1876-77 Miller.



# On Puerperal Fever
## (So-Called)

J. Miller - 1876

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In the following pages, I have made liberal use of the "Discussion on puerperal Fever" in the Obstetrical Society, as reported in various numbers of the Lancet for 1875: and also of various papers and letters, which have appeared from time to time in the same Journal.

J. M.

# On Puerperal Fever (So-called)

Probably no subject in Medicine or Surgery, has given rise to more discussion or greater diversity of opinion than Puerperal Fever. What is it? That is a question, which up to the present day, has received no satisfactory answer. Some have included under the term, every febrile condition, from whatever cause arising, that may occur in a woman recently delivered. But as the causes which may give rise to this condition are extremely varied, very little information, as to the real nature of the disease, is given by the term in this signification. Some again, have held, and indeed the name would seem to imply, that it was a specific disease, having a definite origin, and running a definite course. But if we examine

the descriptions of this disease as given by different authorities, we find that they differ very materially, and that in fact, they are describing very different affections.

As the term is now usually employed — Puerperal Fever embraces a number of diseases, having different causes, symptoms, and anatomical lesions. That there is one specific disease, to which the term Puerperal Fever, should be applied, which can only be communicated from one puerperal woman to another, and which runs a definite course, very few, if any, now believe. But when we come to enquire, what diseases are included under the term, and what are not included, we find that this point has not yet been settled in a satisfactory manner. Concerning one class of cases, there appears to be

little difficulty; namely, those cases which are due to the introduction of a poison into the blood. This has been divided into two varieties, according to the source of the poison:-

1st Where the poison is generated within the body of the patient, as from the decomposition and absorption of coagula, or portions of placenta &c. retained within the uterus, or from the decomposition of the discharge from wounds or lacerations of the os, or any part of the parturient canal. To this class the term "Autogenetic" has been applied. (D. Barnes Lancet May 15/75)

2nd Where a poison is introduced from without, (Heterogenetic) as from exposure of the patient directly to an acute disease, as scarlet Fever, or Erysipelas;- or the poison may be introduced indirectly by the fingers of the accoucheur. The poison in this

case may be decomposing animal matter, the discharge of another woman suffering from Puerperal Fever, or an acute Specific disease.

Now, so far as this view of the subject goes, it is just saying that Puerperal Fever is blood-poisoning, from whatever cause arising, in a puerperal woman, and if we agree to restrict the term to this class of cases, the subject becomes simple enough, and we may either retain the term "Puerperal Fever", or we may call it by some other name, such as "Puerperal Septicaemia" &c.

A large proportion of the cases, however, begin with some inflammatory symptom, say metritis, which may or may not go on to peritonitis. If in such a case symptoms of blood-poisoning set in, then that would be set down as a case of Puerperal

Fever. But then some hold that as all such inflammatory cases may end with blood-poisoning, then all cases of metritis &c, should be called by the same name of Puerperal Fever, since the one is simply a further development of the other. This is a question which still appears to remain undecided by medical men; viz. whether the use of the term Puerperal Fever should be restricted to cases where we have evident symptoms of blood-poisoning, or whether it should also be applied to cases of a simple inflammatory nature. Now I cannot see how this should remain a difficulty. Let us take an analagous case in Surgical practice — say, an amputation of the thigh. The stump is liable to inflammatory action — we call that "Inflammation". Then symptoms of blood-poisoning may

set in, and we call that Pyaemia. But we would never think of saying that the man had Pyaemia, when there were only simple inflammatory symptoms, and no sign of blood-poisoning; and to say that the case might end in blood-poisoning, is no reason, why we should call it Pyaemia till it does so end. Now, applying this to the case of Metritis, we would say, that though metritis may end with blood-poisoning, still we have no reason to call it anything else but Metritis, till it shews symptoms of something else; and if symptoms of blood-poisoning do supervene, then let it be called Puerperal Pyaemia, or Septicaemia — or even Puerperal Fever, if it be agreed to retain that term. In former times, when the symptoms of blood-poisoning were not so clearly understood, as

they are now, and when it might be difficult to distinguish between them, and simple inflammatory symptoms, it might be excusable to use a generic term, such as Puerperal Fever, for both cases; — but now that such cases can generally be easily recognised, we can see no reason, why they should not be separated. Indeed the tendency among most authorities seems to be to exclude simple inflammatory cases, and either to limit the term Puerperal Fever to cases where the symptoms of blood-poisoning are manifest, or to use some new term for such cases.

