PYREXIAL CONDITIONS OF CHILDBED.

from a clinical aspect.

(With Notes of Cases)

by

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The subject of Pyrexial Conditions of Childbed is from the nature of things a very complicated one, and the importance of it especially to the general practitioner cannot be exaggerated. His professional reputation depends largely on the success attending his obstetric cases, and, more particularly I venture to say does this hold good in country districts; the importance of this class of diseases depends on their danger to the life of the patient.

The forms that these pyrexial conditions may assume are very numerous, and their causes are no less varied. They may be connected with the processes occurring before, during, and after parturition, as well as to those morbid conditions to which puerperal women are so liable--the latter thus forming accidental complications.

From September 1898 to December 1898, it was my privilege to have under my care the cases of the out-door department of the Glasgow Maternity Hospital, and during that time 428 puerperal cases were attended to. The progress of each case was reported during the lying-in period by the students and nurses respectively. The records in normal cases were taken once daily and in those where pyrexia developed, twice and sometimes three times a day. Although the reports marked in this way are somewhat imperfect, in so much that the records were not taken at regular intervals (which was quite impossible under the circumstances), still they are just what might be recorded in private practice, and are of great value because the abnormalities they reveal have none the less to be dealt with.

It is now my intention to deal with some observations on Pyrexial Conditions of the puerperium founded upon these cases, and augmented to a large

extent by others occurring in private practice.

Importance of Thermometry during the Puerperium. First of all I wish to draw attention to thermometry during the puerperium, as a matter of great practical importance. In my opinion, it is a good rule to look upon all rises of temperature at this time with suspicion, especially if it rises above 100°F. It certainly should never be overlooked or neglected, because as a general rule, there is no deviation in the puerperal state, from the normal standard, provided no complications arise.

By carefully observing the temperature of the patient, we are enabled to note exactly the variations in the heat of the body, which accompany the onset of pyrexial disease, which characterise the persistence of morbid action, and, in favourable cases, mark the return to health.

The temperature in the lying-in state, affords us much valuable information. It may be the first symptom, and in this way we receive an important warning of impending mischief and of the actual condition of the patient which may not otherwise be realised till some serious affection has arisen. A rise in temperature may occur without the slightest indisposition being complained of.

Careful observation of the temperature, from time to time, may tell of a rising pyrexia, which goes on increasing in spite of energetic and wise treatment, and in such an instance, the inference to be drawn as regards prognosis is bad: at other times by marking a decline, it foretells good news of commencing defervescence.

In working with puerperal cases it strikes one that the thermometer so exactly indicates the slightest disturbance in the condition of a patient, and that so long as the temperature remains, at, or about, 101°F no uterine

examination need be made.

Important as the observation of the temperature undoubtedly is, it must not be made to stand alone from the other functional disturbances of the body, which may exist, nor yet to be held out of proportion to these equally important matters. They are to be compared, studied, and reasoned together, and by enquiring into certain points, we can tell how the patient is progressing- favourably or otherwise.

The normal temperature of a lying-in patient in the great majority of cases, is never above 99°F or 99.5°F. When labour is over, the patient sometimes shivers and frequently the temperature is slightly elevated. This lasts only for a short time, and soon falls to normal or slightly below it.

Squire found that this fall occurred in twenty-four hours, and, occasionally in twelve hours. (Obstet. Trans. Vol. ix P.129.)

This elevation of temperature after delivery is a little greater in primiparae than in multiparae, and may amount to one or two degrees.

A point to be noted during the first few days of the puerperium in most cases is the daily morning fall with a slight rise in the evening.

At the Rotunda Hospital, Dublin, the normal temperature is given as 100.5°F in the axilla, and any rise above that is considered abnormal. (Practice of Midwifery: Jellett P.122.)

Shroeder further observes " that independent of the processes which " immediately after labour, cause a temporary rise of temperature to above " 102°F, it is chiefly the time of the day, at which delivery takes place, " that determines the height of the temperature; its greater rise takes " place when the woman has been delivered in the course of the forenoon, " because the normal and evening exaserbation then falls within the first

" twelve hours of the puerperal state; the succeeding decrease is very "considerable when the delivery occurs in the first twelve hours of the " morning. Under such conditions the rise of temperature takes place " within four to six hours, and the greatest fall, between twenty and " twenty-two hours after delivery." (Shroeder's' Manual of Midwifery.)

Significance of Pyrexia.

The onset of Pyrexia may be trifling or it may be very serious. In many instances it gives us valuable information in regard to diagnosis and prognosis. In many puerperal cases, the presence of a grave lesion in the genital passages scarcely suggests itself, the patient , at the same time looking and feeling comparatively well. The fact of the existence of such a lesion (which is most frequently accompanied by pyrexia) would pass unnoticed without the use of the thermometer. In numerous cases the diagnosis of the puerperal pyrexia may be easy and the condition lend itself to simple treatment, but at other times it may be extremely difficult or impossible.

A steady upward rise from a high to a very high temperature cannot be regarded without grave anxiety and fear for the welfare of the patient. Momentary elevations of temperature, as a general rule, do not involve an unfavourable prognosis. It is very different, however, with those temperatures, that are progressive and continuous in their nature; then the prognosis is very bad.. In my opinion if the temperature taken in the axilla ascends above 100.5°F, some abnormality should be feared and looked for. Whenever you get a high temperature steadily maintained in a puerperal case there will be found present a general febrile condition with its own special features and complications, or a localised affection inflammatory or otherwise with its characteristic symptoms.

If the progress of the diminution in size of the uterus after labour, be carefully watched and recorded, a check in this diminution, especially if accompanied by pyrexia, is a very valuable and early symptom of mischief. This is frequently seen in cases of a septic nature.

When pyrexia is found present in a case, our first duty should be to find out the cause and remove it. Unfortunately it is not always possible to remove the cause of pyrexia but the object is one to be constantly kept in view, and in most instances the main effects of treatment must be directed to secure it, as for example, relieving a loaded bowel by laxatives and enemata, removing retained clots and membranes.

The relation of the Temperature and Pulse during the Puerperium.

Immediately after delivery the pulse falls and ranges between 50 and 90 beats per minute; it varies in different individuals.

Mathew observes that the pulse during the puerperium is more frequent in the morning than in the evening. (Mathew Obstet. Cases P. 43.) The importance of the diminution of the pulse rate after labour, as indicating a favourable state of the patient is undoubted. If the pulse be slow, there is every reason to hope that the puerperium is normal.

Blot, who has paid great attention to the pulse in this connection, states that as long as this diminution of the pulse continues, the patient may be regarded as in a favourable state. A frequent pulse, in my opinion, should at once arrest the attention of the accoucheur. If within the first forty-eight or sixty hours after delivery the pulse assume a weak, quick, running character, enquiry should be made immediately as to the cause of it, and if the state of matters continues, it indicates that the condition of the patient is one of great danger.

A rising temperature, say to 102°F or 103°F with a normal pulse, if not

maintained for any length of time, is usually not serious, although, on several occasions, I have met with cases having a temperature of 103°F, and a pulse ranging from 60 to 80 beats per minute, which ultimately proved to be Enteric Fever, and I now regard these symptoms, occurring in this manner, as features suggestive of Enteric Fever.

As is well known, the most trivial causes may give rise to an increase of the pulse rate, for example, fatigue, emotion, excitement, but this soon passes off as a rule without leaving any bad effects.

Although the temperature continues moderately high 100°F to 101°F, so long however as the pulse reaches 120 beats per minute, or above that, the patient cannot be considered safe or free from relapse.

However fast the pulse may be, the prognosis may be considered not unfavourable, provided the temperature continues low, excepting those cases when the patient is prostrated from collapse, or in some cases of septic-aemia.

Pyrexia and the Secretions peculiar to the Puerperium. Pyrexia accompanied by the sudden stoppage of the milk and lochia is a symptom of grave import, and suggests the occurrence of sepsis, the introduction into the circulation of some poisonous bacteria or their products. So does pyrexia accompanied by the discharge of putrid lochia, which is recognised by its colour, foul smell, and characteristic staining of linen. In all probability, pyrexia is due in the majority of these cases to the foetid discharge and not the foetid discharge to the pyrexia. In some instances the pyrexia is observed before the foetid discharge has been noticed, but this is probably due to one of two things; (1) the foetid discharge may be retained and not able to escape, or its smell has been destroyed by the use of some antiseptics, or (2) the discharge may not have been so far advanced in the

process of putridity as to have acquired the characteristic odour, although, by absorption, it has been capable of producing pyrexia. The fact that in many cases the pyrexia disappears after the removal of the putridity by douching, supports this view, but undoubtedly if the conditions of putrefaction already exist in the uterus, and pyrexia arises from any other cause then the occurrence of putrefaction would be greatly favoured and easily set up, and unless obviated by appropriate treatment, would speedily increase.

Other important factors to be noted in the progress of the case are-- (1) Aspect of the patient. (2) The presence or absence of sleep. (3) Degree of diminution in size of the uterus. (4) Presence or absence of pain. (5) Tympanitis.

The Causes of the Pyrexial Conditions of Childbed. The causes which give rise to the Pyrexial Conditions of Childbed, are very numerous and varied in their nature.. The following in my experience are the principal causes.

(1) Reaction: As previously mentioned, immediately after delivery in many cases there is a slight rise of temperature. This lasts only for a short time and falls again to normal within the first twenty-four hours. In very many cases this rise in temperature does not occur at all.

(2) Certain Conditions of the Breast. (A) The onset of Lactation: In the majority of puerperal cases, lactation occurs without any rise of temperature. As a general rule the secretion of milk is established in about 48 hours after delivery, and occasionally, this is accompanied by a certain amount of constitutional disturbance. In such cases the temperature may rise to 102°F or 103°F and the rate of the pulse vary from 100 to 120 per minute-- the breasts at the same time becoming, in all probability, knotted, turgid, and extremely painful.

The rise of temperature in connection with lactation occurs more especially in mothers of a nervous temperament, or in cases where the infant has been applied to the breast before lactation has been established or where the child has been applied too late. The pyrexia, however, ceases when the function of lactation is fully established.

If the secretion of milk is absolutely and relatively too abundant, so that the mammae become sensitive, inflammatory action may be best prevented by frequently drawing off the milk, administering full doses of salines and aperient medicines, and keeping the breasts suspended in a sling.

(B) Mastitis.: The breasts , if properly attended to before the onset of labour, as a general rule give very little trouble. The precaution is , however, very often not observed. In cases where the nipples are retracted the infant when put to the breast, is unable to draw off sufficient nourishment; the consequence is that the milk is retained in the ducts, distends them, and in this way sets up mastitis.

