by a practitioner who had just attended a puerperal fever patient."—*Op. Cit.* p. 178. Dr. Gordon states, "I had abundant proofs that every person who had been with a patient in the puerperal fever, became charged with an atmosphere of infection, which was communicated to every pregnant woman who happened to come within its sphere."—*A Treatise on the Epidemic Puerperal Fevers*, p. 64. I have every reason to believe that I, unhappily, carried the deadly poison from my first patient to three others, which sadly aggravates the sorrow of losing them. When the first case proved fatal, neither Mr. Crowfoot nor myself thought of contagious puerperal fever. The second and third were delivered the day after her death, and I had no notice of their seizure until I was in attendance on the fourth. In the fifth and last case I thought I took necessary precautions before delivery; and, as the fourth patient was then living, I did not see her again until she was taken. The infrequent occurrence of the disease, and its not being invariably communicated, have caused the subject to attract but little attention. Again, some men of high authority still doubt its contagiousness. But if I were in attendance on a patient in whom I only suspected the disease, I should not feel justified in delivering another without a change of apparel, and rinsing my hands with a solution of chlorinated lime.

If the patient died, I should be still more on my guard. And I would urge the same humane precautions on every practitioner. I felt it to be my duty to discontinue midwifery for a fortnight, which my medical brethren in the town kindly took charge of.

OBSERVATIONS ON SPERMATORRHOEA; OR THE INVOLUNTARY DISCHARGE OF THE SEMINAL FLUID.

By W. H. RANKING, M.D., Cantab,
Physician to the Suffolk General Hospital.
(For the Provincial Medical Journal.)

(Continued from page 29.)

Diagnosis.—There is no difficulty in general in recognising the existence of spermatorrhœa, the presence of continual nocturnal emissions leaving no room for misapprehension. But in the more aggravated forms of the disease there arises a complication of symptoms, which, taken in connection with the disappearance of the nocturnal losses, gives rise to frequent mistakes. These cases, in which the seminal fluid drains away in the evacuations of the bladder and rectum, are usually confounded with chronic affections of the brain and alimentary canal, to which they bear so close a resemblance, as to require considerable tact for their discrimination, especially when, as is often the case, the patient obstinately refuses to make his medical attendant the confidante of his habits of life. Had we any positive signs by which we could recognise the presence of the seminal fluid in the urine, the diagnosis would be perfectly simple; but, unfortunately, such is not the case. There is so commonly an admixture of the morbid secretions from the bladder and prostate, together with amorphous urinary sediments, that neither the microscope or any other agent is sufficient to determine its existence. According to Lallemand, the presence of semen is to be suspected whenever the urine is voided thick and fetid, and exhibits a cloud resembling thin gruel suspended in it. The seminal fluid, it is to be remembered, generally passes away towards the completion of the act of micturition. Where the fluid is discharged during defecation, there is no difficulty in its detection, as by the assistance of the patient it may be submitted to ocular demonstration.

But, setting aside this desirable but at present unattainable proof of the existence of semen in the urine, let us inquire whether there are any general grounds for distinction between the cerebral symptoms produced by spermatorrhœa and those which depend upon idiopathic disease of the brain. The following considerations will enable us to arrive at something like a satisfactory conclusion upon the subject. In the case of spermatorrhœa, the cerebral phenomena are not the first in the chain of symptoms, but are preceded for a considerable time by notable derangement of other functions of the body; the digestion will be found to have been previously impaired, and the sexual vigor usually fails in a degree disproportionate to the general debility. In idiopathic cerebral disease, on the contrary, the symptoms of disordered circulation in the brain—as giddiness, tinnitus aurium, dimness of sight, &c.—take precedence of the disturbance in other organs; the appetite and digestion are not necessarily

impaired, neither is the sexual vigor observed to decline until an advanced stage of the disease. There is not, moreover, the extreme emaciation and feebleness of spermatorrhœa, but the general powers of the body fail only in proportion to the increase of the cerebral disorder. In doubtful cases I consider that the condition of the urinary and genital functions is our best guide in diagnosis. Wherever we have frequent micturition of turbid urine (calculous cases excepted), combined with the gradual extinction of the procreative powers, whatever be the accompanying symptoms, we shall do right to direct our inquiries to the condition of the seminal apparatus.

Having decided upon the existence of seminal losses, the next question is, to determine whether it depends upon chronic inflammation or upon simple atony of the parts. This question can only be decided mainly by the history and general appearance of the patient, as the more prominent symptoms are identical in the two cases. It is, nevertheless, of considerable importance as regards treatment, for a misapprehension of the pathology will lead to considerable waste both of time and credit. The following are the reasons which should lead to the supposition of simple debility of the seminal vessels.

These are signs of general congenital feebleness, as small osseous and muscular development, with late puberty, thin whitish hair, slight appearance or total deficiency of beard, and high treble tone of voice. In addition to these signs of sexual feebleness may be mentioned a general roundness of contour, with wide hips and full thighs. In the genital organs themselves may be observed smallness and flaccidity of the penis, which appears to be drawn close up to the pubes, an elongated prepuce, and small pendulous testicles. I have, while engaged upon this paper, seen a severe case of seminal emissions, depending upon debility, in which one testicle only has descended into the scrotum. Congenital hernia and varicocele are also to be considered as evidences of a debilitated sexual apparatus, as is likewise the presence of incontinence of urine in childhood. If, on the contrary, the patient is of a well-developed frame, with genital organs of normal dimensions, if he has at one time enjoyed average sexual power, we shall be authorised in regarding the complaint as one of chronic inflammation, whatever be the degree of accompanying emaciation and feebleness.

Treatment.—In noticing the treatment of seminal emissions we dismiss entirely those which occur but seldom, and in robust continent individuals, since, as has been before stated, such discharges are not to be considered morbid. The following remarks are to be viewed as referable to diurnal and nocturnal pollutions of frequent recurrence.

Our first object must be to inform ourselves of the exciting cause, and at once to remove it. If the emissions coexist with ascariides in the rectum, our treatment must be directed to their expulsion, upon which, in some cases, the patient will be restored to health without the intervention of other means. The ordinary remedies for these worms are sufficient—such as calomel, purges, salt and water injections, and mercurial inunction of the anus. When the complaint depends upon disease of the rectum inducing constipation, as stricture, fissure, or hæmorrhoids,