A somewhat similar difficulty meets us, when we have to deal with cases, that have their origin from the infection of some specific disease, such as scarlet fever, namely, whether they should be called cases

of simple scarlet fever, or whether the term Puerperal Fever should be applied to them. We occasionally meet with a case, where a recently delivered woman is attacked by Scarlet Fever, where it runs the usual course, rash appears and disappears in the usual manner, complains of sore throat, skin desquamates &c, and the woman recovers. More often, however, the disease takes on a peculiarly malignant character, and the woman dies, it may be in the course of a few hours. The symptoms in this case may be very obscure, the throat affection may not be well marked, rash very slight, if any, even in cases, where it has had the necessary time for its development, but still there may be no doubt as to the connection of Scarlet Fever with the case. Now the question is — Should

both of these cases be called Puerperal Fever, or should they both be called Scarlet Fever? Or again, should the one where the symptoms of Scarlet Fever are well marked, be called Scarlet Fever, and the other Puerperal Fever? This question appears to me to be more difficult to settle, than the former one, because here we have not as a rule, such a clear line of demarcation, as we have between simple metritis, and metritis followed by blood-poisoning. These remarks apply also to infection from Typhoid fever, Diphtheria, Erysipelas &c.

It has been suggested that in all cases, where we can ascertain the origin of the infection, - ~~that~~ be it scarlet fever, erysipelas &c, if the patient should die, the death should be certified as Scarlet Fever, erysipelas &c. Thus (in the Discussion on Puerperal Fever - Lancet

May 15th 1875 - Page 688) Dr. Squire asserts "that not only is Puerperal Fever, not typhus, typhoid, small-pox, measles, diphtheria, nor even Scarlatina, but these diseases are little modified by the Puerperal state, and retain their distinctive characters, so as to be easily recognisable; they ought to be diagnosed under this, as under other conditions, and called by their own names, and not by that of Puerperal Fever". On the same page Dr. Braxton Hicks says - "My observations have gone to shew that there is no rash, and that there are none of the permanent symptoms of Scarlatina, where Scarlatina has been unquestionably mixed up with the case". And again on page 543 he says - "When Scarlatina has occurred in a house the children have been the first to take it, and the woman has not had

Scarlatina at all, but Puerperal Fever, while in other cases, the woman has been the first to be affected, - she has Puerperal Fever, and the children have shortly afterwards died of Scarlatina."

I think that the mass of evidence goes to shew that Dr. Braxton Hicks is right, and though we might be able to certify a large number of cases as scarlet fever, Erysipelas &c. still a great many would be left, where we would have some doubts as to the exact nature of the infection, and these cases we would still have to certify as Puerperal Fever. It has been my misfortune to have had three cases, where I have now no doubt but Scarlet Fever, was the source of the infection. About the first case I had some doubt, and I returned it as Puerperal Fever - the other two were unmistakeably cases of

Scarlet fever. One of these died, and I returned it as a case of Scarlet Fever — the other recovered. These two cases occurring immediately after the first case, left no doubt in my mind, as to its being Scarlatinal also.

The first case was that of Mrs S.— aged 24 — Primipara. She had had two previous miscarriages, on both of which occasions, she suffered (as she told me) from inflammation of the womb. She was confined on the 25th November. Presentation natural, labour somewhat tedious, but ended satisfactorily. Placenta came away easily about 15 minutes after the child.

Nov. 26 — Complained of severe pain in lower part of abdomen, which was increased by pressure above the pubis — Pulse 130 — skin hot — discharge scanty.

Ordered 6grs of Calomel, and hot —

fomentations to abdomen.