Mastitis, again, very often arises from an infected fissure. In this case the gland becomes swollen throughout its whole extent, or only in some parts of it. It then becomes extremely sensitive and painful; the skin over the gland, or over the inflamed area, becomes tense, hot and red. The lymphatics are seen to proceed to the swollen glands in the axilla in the form of thin red lines, and the veins become prominent. In the majority of these cases, the inflammation subsides under appropriate treatment. On the other hand it may end in suppuration.

(C) Suppurative Mastitis: This condition very often owes its origin to the presence of chaps on the nipple, through which absorption of septic matter takes place. Sometimes it is the result of a blow or injury. Here as a rule, one lobe of the gland becomes involved, but if neglected the

suppurative process may extend throughout the whole organ.

The most prominent symptom of the affection is pain, which is very intense in its nature. At the beginning of the illness, the pyrexia is usually very high, but it soon falls to some extent, and passes into a prolonged suppuration fever. Suppurative Mastitis may readily develop into an abcess.

(D) Abcess of Breast: This may cause a very high degree of pyrexia. Usually the local symptoms of mammary mischief soon shew themselves, and the nature of the illness one has to deal with, is easily diagnosed. Though sometimes it is very severe in its onset and duration, yet it readily yields to treatment. Whenever the signs of pus are definitely ascertained by the usual signs of fluctuation etc., the abcess should be at once firmly incised under aseptic precautions. This condition may lead to more or less destruction of the glandular elements of the breast.

(E) Chaps of the breast may cause intense pyrexia. The fever in this case depends on the size of the chaps, the pain which they occasion, and the irritability of the patient. When the pain ceases and the nervous excitability is calmed the pyrexia is at once abated.

In all these morbid conditions of the breast occurring during the puerperium, I would again draw attention to the important clinical fact, that it is by the careful and systematic use of the thermometer, that we get the earliest indications of their presence. Then, by applying appropriate treatment, we may be enabled to save our patients a great deal of discomfort and suffering and, in many cases, by adopting proper measures, a patient may be able to suckle her child well, who, on previous occasions, had the misfortune to have an abcess of the breast.

The following three cases are good illustrations of pyrexia due to

Chart. 1

DISEASE.

Mastitis and Chaps on Nipples

Notes of Case.

Name M. M.

Age 24

Diet

Case Book No. 1

4th day Breasts sore

5th " Breasts sore

6th " Breasts sore & Nipples

7th " Breasts better.

8th " " "

Date of ~~admission~~ Delivery.

Nov. 7th 1878.

Result Recovery.

Time.	M E	M E	M E	M E	M E	M E	M E	M E
Bowels.			X	X			X	
Urine.								
Day of Disease	1	2	3	4	5	6	7	8
Pulse.	90	72	90	100	98	114	84	84.
Resp.								
Date.								

Temperature (Fahrenheit)

107° 106° 105° 104° 103° 102° 101° 100° 99° 98° 97°

Castor oil. Castor oil. Epsom Salts.

Normal Temperat. of body.

Patient well.

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mammary mischief.

Case 1. M. M. Age 24, was confined on the 7th Nov. 1898. Primipara. The first and second stages of labour occupied altogether eleven hours. Forceps were required at the outlet. Placenta came away in ten minutes. Immediately after labour the temperature was 98.4°F, and the pulse 86. For the first three days patient did well, but on the fourth, pyrexia developed as is demonstrated in the following table. (See chart 1.)

1st. day	(Temp.)	99°F.	(Pulse)	90	
2nd. "	"	97°.8	"	72	
3rd. "	"	98	"	90	
4th. "	"	100.4	"	100	Breasts sore.
5th. "	"	100.2	"	98	Breasts sore.
6th. "	"	101.8	"	114	Right breast more enlarged than others and painful.
7th. "	"	98.2	"	84	Breasts somewhat better.

The treatment adopted was particular attention to the nipples, and the administration of repeated doses of Epsom Salts.

Case 2. Mrs. M. Age 29. Multipara. 6th. Confinement. Was delivered of a female child on Sept. 24th. 1898. Labour was normal in every respect. The first and second stages occupied 8 hours and the placenta was expelled in 25 minutes. The condition of the patient was very favourable for the first two days, during which time the pulse and temperature were perfectly normal. On the third, however, pyrexia developed, the temperature, rising to 103°F, and the pulse 120. The following table shows exactly the state of matters. (See chart 2.)

1st. day	(Temp.)	99.4°F.	(Pulse)	66	Condition of breasts satisfactory.
2nd. "	"	98.4	"	90	" " " " Castor Oil.

Chart. 2

DISEASE.

Mastitis and Chaps of nipple.

Notes of Case.

Name Mrs M.

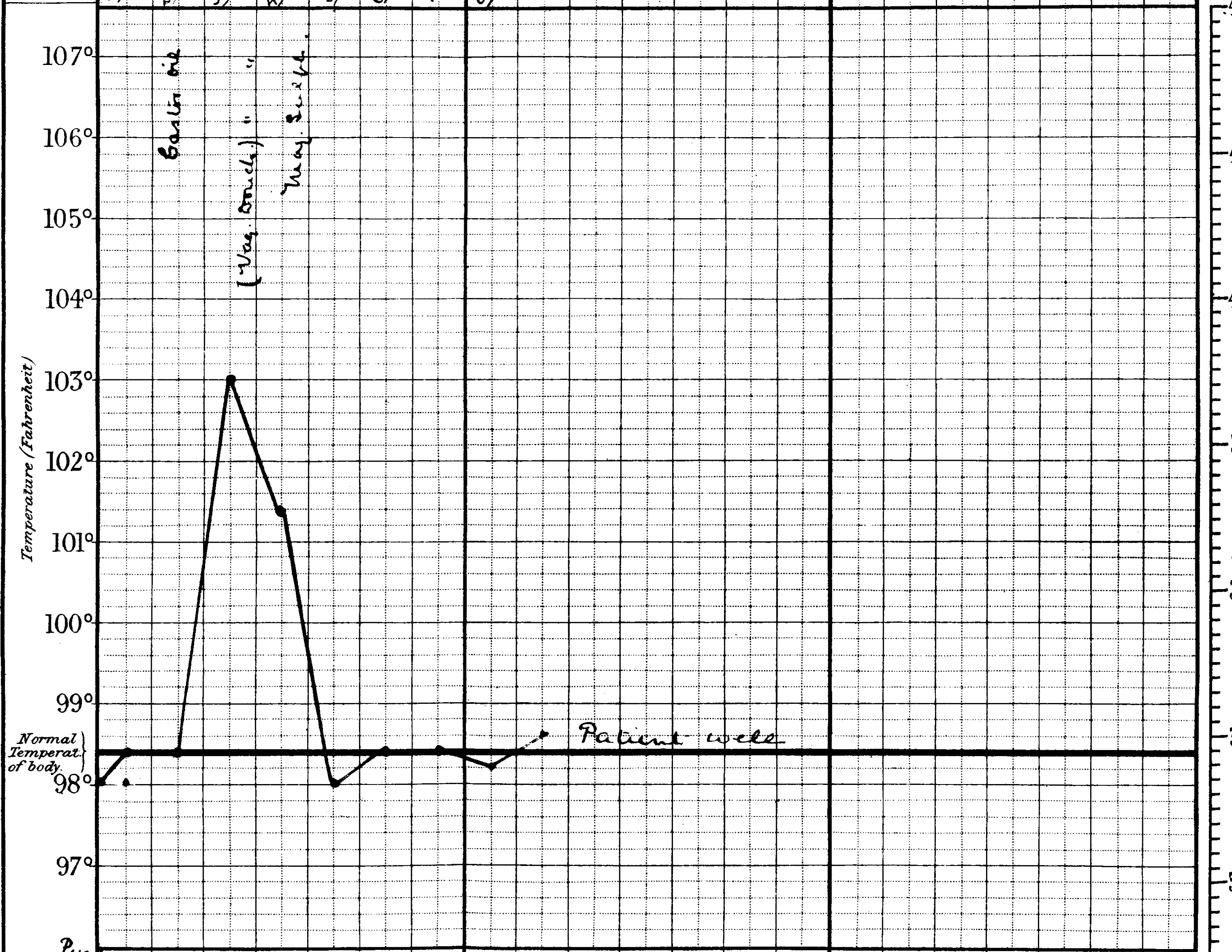
Age 29 (Multip.)

Diet

Case ~~Book~~ No. 11

3rd day. Breasts very sore
4th " do do.
5th " do. do.
6 " Breasts sore
7 " do. better.

Time.	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E
Bowels. / Urine.	1st day		2nd day		3rd day		4th day		5th day		6th day		7th day		8th day			



Day of ~~Dis.~~ Puerp.	←	1	2	3	4	5	6	7	8
Pulse.	74	66	90	120	90	60	74	78.	
Resp.									
Date.	24	25	26	27	28	29	30	1	2

Date of ~~admission~~ Delivery. 24th Apr. 1898

Result Recovery

3rd. day	(Temp.)	103°F.	(Pulse)	120	Breasts very sore. Castor Oil & Vaginal Douche.
4th. "	"	101.4	"	90	Breasts still very sore. Epsom Salts.
5th. "	"	98	"	60	Breasts very sore.
6th. "	"	98.4	"	74	Breasts not so painful.
7th. "	"	98.4	"	74	Breasts satisfactory. No pain.

Improvement after this uninterrupted.

Case 3. This case is a good example of pyrexia due to the onset of lactation. Mary R., age 20. Primipara. Was confined in Sept. 1898. The pelvis was contracted, causing a prolonged second stage in the labour. Forceps were applied. (See chart 3.)

1st. day	(Temp.)	98.8°F.	(Pulse)	92	
2nd. "	"	100.6	"	104	Breasts engorged.
3rd. "	"	100.2	"	70	
4th. "	"	99.4	"	84	
5th. "	"	99	"	80	

Treatment: On the second and third day large doses of Magnesium Sulphate were administered, the condition of the breasts being much relieved thereby.

(3) Emotion: A very important and very common cause of transient puerperal pyrexia is excitement or worry. Such cases are more frequently met with in lying-in hospitals than when treated outside, but, in the latter, the probability is, that they have not been observed. They are by no means uncommon in private practice. In certain hysterical women there may be noticed high temperatures, corresponding to the catamenial period, and during the puerperium, should the medical attendant be puzzled with a

Chart 3

~~DISEASE~~.

Onset of Lactation

Notes of Case.

Name { ell. R;

Age 20 (Primip.)

Diet

Case ~~Book~~ No. III

2nd day: Breasts engorged.