Nov. 27. Bowels had been freely moved. Pain still continues, abdomen slightly swollen — discharge none — pulse 140 — skin hot and dry — talks incessantly, but rationally. Ordered calomel and opium powders — ½ a grain of each every 3 hours. Also turpentine stupes to abdomen, and warm water injections into vagina.

Nov. 28 — Abdomen tympanitic, but says she has no pain, even when deep pressure is employed — No discharge. Complains of throat being dry, and somewhat painful. On examination find the fauces and soft palate congested and of a livid hue. On the skin, on the front of the chest, and the legs, are several patches of a scarlet colour, but so indistinct as hardly to be recognisable as a scarlet fever rash. Patient talks

incessantly and sometimes incoherently. Stopped the Calomel and Opium, and ordered a mixture containing Chlorate of Potass, and Liq. Ammon. acet. Also brandy, beef tea, and milk, as Symptoms of depression were setting in.

Nov. 29. Symptoms much the same as on previous day — Rash hardly visible even on careful examination. Abdomen continues tympanitic — talks more incoherently — look of depression more marked. Died in the afternoon somewhat unexpectedly.

I learnt subsequently that there was a case of Scarlet Fever, in the house adjoining the one in which this patient lived. I was not attending any case of Scarlet Fever at the time, but had been, about a week previous to her confinement.

Case 2. Mrs R. Aged 30. Primipara — Confined on the 29th Nov.

the day on which Mrs S. died.
Labour natural in every respect, and comparatively speedy. There was a considerable discharge of blood after the placenta came away. Uterus contracted firmly, and subsequently there was no extra haemorrhage. Did well till the 2nd December (4th day after delivery) when feeling thirsty, she got up to get a drink of water, when she washed her face and hands, and went about the house for a short time. In the afternoon violent purging commenced, which lasted till next morning the 3rd Dec. When I saw her, the diarrhoea had somewhat abated. Said she felt quite well, and had no pain anywhere. Though she answered sensibly, she appeared somewhat confused and nervous. Pulse 140, skin hot and dry, and covered with a scarlet

rash – Said she had no pain in throat, but on examination it appeared congested, and of a deep red colour. Tongue covered with a creamy fur, through which red papillae projected. Ordered a mixture of Chlorate of Potass, and Aromatic Spirit of Ammonia. Body to be sponged with tepid water.

Dec. 4th Had slept none – talked incessantly – No pain – discharge still continues, though scanty – other symptoms same as on previous day – Same treatment, with the addition of brandy and beef-tea.

Dec 5th Still continues talking – appears more restless – rash not so bright – look of depression more marked. Died on the morning of the 6th Dec.

Case 3 – Mrs B – 4th child – Confined on Dec 21st Labour natural

Did well till 4th day - when the whole body was covered with a scarlet rash. Pulse between 130 & 140 - skin hot and dry - discharge normal. complains of severe pain in head and back, and aching in the limbs. No pain in abdomen. Says the throat feels dry, but not sore. On examination throat appears congested. Tongue covered with a creamy fur, with red papillae projecting through it. Bowels confined - Ordered calomel and jalap powder, and a mixture of Chlorate of Potass, and Aromatic Spirit of Ammonia. In this case there were no nervous symptoms - Patient was always calm and collected - never talked unless when occasion required, and then rationally, except on first night - after rash appeared, when she raved slightly. She progressed favorably towards recovery.

On the 7th day after its appearance the rash went away – The skin desquamated in the usual manner, in large flakes from the palms of the hands, and soles of the feet and in scales from the rest of the body. Though ordered to keep her bed, she got up on the 12th day, and on the following day, her feet were slightly swollen. By keeping her in bed and having the bowels freely opened, this entirely disappeared in a few days, and after that time, she recovered rapidly without an unfavourable symptom.