Date of ~~admission~~ Delivery.

Sept. 1898

Result Recovery

Time.	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E
Bowels.																										
Urine.																										

Temperature (Fahrenheit)

107°
106°
105°
104°
103°
102°
101°
100°
99°
Normal Temperat. of body.
98°
97°

Relieved by

Day of ~~Dis.~~ Puer.	1	2	3	4	5	6	7
Pulse.	92	104	90	84	80	90	78
Resp.							
Date.							

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case of obscure pyrexia, the fact that it may be due to emotional excitement, should always be kept in mind. With regard to the rise in the temperature from nervous causes, it may simply be produced from that alone, or may be mixed up with other causes, such as, a certain degree of septic absorption. Then the state of matters is much more serious. It is quite feasible to think, that a Nervous Pyrexia may be the exciting cause of some cases of septic absorption, in as much as the increased temperature may greatly augment the virulence of the micro-organisms finding a nidus in the uterus or uterine contents. Galabin records the case of a lady, who appeared to go on well for two weeks after her confinement.. She was then excessively agitated at one of her children being nearly choked. A sudden rise in temperature followed. But the pyrexia did not quickly subside. The symptoms of septicaemia developed and the patient ultimately died. He thought, however, that if the contents of the uterus had been perfectly healthy at the time, death would not have happened. (Obstet. Trans. Vol. xxvi, Page 17.)

.The transient pyrexial conditions arising from disturbance of the nervous system are not, as a rule, accompanied by an initial rigor or shivering. " The absence of this initial rigor" Playfair holds, "distinguishes these "cases from the more serious and dangerous pyrexiae, arising from septic "mischief. In the latter instance the initial rigor is seldom or never "absent, if carefully enquired after."

E.M. Tait records several instances in Obstet. Trans. London Society (Vol. xxvi. P.12.) of what he calls "Nervous Temperatures". From his observations it is to be noted, that rises of temperature occur within a few days after delivery or, as in one case, as long as eighteen days after. They, more-

Chart 4

DISEASE.

Pyrexia due to excitement and drink

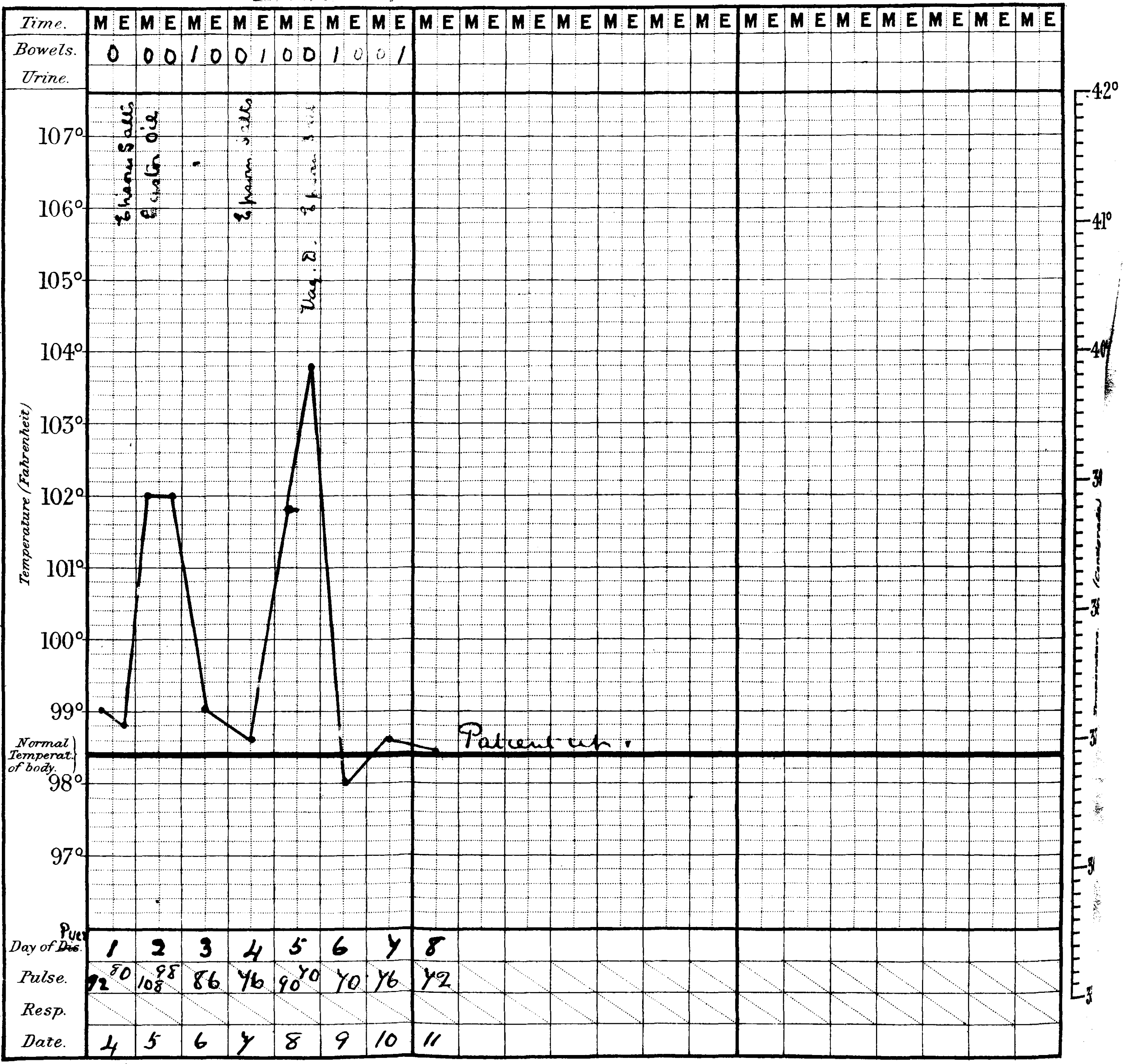
Notes of Case.

Name Mrs G

Age 21 (P.)

Diet

Case ~~Book~~ No. IV



Date of ~~*admission*~~ Delivery. 4th Oct. 1898

Result Recovery

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moreover, did not specially occur in those whose labours were difficult and tedious, or who had perinael tears.

Case iv. illustrates this form of pyrexia produced by nervous influences alone.

Mrs. C. Age 21. Primipara. Confined on 4th. Oct. 1898. Labour was natural in every way, the first and second stages occupying 8½ hours, and the placenta coming away normally in ten minutes. Temperature immediately after delivery 99°F, Pulse 92. The patient's condition was perfectly satisfactory, except on the second and fifth days, and during the latter the temperature rose as high as 103.8°F. On the fifth day it was considered necessary to examine the uterus, but there was no evidence of local trouble, no clots being found and no putrid lochia. The lochia at the same time was scanty on both days, the second and the fifth, the patient was noticed to be very much excited, and, on enquiry being made, the following facts were learned. On the evenings previous to the second and fifth days the house was full of neighbours, and drinking was freely indulged in, of which the patient had evidently her share. The records of the case are perfectly normal with the exception of these two days. (See Chart 4.)

1st. day	(Temp.)	98.8°F.	(Pulse)	80	
2nd. "	M.	"	102	"	108	Epsom Salts & Oil.
	E.	"	102	"	98	
3rd. "		"	99	"	86	
4th. "		"	98.6	"	76	
5th. "	M.	"	101.8	"	90	Salts.
	E.	"	103.8	"	70	
6th. "		"	98	"	70	
7th. "		"	98.6	"	76	

(4). Intestinal Contents: It is not uncommon during the first few days of the Puerperium for the woman to get a rise of temperature and headache, without localising symptoms anywhere. Such symptoms cause little anxiety and generally disappear after a purge. With a pulse of 120, the same symptoms are of the utmost gravity, in as much as, although the pyrexia and headache may be explained by a loaded bowel, the rate of the pulse especially if it be continuous, would suggest the possibility of putrid or septic infection. Very great distension of the bowel with faecal matter is a frequent cause of pyrexia in the puerperal state. During pregnancy, there is a tendency to constipation, and very often when labour comes on the bowels are found practically loaded. This retention leads to the absorption of poisonous gases or other toxic products from the intestines, or sets up inflammation of the lining mucous membranes from irritation and pressure. In both instances pyrexia results. The diagnosis of such a condition is greatly facilitated by feeling the faecal masses per rectum or vaginam, or palpating the surface of the abdomen, when very often a hard, doughy swelling which pits on pressure, is detected in the caecal region. Another important symptom is that as a rule the uterus is not easily felt in front, for the first few days of the puerperium.

The due evacuation of the bowels causes a rapid subsidence of the symptoms. As a preventative against this state of matters, the bowels in addition to being thoroughly emptied before the onset of labour ought to be opened on the evening of the second day or morning of the third day after delivery.

Diarrhoea and other functional derangements of the digestive organs such as colic and flatulence may also cause transient pyrexia, and then again the intestinal disorder may lead to an exaserbation of the temperature

Chart 5

DISEASE.

Pyrexia due to loaded bowel

Notes of Case.

L. G.

Name

Age 14

Diet

Case Book N° V

Date of admission. Delivery 21st Oct. 1898.

Result Recovery

Time.	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E	M E
Bowels.	0	0	0	0	0	0	0	X	0	X	X														
Urine.																									

Temperature (Fahrenheit)

107° 106° 105° 104° 103° 102° 101° 100° 99°

2 pints Saline Castor oil

Patient well

Normal Temperat. of body. 98° 97°

Temperature. (Centigrade)

42° 41° 40° 39° 38° 37° 36° 35°

Day of Dis.	Puerp. 1	2	3	4	5	6	7
Pulse.							
Resp.							
Date.	22	23	24	25	26	27	28

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of a previously existing morbid condition; e.g. Sapraemia.

Case v. L.G. Age 17. Primipara. Confined 21st.Oct.1898. Labour normal. First and second stages occupied 28 hours, and third stage 20 minutes.

The condition of this patient was quite satisfactory up till the fourth day, when the thermometer registered 102°F. Constipation was a marked feature for the first four days, all other symptoms being perfectly normal. With the administration of Epsom Salts on the fifth and sixth days the pyrexia completely disappeared. (See Chart 5.)

1st. day	(Temp.)	99.2°F.	(Pulse)	90	
2nd. "	"	99.3	"	82	
3rd. "	"	100.2	"	74	
4th. "	"	102	"	104	Salts.
5th. "	"	100.4	"	96	Oil.
6th. "	"	98.6	"	90	

Case vi. M.M. Age 31. Multipara (5). Confined 8th. Nov. 1898. Labour normal. First and second stages occupied 12 hours. Placenta expelled immediately. Temperature 98.6°F. Pulse 90. All went well till fifth day, when pyrexia developed, the temperature rising to 102.5°F, and the pulse 92. All other symptoms were satisfactory, with the exception that the bowels had not moved since the morning of the third day. With aperient medicines the pyrexia disappeared. (See Chart 6.)