Now, here are three cases, none of which are exactly alike, and yet there can be no doubt as to the connection of scarlet fever, with the whole of them. In case No 1 the symptoms were at first, those of metritis, and I considered it to be such, pure and simple, till

subsequent facts made me doubt the accuracy of this opinion. That there was metritis, I have no doubt; but the question arises, - was the metritis the primary disease, and the scarlatinal element a mere complication? Or was the scarlatina the primary disease, and if so, was the metritis dependent on the scarlatina, or was it an independent affection? These are questions which I cant pretend to answer.

In the other two cases, there were no symptoms of metritis, or other inflammatory mischief. The second case might be put down as a severe case - the third as an ordinary case of Scarlet Fever.

These three cases will be sufficient to shew the difficulty that sometimes exists in deciding, what should be called Puerperal Fever, and what

Scarlet Fever. In case No 2. I said before that I certified the death as Scarlet fever following delivery, and I think by so doing, I conveyed more information, than if I simply had put it down as Puerperal Fever.

The same difficulty exists with regard to Erysipelas, typhoid, diphtheria &c.

If it were true as Dr Squire asserts, that Scarlet Fever, as well as measles, small-pox, diphtheria &c., are little modified by the puerperal state, and retain their distinctive characters, so as to be easily recognisable, then I should say, by all means let them be called by their own names, and not by that of Puerperal Fever. But seeing that this is not the case, then we must rest content, for the present at least, with calling such cases, as can be diagnosed as scarlet fever &c. by their own names, and other cases

which are so modified, that they cannot be so diagnosed, will still have to be called Puerperal Fever, or some other name which may be agreed upon.

If we exclude then all simple inflammatory, and all cases which may be diagnosed as Scarlet Fever, diphtheritic erysipelas &c. — what have we left to which the term Puerperal Fever may be applied? I think the proper answer to this question is — blood-poisoning, from whatever source arising. Then, have we any symptoms which are common to all these different forms of blood-poisoning, that would entitle us to class them as one disease? I think we have, at least in the more advanced stages of the affection, though no doubt, the symptoms may vary very much at the outset.

We have two classes of cases, so far as symptoms are concerned:— 1st those cases where we have evidence of inflammatory mischief, and 2nd where we have none. As to the first, we find that Erysipelas is more "potent in the introduction of the local inflammation, which produces Puerperal Fever," (Dr. Jonathan Hutchinson Lancet Ap. 17/75) than the poison of specific fevers;— and in this class also would be included such cases as have their origin in simple inflammation of the patients own tissues. In the other class of cases, the poison may be derived from another woman suffering from Puerperal Fever, or from a specific disease. But in any case, whether it begins with symptoms of inflammation or not, when blood-poisoning actually does set in, then the disease assumes a character, which appears to vary

very little, no matter what may have been the origin of the poison.

What then are the symptoms, whereby we may know when blood-poisoning has commenced? First comes the appearance of the patient, — at first she is restless, often tossing about in bed, then the countenance assumes a peculiar anxious, wild and sunken look, which is very characteristic. Pulse from 130 to 140. Temperature at first from 100° to 105°, though at the final stage, the skin may be cold and clammy. Often more or less distension of abdomen, though not always. This is usually present when we have had inflammatory symptoms. Suppression of milk — breasts flaccid. Lochial discharge, deficient or absent, — if any, generally of an offensive odour. Great thirst, tendency to low muttering delirium. In all the cases I have

seen, which ended fatally, the patient talked incessantly, seldom reaching more than a minute or two at a time, but generally rationally, till within a short time before death. In those cases, where there has been pain in the abdomen at the outset, this may and indeed generally does disappear altogether; - even when deep pressure is employed, the patient will say she has no pain. This may be looked upon as a good sign, by her friends, but I consider it one of the worst. So long as the patient complains of pain, I think there is some chance of recovery. When we have symptoms such as these occurring in a woman, within a few days after delivery, I think we are safe in setting them down to blood-poisoning.

The question now arises — How

is it that so many different causes, such as inflammation of the patients own tissues, poison derived from decomposing animal matters, or the poison of an acute infectious disease, should give rise to symptoms which have a general resemblance in all these cases, and which has led to the idea, that there is a Specific Puerperal Fever?

The answer to this question is to be found, I think, in the peculiar condition of the woman. Probably too much attention has been paid hitherto to the various poisons which may give rise to the disease, and too little to the state of the patient, the recipient of the poison. Let us consider wherein a woman recently delivered differs from one in ordinary health.

First, we have the state of the uterus and parturient canal. In the uterus itself, we have an open wound, left

by the separation of the placenta, which has been not inaptly compared to a stump after amputation. Then the cervix is generally more or less torn, and the vagina, is often in a bruised condition, especially in primiparae, where the passage of the head is usually tedious; and finally, there may be rupture of the perinaeum. Some hold that absorption of the poison takes place most readily in the uterus, where the placenta has separated, others that it takes place most readily at the cervix, while others hold that a ruptured perinaeum is a most fruitful source of blood-poisoning. Be this as it may, I can see no reason for doubting that absorption of the poison, may not take place at any of these positions; indeed the main point appears to me to be, that the whole canal, from the fundus uteri to the

vulva, is in a condition most favourable for the absorption of any matter which may be brought into contact with it.

When the patient is in a more or less exhausted state, both from the exertions she has been making during labour, and also, in many cases at least, from loss of blood. The condition of the blood is peculiar, the fibrine is in excess, sometimes as much as 8 parts in 1000, and the salts are diminished, both of which conditions are favourable to the precipitation of the colloidal fibrine. When this woman has been for a time supplying to the child a mass of blood, from her own body, which has now stopped, so that practically she is in the condition of a person who has lost a limb, a considerable portion of the body. When she is in a

nervous condition - She has been supplying from her own potential energy, that element which has been shewn in the movements of the foetus, and now that is stopped, and she is suffering from that nervous reaction which comes on when that motion is suddenly arrested. She is therefore in the exact condition, for a series of changes which must necessarily be febrile in character." (Dr Richardson - Lancet ap. 14/75)

Dr Richardson would add to these facts, Hereditary qualities. We cant see why there should not be a hereditary tendency to Puerperal Fever, as well as to any other disease.

All these may be put down as predisposing causes, but we must admit that they are something more than mere predisposing causes, as we usually understand that term, and that they must be reckoned (along

with the poison) in making up the sum total of the causes, which produce this affection.

But, it may be urged, this is all very well, but it tells us nothing as to <u>how</u> these various conditions should so modify the poisons derived from various sources, as to produce a disease, which may differ very much from the original disease, from which the poison is derived. To this, I can only answer, very true, I cant tell how they should do so, but still I have no doubt, but that they must be considered very important elements in the causation of the disease.

There are other predisposing causes which it may be proper to mention here, such as the sanitary condition of the dwelling, as to ventilation and drainage, and all circumstances which tend to lower the general health

of the patient. Mental emotions appear to be a powerful predisposing cause, if not an exciting cause. Dr. Braxton Hicks relates a case where "a gentleman attended a poor woman, the wife of a coachman. The coachman had had notice to quit, and the wife knew of it, just as she was in the act of delivery. She then became violent and got up and smashed the windows. She was kept quiet for a few hours, and then fell into a rapid and malignant puerperal fever, and died in a few days." (Lancet Ap 17/75)

There is another point which has given rise to much discussion and diversity of opinion; namely contagion. Some have held that this disease is peculiarly liable to be transmitted from one patient to another, while others deny this altogether. How can

me account for this. I think it may be accounted for to a great extent at least, by the fact, that simple inflammatory cases, have been included under the same term, as those which are due to a poison. Now if a practitioner has happened to have seen a large number of cases of a simple inflammatory nature, and he calls all these, cases of Puerperal Fever, and he finds that there is no connection between them, I do not wonder at his doubting the contagious nature of the disease. I have had many cases of simple metritis, and I have no reason to suspect, that I ever conveyed that disease from one patient to another. In fact, I am inclined to believe that simple inflammation can not be communicated from one puerperal woman to another, so long as it

remains simple inflammation. But, if in the progress of the disease a foetid or putrid discharge should arise, then I consider that if this should in any way be brought into contact with another puerperal woman, it may give rise to symptoms of blood-poisoning, just as it may give rise to the same symptoms in the first patient. But this is not inflammation pure and simple, it is inflammation with something superadded, and that is a something which is capable of producing blood-poisoning. In the second woman (that is the woman to whom the putrid discharge has been conveyed) she may, or she may not have symptoms of inflammation - she may die in the course of a few days or hours, with no other symptoms than those of blood-poisoning. When once the blood-poisoning is established