1st. day	(Temp.)	97.6°F.	(Pulse)	61
2nd. "	"	99.6	"	100
3rd. "	"	100	"	104
5th. "	"	102.5	"	92
7th. "	"	98.6	"	70

Chart 6

DISEASE.

Pyrexia due to intestinal contents

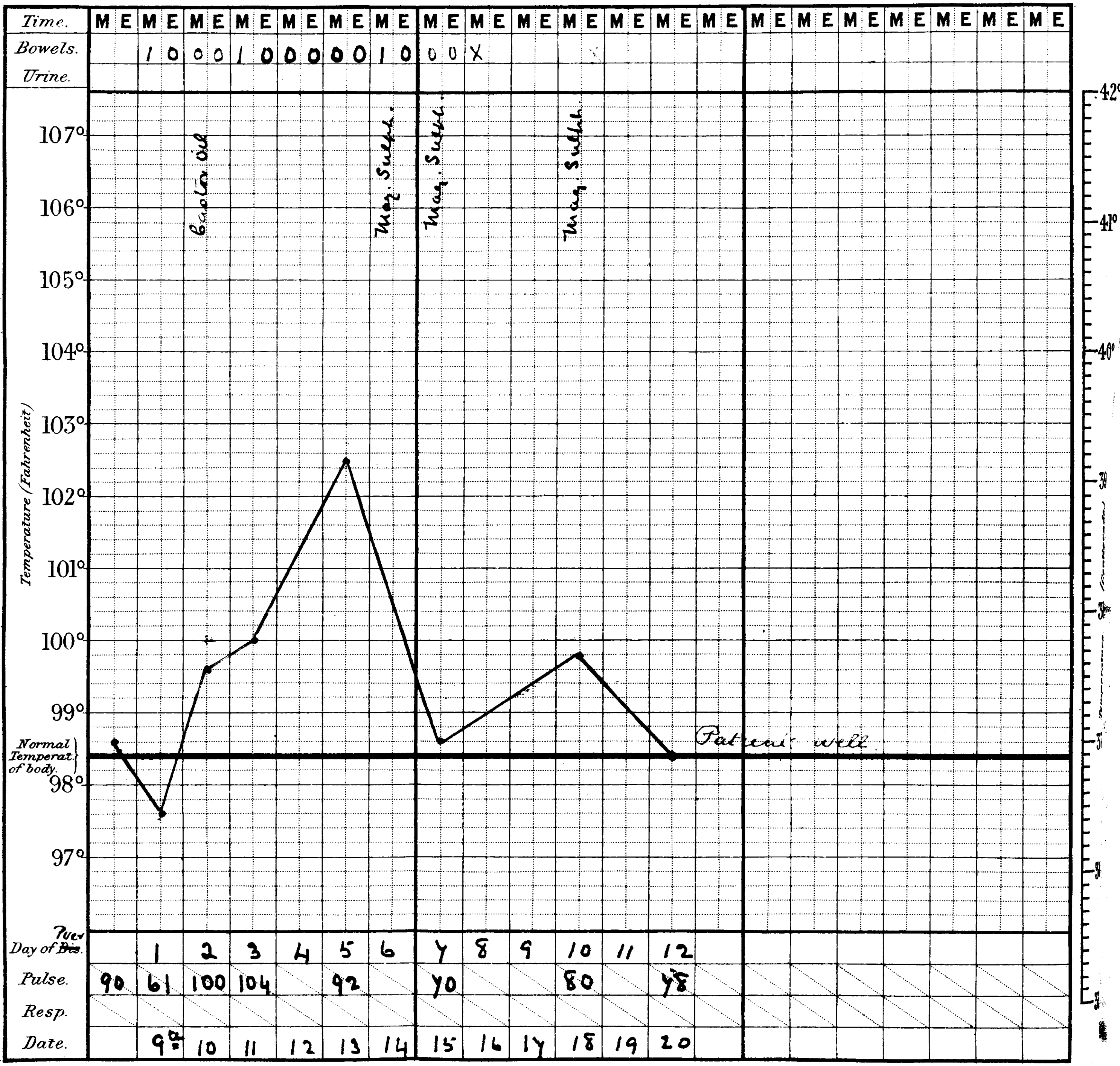
Notes of Case.

Name M. M.

Age 31. (M.)

Diet

Case ~~Book~~ No. VI



Date of ~~admission~~ delivery.
8th Nov. 1898

Result Recovery

10th. day (Temp.) 99.8°F. (Pulse) 80

12th. " " 99.4 " 78

(5). Retention of Urine: In neurotic patients particularly retention of the urine giving rise to pain, more or less severe, is well known to be oftentimes accompanied with pyrexia which soon subsides by drawing off the urine with a catheter. Patient complains of her inability to pass water and this draws attention at once to the cause. The rise of temperature is usually to 100°F. or slightly over it, while the pulse rate may increase to 130 or 140 beats per minute. The regular use of the catheter may have to be continued till the bladder has regained its normal contractive power.

(6). Persistent Haemorrhage: This may also cause a rise of temperature in puerperal women. Here the pulse is very much increased in rate, the acceleration lasting for some time. A factor in producing the haemorrhage is the habit of applying hot water bottles to the feet immediately after labour.

Case vii. Mrs. M. Labour abnormal. Multipara. Confined in October, 1898. Two sets of students had respectively attended this case, and reported that the patient was not in labour, but that the os was the size of a sixpence. A few days after, a third set visited her, and reported slight ante-partum haemorrhage with moderate pyrexia.

When I saw her the temperature was 100.8°F. and the pulse 120. Examination showed the os to be the size of a shilling, and the edge of the placenta could be distinctly felt: and blood oosing away. Profuse haemorrhage suddenly came on. Dilatation of the cervix with the fingers was immediately performed, when the placenta at once was expelled. Podalic version was then done, and a still born child delivered. Persistent haemorrhage

developed. Hypodermic injections of Ergotinin were administered and the uterus repeatedly douched with water and creolin at 120°F; finally packing of the uterus and vagina with iodiform gauze was resorted to, and transfusion of salt solution into the axillary region, but she died in about five hours time from collapse. The cause of the haemorrhage in this case, I believe, was due to detachment of the placenta, and was undoubtedly accompanied with a slight degree of pyrexia until the onset of collapse. Two other cases recently occurred in my private practice, where persistent haemorrhage came on after delivery. In both the temperature was about 100°F. and the pulse accelerated. In both cases hot water bottles had been applied to the feet, and treatment had little effect, until they were removed after discovery. The measures adopted were Ergotinin hypodermically and intra-uterine douching.

(6). Cold-, Overexertion and the use of Intoxicating Liquors are all of them fruitful sources of pyrexia. Cold may set up pyrexia by its general effects on the system or producing a local inflammatory condition.

Case viii. is a good illustration.

Mrs. G. Age 35. Multipara. Confined on 14th. Oct. 1898. Labour normal. First and second stages occupying 25 hours and the third stage 8 minutes. All went well until the third day when the temperature rose to 102°F. and the pulse 99. This was brought about by the patient getting out of bed and going about the place exposed to the cold. She was ordered back to bed and to stay there, when the temperature gradually subsided to normal. The general condition of the patient was satisfactory, the breasts and the uterus, showing no local symptoms. The following records were taken during the course of the puerperium. (See Chart 7.)

Chart 7

DISEASE.

Pyrexia due to cold and exertion.

Notes of Case.

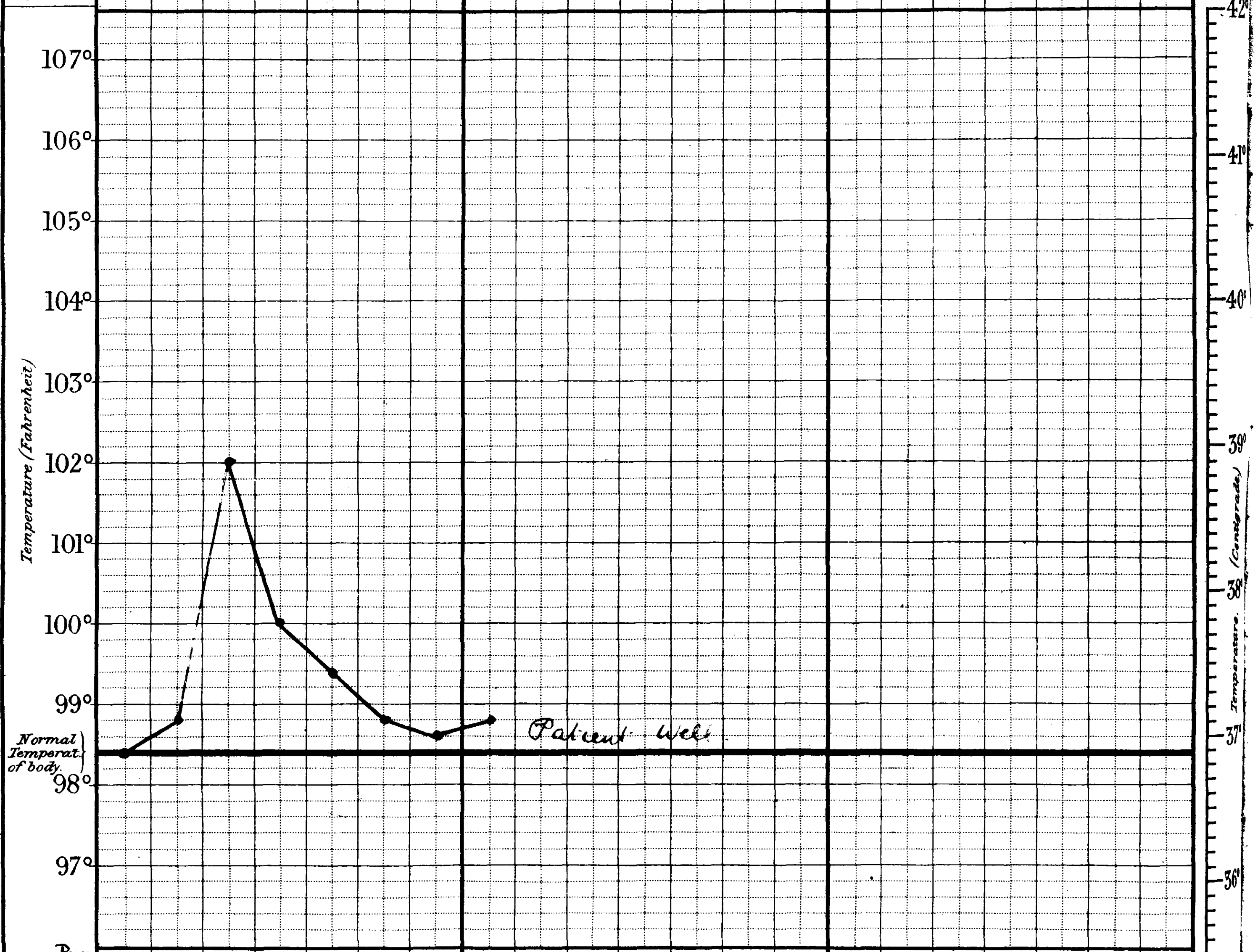
Name Mrs G.