I think it may be communicated readily from one patient to another.
Again, it is sometimes difficult to recognise cases of simple, from cases of Erysipelatous inflammation, and of course the latter is readily communicated from one patient to another, by contagion. If a Physician happened to have a series of erysipelatous cases, and failed to recognise their erysipelatous character, he would be very apt to consider that simple inflammatory cases were contagious. I had a series of 6 cases, where I have reason to believe that erysipelas was the origin of the disease. The following is a brief abstract. The first case – Mrs M– was confined on the 21st Jan. 1876. I was at that time attending two children, who lived two stairs above the house occupied by Mrs M–, and who were suffering

from erysipelas. On the second day after she was confined, Mrs M. had a rigor, followed by severe pain in lower part of the abdomen, and great febrile disturbance. She was ordered calomel, opium, and quinine, in large doses— turpentine stupes were applied to abdomen, and vaginal injections were used. She got besides, tincture of Perchloride of iron. She made a good, though tedious recovery. A physician who was called in consultation, agreed with me in considering that the cases of erysipelas upstairs, were to blame for the mischief in this case.
On the 24th Jan- the third day after I attended Mrs M., I attended two cases, both of which were attacked in a similar manner, these recovered in a short time, under similar treatment. On the 1st Feb. I attended two other patients, who lived about

two miles distant from these three, who were first attacked. These two were attacked in the same way. One of them recovered in a few days, the other recovered but slowly. Again on the 3rd Feb, I attended a Mrs B— who lived near those first attacked,—she suffered in the same manner for a few days, and then made a good recovery. In all these cases I gave Calomel and opium in 3/4 or 1 grain doses of each every 3 hours, along with 2 or 3 grains of quinine. From that time to the end of April, I attended 28 cases, in two of which I had to use the forceps, and in one I had to turn, and none of these suffered in the smallest degree. These 28 cases occurring one after another, and presenting so far as I could make out no symptoms whereby we could distinguish between them and simple

inflammatory cases, would be very apt to lead one to the conclusion that simple metritis was contagious, were it not for the fact, that we have pretty clear evidence, that the inflammation was not simple but erysipelatous. I do not introduce these cases, as cases of Puerperal Fever (because none of them shewed any symptom of blood-poisoning), but simply to point out a possible source of error, in deciding whether cases of simple inflammation are contagious or not.

As to those cases which have their origin from Scarlet Fever, a other specific disease, very few deny, but that they are very contagious.

If statistics be of any value in this disease, then we have ample evidence of its contagious nature. The following extract from the Lancet of Jan 23 - 1875 - will suffice: —

"In Sunderland, of 43 cases which occurred in 1813, 40 happened in the practice of one Surgeon, and his assistant. In the epidemic which occurred in Aberdeen in 1789-90, the disease attacked such women only as were visited or delivered by a practitioner who had previously attended patients affected with the same disorder. Roberton states that from Dec. 3rd 1830 to Jan. 4th 1831, a midwife attended 30 cases for a Public charity, of these 16 were attacked, and all died. In the same month, 380 women were delivered by other midwives for that institution, and none of these suffered in the smallest degree."

Notwithstanding the evidence of such facts as these, which might be multiplied indefinitely still some ask — Is Puerperal Fever contagious? and bring forward as a reason for

their doubt, the fact that women have been exposed to the infection of Puerperal Fever, and have escaped. We may say the same thing of any other infectious disease such as small-pox, still we never ask the question — Is small-pox infectious.

Pathology. — Are there any special local lesions, which in any case, would enable us to say — this Patient died from Puerperal Fever? To this question a negative answer must, in the present at least, be given. If we examine the accounts of various authors on this point, we find that some say they have found evidence of peritonitis or metritis, or serous effusion into the abdominal cavity &c, while others deny having found any evidence of inflammatory action whatever. There can be no doubt that in the great majority of cases (even excluding

cases of simple inflammation) evidence of more or less inflammatory action will be found; while in other cases, no trace of this may be found at all. The source from which the poison is derived, seems to have some considerable influence in determining whether there be inflammatory action or not. Thus if the poison be derived from scarlet fever, typhoid &c we would not be so likely to find traces of inflammation, as in those cases where erysipelas had been the original source of the disease. Again in those cases which have arisen in the patients own tissues (autogenetic) we will generally find evidence of inflammatory action more or less decided. This subject is still in a very obscure state, and untill it is finally settled what has to be included under the term Puerperal fever, and what excluded, I am afraid

must remain so. The most we can at present say is – that so far as we have as yet ascertained, there is no special local lesion, which we can point to, as being characteristic of Puerperal Fever.

I have purposely avoided using the terms Septicaemia and Pyaemia, as there appears to be some confusion, as to the exact application of these terms.

Septicaemia literally means, septic or morbid matter in the blood, – Pyaemia means Pus in the blood. If the use of the terms be limited to these significations, then the term Puerperal Pyaemia could be applied only to cases where the disease originated in the patients own body, and it would be analagous to Pyaemia following an amputation. The question as to whether the pus is derived from inflammation of the veins

(uterine phlebitis) or lymphatics (lymphatitis), or whether it is only absorbed and carried away by these vessels from a suppurating surface, need not be discussed here.

As to Septicæmia, there are various opinions. The idea is that putrid matter is introduced into the blood, — but the manner in which the putrid matter acts has not yet been definitely agreed upon. Some hold, that when it enters the circulation it acts as a ferment; — while others, as Jonathan Hutchinson, considers that it acts by producing gangrenous inflammation of the part to which it is applied, and that the blood becomes poisoned by absorption of morbid materials from the part so affected. This is a difficult point, and wants clearing up, as it is important with relation

to treatment.

The part which Bacteria play in this and allied affections, is a point which is exciting much interest at the present time. Some hold that these bodies are the actual agents which produce the disease, and that antiseptics are only valuable in so far as they have the power of destroying these bodies. Others again hold that their presence is merely accidental — that they are not the cause but the effect — that they simply find a soil suitable for their growth and development in decomposing animal matter — and that antiseptics act by preventing the decomposition, which is essential to their appearance. It would no doubt be interesting to know, which of these two theories is correct, but so far as treatment is concerned

it appears to matter very little whether antiseptics act in the one way or the other, so long as the actually do good.

Treatment.— As regards the treatment we find that here also the most contradictory views have been held. While some have held that blood-letting, and other anti-phlogistic remedies, gave the patient the best chance of recovery, others have held that under such a regimen, every patient has died. This diversity of opinion has no doubt arisen, from grouping cases of sthenic inflammation, with those of a decidedly asthenic character, which latter is the type that all cases of blood-poisoning sooner or later assume.

Given a case of sthenic inflammation, treat it as sthenic in-

flammation, always however bearing in mind, that in the puerperal state, the sthenic is peculiarly liable to assume the asthenic form. Given a case of Scarlet Fever, which can be diagnosed as such — treat it as Scarlet Fever; — so with Erysipelas, typhoid &c.

But if in the course of any of these affections, the disease should assume the malignant or Puerperal type (as it has been called), and which is now generally admitted to be indicative of blood-poisoning, or if it has had this character from the outset, then all remedies of a debilitating nature must be avoided.

Then what remedies should be tried? First look to the general surroundings of the patient. While the room is maintained at a moderate temperature, see that

plenty of fresh air be admitted. The offensive discharge which is usually present, should be allowed to remain about the patient's person, as short a time as possible. Washing out the vagina and uterus, either with plain luke-warm water, or with the addition of some disinfectant, such as Condy's Fluid, or Carbolic acid, should be used 2 or 3 times a day. In many cases this appears to have a very decided influence in checking the progress of the disease, because it sometimes happens, that the symptoms cease almost directly, when the uterus is washed out.