Age 35 M.

Diet

Case ~~Book~~ No VIII

Time.	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E
Bowels.																																										
Urine.																																										



Day of ~~Dis.~~ Puer	1	2	3	4	5	6	7	8							
Pulse.	64	72	99	96	72	90	86	84							
Resp.															
Date.	14	15	16	17	18	19	20	21							

Date of ~~admission~~ Delivery.
14th Oct. 1898

Result Recovery

Entered at Stationer's Hall. *Printed and Published by Wodderspoon & Co. 7, Serle Street, Lincoln's Inn.* *Gould's Clinical Chart.*

1st. day	T. 98.4	F.	P.64.	
2nd. "	98.8		72.	
3rd. "	102		99	Had been up & ordered back
4th. "	100		96	to bed.
5th. "	99.4		72	
6th. "	98.8		90	

The evil influence of alcoholic excess is shown in Case IV P.13

8. LACERATIONS OF THE GENITAL TRACT are in many instances associated with pyrexia. In a large number of instrumental cases very few had a rise of temperature at all. When it did occur, the elevation of temperature might be regarded as due to the operation. Lacerations of the perinaeum seldom happened but as a rule were followed by one or two degrees of pyrexia.

Abrasions of the vaginal mucous membrane in several instances led to sloughing forming what is known as Puerperal ~~Nerves~~ Ulcers, and were accompanied by pyrexia. In one case of Marginal Placenta Praevia a rupture of the cervix of considerable size occurred but was not followed by pyrexia. The great danger of all these injuries is the fear of sepsis. To guard against this, systematic and regular douching with Creolin or Corrosive Sublimate should be resorted to.

Case IX. M.D. Age 23. Primipara. Confined on 23rd. August, 1898. Forceps case. First and second stages occupied 36 hours, and the third stage 20 minutes. The mucous membrane of the vagina was considerably lacerated, resulting ultimately in the formation of sloughing or Puerperal ulcers. From the third to the seventh day the temperature ranged from 101° F to 102 deg.F. and the pulse rate from 100 to 122, ~~deg~~., the records being taken twice daily. The urine required to be drawn

Chart 8

DISEASE.

Puerperal Ulcer – lacerations

Notes of Case.

Name M. M.;

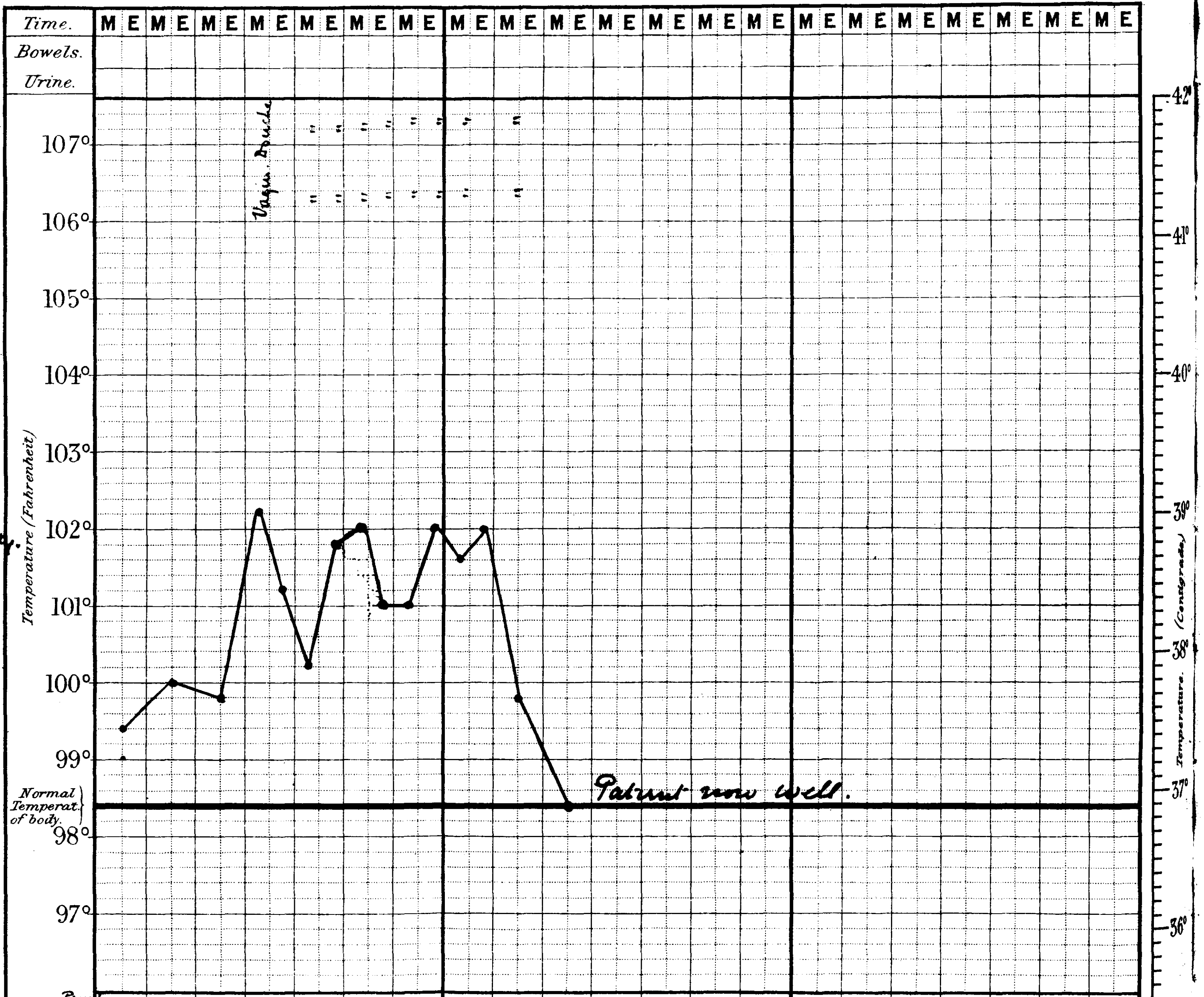
Age 24 Primip.

Diet

Case ~~Book~~ No. IX

Additional Notes:

3rd day: Milk and lochia scanty.



Day of ~~Dis.~~ Puerp.		1	2	3	4	5	6	7	8	9
Pulse.	82	96	106	122 / 106	108 / 104	110 / 104	102 / 101	98 / 102	96	96
Resp.										
Date.	23	24	25	26	27	28	29	30	31	1

Date of ~~admission~~ Delivery.
23rd Aug. 1898

Result Recovery

Entered at Stationer's Hall. Printed and Published by Wodderspoon & Co. 7 Serle Street, Lincoln's Inn. Gould's Clinical Chart.

off at regular intervals. After the seventh day the temperature and pulse became normal (see Chart 8)

Treatment: Vaginal douching with solutions of Creolin, and dusting the parts with Iodoform.

9. Intra-uterine douching.

Very often after administering an intra-uterine douche at a temperature of 120 deg. F., it is noticed that the temperature of the patient rises one or two degrees. It soon subsides, and as a general rule does so within twenty four hours.

10. Threatened rupture of the Uterus, is also associated with pyrexia. In addition to a temperature rising above 101 deg.F. the symptoms of this dangerous complication are a rapid increasing pulse rate, continuous or tonic uterine contractions and the fact that Bandyl's ring can be felt one and a half inches above the symphysis Pubis. When this latter condition is present the uterus has to be distinguished from a distended bladder. In the case of a distended bladder, fluctuation can be readily made out and the symptoms disappear when the catheter is passed and the urine drawn off.

11. Eclampsia: is usually associated with pyrexia. At first the pyrexia is normal, and may reach hyperpyrexial altitudes.

12. Putrid and Septic Infection:

If a portion of the membranes, or placental tissue, clots and lochia are left behind in the uterus, they undergo the process of decomposition by the action of saprophytes or non-pathogenic organisms. In this

way ptomaines are produced, which being absorbed by the patient originate the morbid condition of Sapraemia with all its characteristic toxaemic symptoms. The onset of the symptoms occurs very shortly after the absorption of the poison, while they cease after the supply has been stopped. There may be an initial rigor, usually there is; - the temperature rises to 102 deg.F. or higher and the pulse becomes proportionately rapid. As a general rule the lochial discharges are putrid or becoming so, while at the same time there is a check in the diminution in size of the uterus. In true sapraemia, there is no invasion of the endometrium or blood by the organisms themselves, for if the decomposing matter be cleared out and an intra-uterine ,antiseptic douche be given, the symptoms usually disappear. If the patient be neglected and proper treatment not adopted she becomes much worse, all the symptoms being greatly aggravated and in all probability the case develops into septic infection in one or other of its different forms. The saprophytes of which in uterine cases the Bacillus Proteus vulgaris is the most common, are chiefly introduced into the uterus by the fingers, instruments or dust-laden air. Therefore in addition to observing the strictest antiseptic precautions when attending cases of labour, the accoucheur must do all in his power to prevent the entrance of air into the uterus, and to endeavour not to leave behind any debris after labour is completed. Premature expulsion of the placenta, want of control of the uterus while the patient lies in the lateral position, or other mismanagement of the third stage of labour, are the principal causes of debris being retained in, and air gaining admittance into the womb. They are thus to be avoided with the greatest possible care. Moreover, by the absorption

of the ptomaines, the patient's vitality is lowered, and she becomes less able to resist the possible attack of septic infection.

With regard to the action of Saprophytes in the causation of septic infection, there are two views held:

(1) That the saprophytes, by the process of putridity, so enhance their own power that they themselves become pyogenic, attack the endometrium, and set up septic endometritis.

(2) That the saprophytes, stimulate the pyogenic organisms present, and so increase their virulence.

Whatever of these opinions is correct, it is all important that, in order to prevent the occurrence of septic infection, sapraemia should be prevented if possible; and if present should be recognised and treated as early as possible. Very often decomposition of clots, placental tissue, etc., in the uterus, is accompanied by - and all the more certainly if not remedied, is followed by - an invasion of the endometrium by pyogenic organisms, causing a condition of septic endometritis. This affection is included by many authors under the term sapraemia, but is in my opinion, as suggested by Mathew, better called "septic toxaemia."

In septic toxaemia (~~i.e.~~ i.e. septic endometritis) there is an invasion of the endometrium by pyogenic organisms and the invasion is limited only to that. The ptomaines produced by these again are absorbed into the blood by the veins and lymphatics, and give rise to an aggravated toxaemia, compared with sapraemia. The pyogenic organisms being thus invested in the endometrium, it is easy to understand that this condition is not cured at once by clearing out the uterine con-

tents and by intra-uterine douching, but nevertheless it is greatly benefited thereby, especially if these measures are carefully carried out at least twice daily. Recovery is aided by the administration of nourishing diet, stimulants and aperients, and takes place usually after a week has passed. Curettage has been advocated by some authorities with the view of removing the infected endometrium. The difficulty is the removal of the endometrium entirely, and if this is not done, the risk to the patient is much increased, owing to the fresh surface exposed by the operation.

In some instances the patient suffers from a combination of sapraemia and septic toxaemia. This is much more serious, and if recovery takes place at all, it may be more protracted owing to the vitality of the woman being greatly weakened by the sapraemia.

If there is a large escape of the pyogenic organisms into the blood in addition to the local invasion, we have the condition of Septicaemia or Acute Sepsis set up. Septicaemia is described by many as having a sudden onset on the third or fourth day of the puerperium, the state of the patient previous to that being quite satisfactory. This, in my experience, is not the invariable rule, as it is just a question when the poison is absorbed. Septicaemia may set in much earlier and is frequently preceded by Sapraemia. The chief symptoms are usually ushered in with a rigor; the temperature rises to 104 deg. Fah. with a subjective sensation of cold and shivering. On the other hand, the temperature may rise gradually. Then there is a marked morning remission and evening exascerbation. The pulse gradually increases in frequency with nightly remissions and

may be out of all proportion to the temperature. The patient usually complains of severe headache and sleeplessness. There is also profuse perspiration with recurring rigor and stoppage of the milk and lochial discharge. Abdominal tenderness may or may not be present. In severe cases, the disease runs a very rapid course - the patient most often dying. As regards treatment, intra-uterine douching is beneficial, combined with the use of stimulants - quinine and iron.

PYAEMIA may be regarded as a sort of chronic form of Acute Sepsis or Septicaemia. Its onset is usually later - about the eighth or tenth day. Previous to this date, the puerperium may have been normal or sapraemia may have been present and been neglected. In pyaemia the virulence of the microbes is not so intense as in Septicaemia, and time is consequently allowed for pathological changes. The symptoms resemble to some extent those of Septicaemia, but in addition, abcesses form in the joints, lungs, liver, spleen, brain and other organs.

In puerperal women, Septic Infection of the genital passages is due to the introduction of pyogenic organisms, of which the chief is the Streptococeus Pyogenes vîa the uterine lymphatics. The outbreak of the disease depends essentially upon the period at which infection has taken place. This may happen during the second or third stage of labour, but occasionally at the beginning, or even during pregnancy. The examining finger may open some of the absorbent vessels by detaching the decidua or placenta, as in

cases of Placenta Praevia.

Dr. Whitbridge Williams has examined bacteriologically the uterine contents of 40 cases of pyrexia during the puerperium. Cover slip and culture preparations were made in each case. The results may be read in the American Journal of Obstetrics for Sept., 1898, and are as follows:-

Streptococci	were found in	8 cases.
Staphylococci	"	3 "
Colon Bacilli	"	6 "
Gonococci	"	2 "
Anaerobic Bacteria	"	4 "
Unidentified aerobic bacteria	"	3 "
Bacteria in cover glass but culture sterile		4 "
Diptheria Bacilli	" "	1 "
Typhoid Bacilli	" "	1 "
Gas Bacilli (Bacillus Aerogenes Capsulatus)		1 "

There were several instances of mixed infection. In 11 cases, cover glass, cultures and blood were sterile and in one case the only organism found was the Malaria Plasmodium, in the blood. His conclusions were:-

1. That in most of the cases where no organism was found, the pyrexia was due to absorption of septic material from the intestines, as the temperature subsided after the use of aperient medicines.

2. That in a few cases, no cause for the pyrexia was discovered.

3. That puerperal infection is a wound infection and like it, may be due to a number of different bacteria, which have been introduced into the patient from without.

In the October number of the American Journal of Obstetrics, Dr.

Williams writes upon the Bacteria of the Vagina, and their significance. His conclusions are based upon the bacteriological examination of the vaginal secretion of 92 pregnant women and are briefly as follows:-

1. The vaginal secretion of pregnant women does not contain the usual pyogenic cocci when these organisms are found they are introduced from without.

2. The Gonococcus is occasionally found in the vaginal secretion and during the puerperium may extend into the cervix and uterus.

3. It is possible but not yet demonstrated, that in very rare instances the vagina may contain bacteria, which may give rise to Sapraemia, and putrefactive Endometritis by auto-infection.

4. Death from puerperal infection is always due to infection from without.

Dr. William's investigations therefore point to the necessity of extra vigilance and care in maintaining aseptic and antiseptic surgery and in the thorough disinfection on the part of those who are liable to be called to attend a confinement, whenever pus in any form may contaminate the hands or clothes. In addition the risk of puerperal infection is to be avoided by cultivating as much as possible external palpation in place of making vaginal examinations. The use of vaginal douches is not necessary and is probably harmful.

It is of the greatest importance now as regards prevention and the prognosis of a case that we should be able to decide, whether it be due to septic infection or not. If the symptoms of this affection

are very clear, a decision is easily arrived at. In most cases of Sapraemia, and Septic Infection, however, the diagnosis and the prognosis are the chief difficulties. Sapraemia can only be distinguished from Septic Toxaemia and Septicaemia at the first, by the fact that in Sapraemia the pyrexia and other symptoms subside after the complete evacuation of the uterine contents and the use of the antiseptic intra-uterine douche. If the symptoms do not subside at once to this treatment, the case is to be regarded as one of septic infection. In some instances, a correct diagnosis and prognosis may be impossible but are best aided by careful observation of the temperature, pulse, and secretions. It may be very difficult at times to distinguish between a case of septic infection and one of typhoid fever - between a scarlatina exanthem (seen sometimes in septic cases) and true scarlatina, or between septic infection and an incipient Pneumonia.

At other times septic infection may be engrafted on as it were, to a preexisting pyrexial condition, the two diseases thus masking and compounding each other.

For the proper diagnosis of the different local diseases, everything depends upon an accurate examination performed according to the rules of medicine - Surgery and Gynaecology. In this way the equivocal cases become reduced to a number of cases, erroneously regarded as Septic, because they are not distinctly anything else. Any method that would lead to greater precision in the diagnosis of the different forms of septic infection would be very acceptable to all generally interested in its scientific treatment and pre-

vention.

The bacteriological methods as adjuvants to a clinical diagnosis suggest the kind of assistance required. In my opinion the employment of the culture tube and cover slip preparations, as used by Dr. Williams would do much in promoting a scientific appreciation of the nature of septic infection, even although existing under any manner of disguise. I believe that the bringing together of the methods of observation thus spoken of, would add an element of certainty to the principles and details of the management of childbed., and would afford an additional guide to the management of some of its most dangerous complications. For this purpose I consider it the duty of the state or municipal authorities to make provision for the establishment and support of suitable laboratories generally available to the practitioner for investigating the culture and microscopic methods of diagnosis of septic infection in particular, as well as of those bacteriological procedures of similar value .

As regards the use of Anti-streptococcic Serum at the present time, many cases have been published within the last two years, where it has been employed. Many praise it as a remedy, but as a rule in the instances it has been given, no distinction has been drawn between Sapraemia, and septic infection. Others again have seen no good result from its use.

Professor Denys, and Dr. Leclef together made careful investigation into its efficacy. From experiments made upon rabbits with the serum, they came to certain conclusions some

Chart 9

DISEASE.

Sapraemia

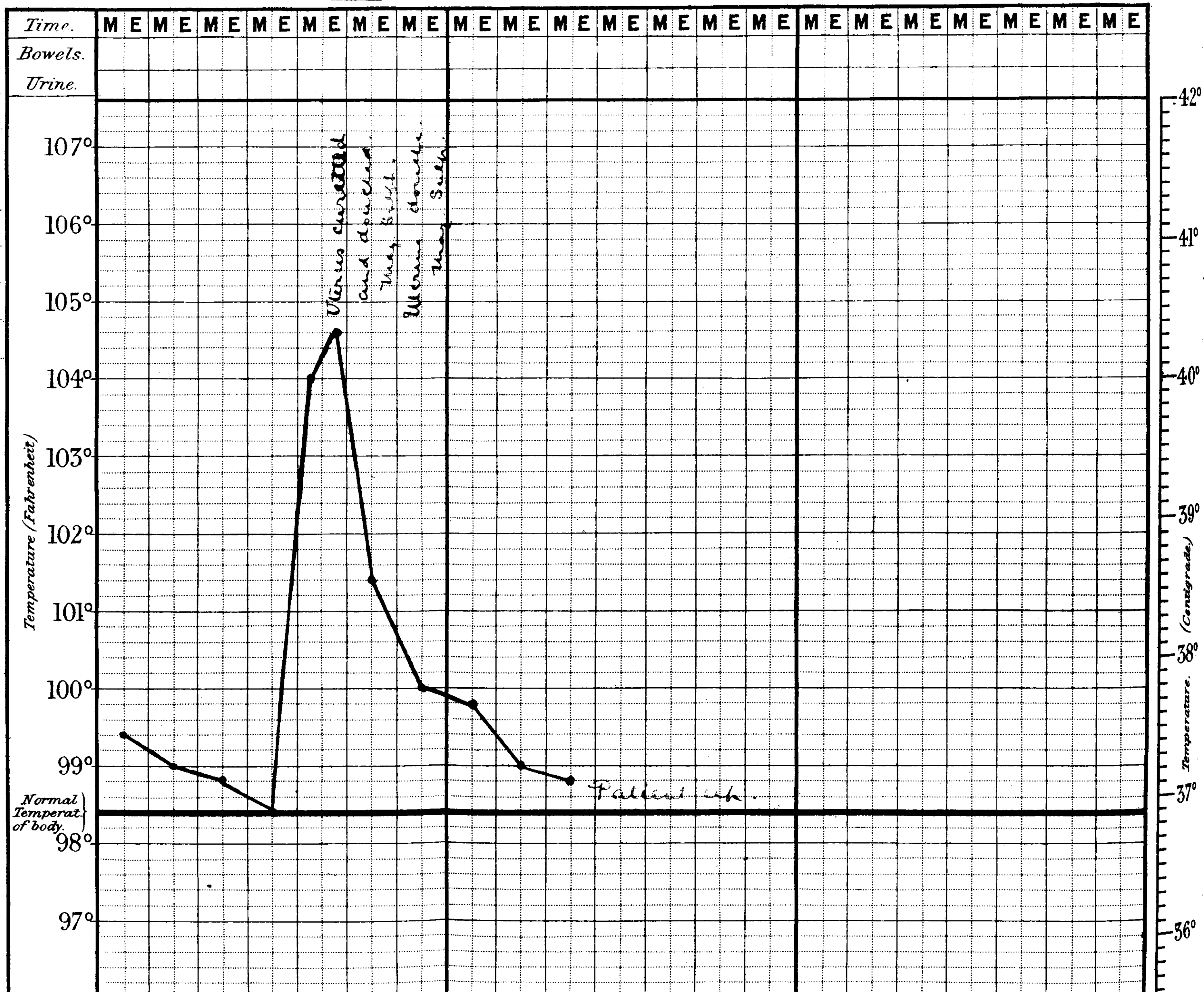
Notes of Case.