If it be the case that the poisoning of the blood, is caused by the absorption of decomposing materials, from the uterus or vagina, and that the poisoning is kept

up by continued absorption, then one can see how washing out the uterus should be of great value. But if the poison, when once introduced into the circulation, propagates itself in some such way as a ferment does, then it appears to me that the use of the syringe would be of little service. However, as this question has not as yet received a satisfactory solution, it will be best in the meantime to continue its use. It can at least do no harm, and we generally find that it has a soothing effect, and lessens, or entirely prevents the offensive odour, which is usually present. Besides, the mere fact of the symptoms sometimes ceasing, when the uterus is washed out, would in itself be a sufficient guarantee for

its use. (We may observe in passing, that this ~~view~~ fact appears to support the view that the disease is kept up, at least in some cases, by absorption of the morbid matter, and that it does not act as a ferment.)

The diet of the patient should be nourishing, and may consist of milk, beef-tea, chicken broth &c. which should be given in small quantities, and at short intervals, say every half-hour, or twenty minutes. If there be a tendency to diarrhoea the beef-tea may be thickened with common flour. In one case I had, where the diarrhoea was very troublesome, I imagined that more benefit was derived from astringent injections into the rectum, than from medicines administered by the mouth. Stimulants should

be given freely — probably brandy, or good whiskey, is more to be depended on than wines.

As to medicines, we have as yet found no Specific. Probably opium is more depended on than any other drug. In those cases at least where there are evidences of inflammatory action, it has a beneficial action in soothing the pain. It should be given in doses of ½ a grain or more every 2 or 3 hours. Quinine may be combined with the opium, either in powder, or as a pill, and should be given in large doses, say from 2 to 6 grains in a dose. Tincture of Steel has also been recommended. In those cases which are connected with Erysipelas, we should expect that it would be of special value.

Many other medicines have been recommended, and each has its

special advocates; - for example, turpentine has been considered by some as almost a specific. In cases where there is much tympanites, it may no doubt often relieve that symptom, to a considerable extent, but this appears to be about the most it can accomplish.

What we want is a medicine that will act by stopping the action of septicaemous poisons, by its direct action on the blood, but as yet such a medicine has not been found. Dr. Richardson however predicts "that in ten years hence, we shall see a means of preventing these diseases from septicaemous poisonings, as clearly as we now see the means of producing them by the introduction of these poisons, in the form of inoculated matter in small-pox, by vaccination."

(Lancet Ap. 17/75-)

One other question remains; — What precautions should be used by the Physician, in order to prevent the spread of the disease. We are told to change the clothes, bathe freely, and wash with disinfectants, but even after all this, we cant be certain, that the poison has been thoroughly removed, and that we may not be the bearer of it. What else can be done? The only other thing that remains, is to leave off practising midwifery for a season. Dr. Matthews I mean appears to consider that this latter course is in no case necessary. He states that during all the time he has been in practice, while he has been seeing more or less of Puerperal Fever during the whole of that time, he has never found it necessary to give up practice

for a single day, for that reason.
This may be true, but it appears to be very much at variance, with the experience of other practitioners. It has been suggested that the poison may fix itself more readily on the person of one individual, than on that of another, or at least that it is more difficult to get rid of, in one than in another, and there may be some truth in this. At all events, in the meantime, it will be the safest and wisest plan, for a physician if he has had a number of cases occurring one after another, to desist from practising midwifery for a considerable time. It may be asked - How long should he desist? Instances are on record, where a practitioner has given up practice for a month, and the first case

he attended after that period, was attacked by the disease. Cases of this kind shew the difficulty there is in getting rid of the poison, and that we can not set down any hard and fast rules, as to the length of time it is necessary to desist from practice. Two or three months have been recommended. Well, all we can say about that, is — that it would be safer than only one month. In the meantime of course baths — even Turkish baths — and disinfectants, should be liberally made use of.

John Miller