Name Mrs. McD;

Age 21 Prim.

Diet

Case ~~Book~~ No. X



Day of Puer. ~~Dis.~~		1	2	3	4	5	6	7	8	9
Pulse.	106	84	92	88	128 136	112	120	92	96	90
Resp.										
Date.	11	12	13	14	15	16	17	18	19	20

Date of ~~admission~~ Delivery

Oct. 11th 1898

Result Recovery

of which are briefly as follows:-

1. That the majority of the cases of Streptococcic infection are benefited by the use of the serum and that a certain number of cases are not benefited either because the serum is not sufficiently active or because the infection is due to some organism other than Streptococcus Pyogenes.

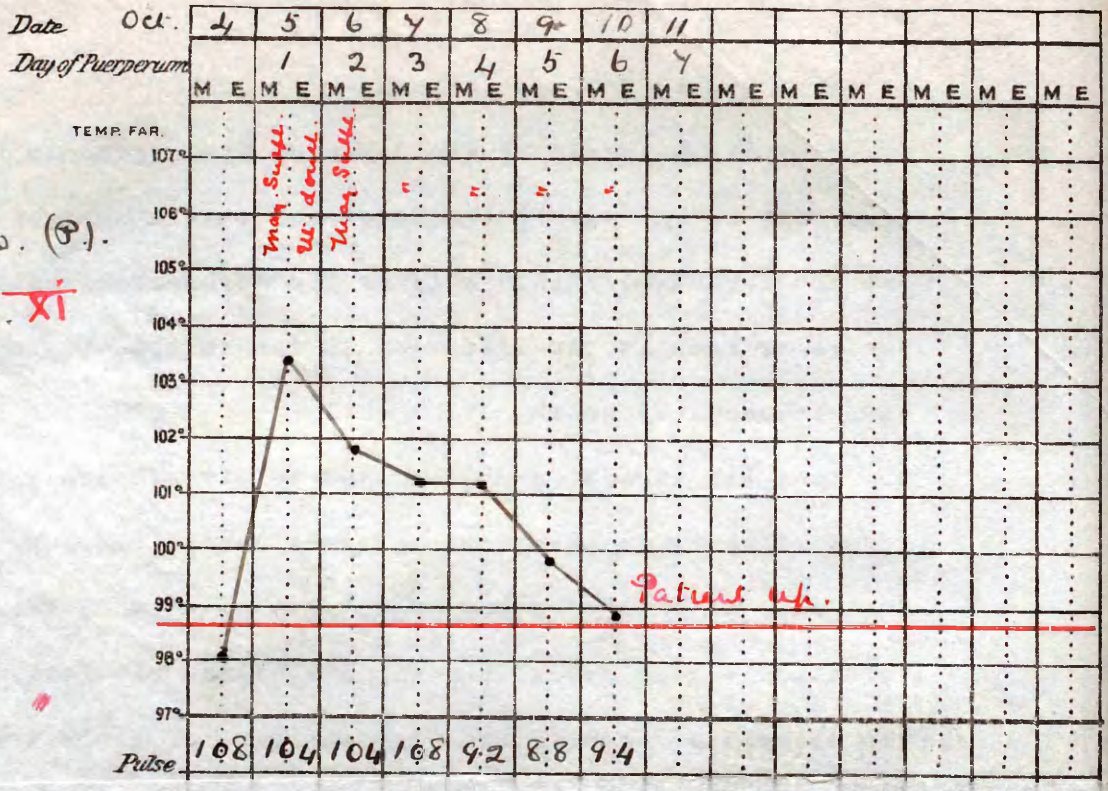
2. That the infection must be due to Streptococcus Pyogenes.

Several instances of pyrexial condition occurred during my residence at the Maternity Hospital- some due to Sapraemia and Septic infection - some doubtfully so, and others simulating septic infection The records of some of the more striking of these are now given.

Case X. Mrs. McD. Age. 24. Primipara. Confined on Oct. 11th. 1898. First and second stages occupied 14 hours, and the third stage 2½ hours, the placenta being adherent. The placenta was removed by the district physician, Patient kept quite well until the fourth day when the temperature was 104° F. the pulse 128, and sleep was conspicuous by its absence. On seeing her in the afternoon of the same day I ascertained the presence of a sanious discharge from the vagina and the temp. was now 104.6 F. and pulse 136. Thinking that there might be something lodging in the uterus, I administered an intra-uterine douche of Creolin solution before making a physical examination. The uterus was then explored with the finger, and a portion of placental tissue was felt adherent to the fundus. An attempt was made to bring it away with the finger, but this failing the uterus was curetted and the placental tissue removed under chloroform. Another intra-uterine douche and ergotin hypo-dermically were given on the following

Sapraemia

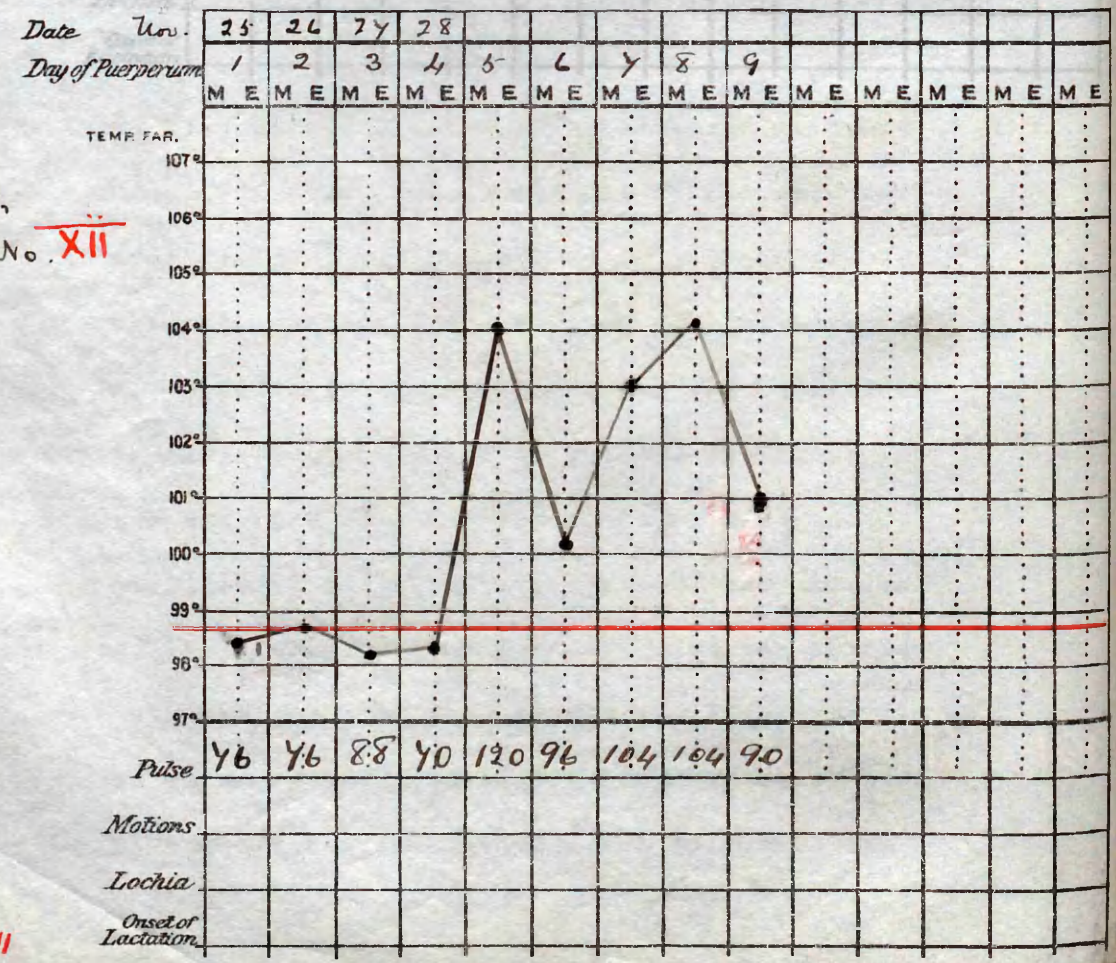
Chart 10



Mell;
Age 20. (P.).

Case No. XI

Sapraemia - Septic Toxaemia and Phthisis



Mrs W;

Case No. XII

Chart 11

day an intra-uterine douche was again given and the patient gradually recovered. For the full records of this case of Sapraemia, see Chart 9.

Case XI. M.M. Act.21 Primiβara. Confined on Oct.4 1898. First and second stages occupied 44 hrs., third stage 15 minutes. Delivery with forceps applied above the brim was accomplished with difficulty. Temp. 98 deg.F., Pulse 108, Respiration 48. The first day after delivery the temperature was as high as 103.4deg. F and pulse 104. At 11 p.m. I saw her and administered an intra-uterine douche, when several small dark clots undergoing decomposition were washed out. Afterwards with daily doses of aperients the patient made a good recovery. (see chart 10)

Case XII. Mrs. W. Confined on Nov. 26th. 1898. First and second stages lasted 14½ hours, third stage fifteen minutes. Labour normal For the first four days patient's temperature kept practically normal and the pulse ranged from 70 to 80. On the fifth a temperature of 104 deg. Fah. was recorded and pulse 120. In the evening when I saw her I considered it best to explore the uterus, as the lochial secretions were not satisfactory, having a bad odour and colour. Placental tissue was found adhering. Curettage was performed under chloroform and the debris thoroughly removed. Inter-uterine douches were given both before and after the operation, and repeated daily for some time. The pyrexia continued for several days, but was partially accounted for by a phthisical tendency. She gradually got well. (See Chart 11).

The next two cases are illustrative of Septicaemia.

B— C—, 35. Mullish. Septic Endometritis - Septicaemia

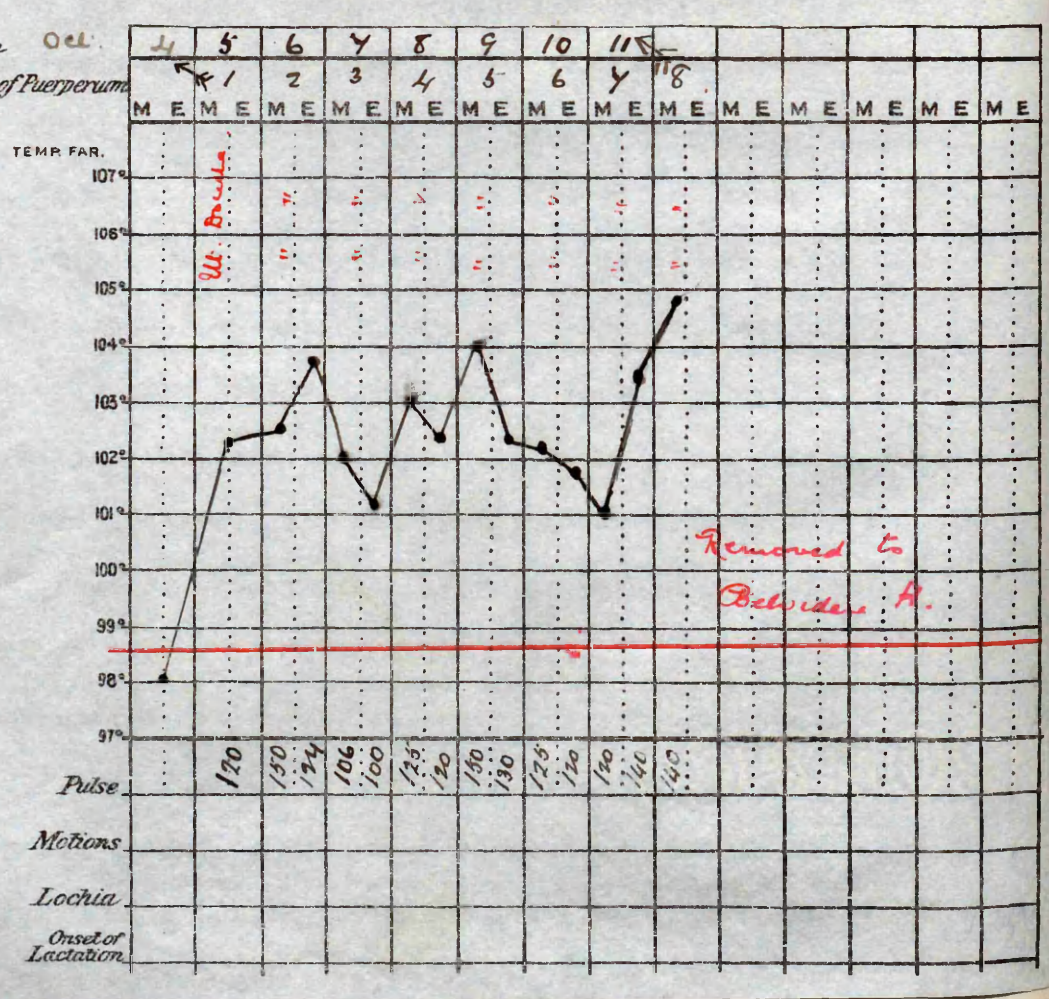


Chart 12

Case XIII. B.C. Age 35. Multip.(6). Was delivered of a still-born child prematurely at the seventh month on Oct.4th. 1898. The patient and her surroundings were in the most filthy condition On examination the vagina and cervix were found to contain bad smelling decomposing clots. Some of which had been discharged into the bed, two or three days previously and were still lying there thoroughly putrid: the case could be made out to be one of Marginal Placenta Praevia. First of all the vagina was douched out and version attempted, but was practically impossible owing to great contraction of the uterus. Forceps were then applied and delivery completed immediately. The temp. was now 98° F. and pulse 110. The accompanying chart shows the variation of the temperature and pulse during the puerperium but the following additional notes of the condition of the patient were taken from day to day. (See Chart 12)

1st. day. Patient had had no sleep and no movement of the bowels.

2nd. " Patient states that she felt very ill - still no sleep - uterus painful on pressure - very little urine passed - lochia scanty. Uterus douched.

3rd. " Patient felt better and had some sleep - uterus not so tender or painful on pressure - urine passed satisfactorily - lochial secretions more abundant - Breasts normal - no movement of bowels up till now. Uterus douched.

4th. " Patient had a rigor and felt much worse - bowels moved Other symptoms much the same as yesterday. Uterine

Mrs B——, 41, Multip. Sapraemia - Septicaemia.

Case No. XIV

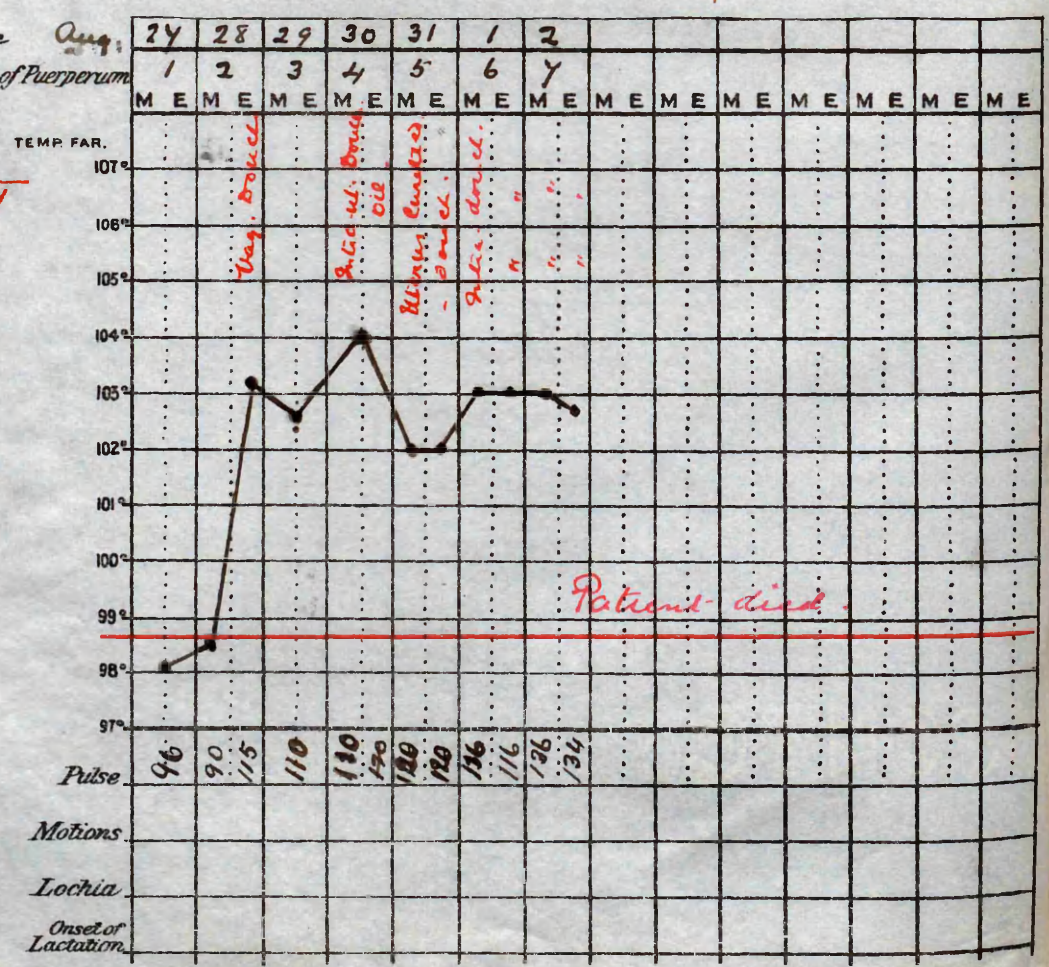


Chart- 13

douche.

5th. Day. Patient had another rigor and felt very bad indeed. Short Snatches of sleep only - Lochia Foetid - bowels moved. In addition vomiting had come on and patient complained of severe pain on the left side of uterus. Uterus douched A consultation with district physician who confirmed the diagnosis but patient would not go to hospital.

6th. " Doses of sleep - lochia had a very bad smell and showed characteristic stain on linen. On douching the uterus a condition of Parametritis was made out, owing to the swelling and puffiness of the surface of the uterus.

7th. Day Patient stated that she felt well - a condition termed "Euphoria"

8th. " Patient had a rigor. Temperature ascended 104°8 F.Pulse 140. Crepitation at the base of left lung was detected for the first time in the history of the case. Patient now consenting, was removed to Belvidere Hospital where she ultimately died a few days later.

The treatment consisted in administering intra-uterine douches daily - stimulants - quinine and Pulv. Ipecac Co.

Case XIV. Mrs. B. Age 41. Multipara (5) Confined on 27th. Augt., 1898. First and second stages lasted 30 hours, the third 15 minutes. Patient was delivered with forceps under chloroform owing to delay in the second stage. The sanitary conditions at the house and bed were most filthy. The accompanying chart (13) shows the pyrexia and pulse rate during the puerperium and the following notes were taken throughout the progress of the case.

2nd. Day. A piece of retained decomposing membrane was expelled from the uterus.

3rd. " Castor Oil and Vaginal douche given.

4th. " Temp. 104°F. Pulse 110. Intra-uterine douche given.

5th. " Uterus expored under chloroform and membrane found adherent. Uterus was then curetted and intra-uterine douche given of Corrosive Sublimate (1 in 2,000) and subsequently washed out with Creolin solution.

6th. " Patient delirious. Inter-uterine and vaginal douches given.

7th. " Same as 6th. day.

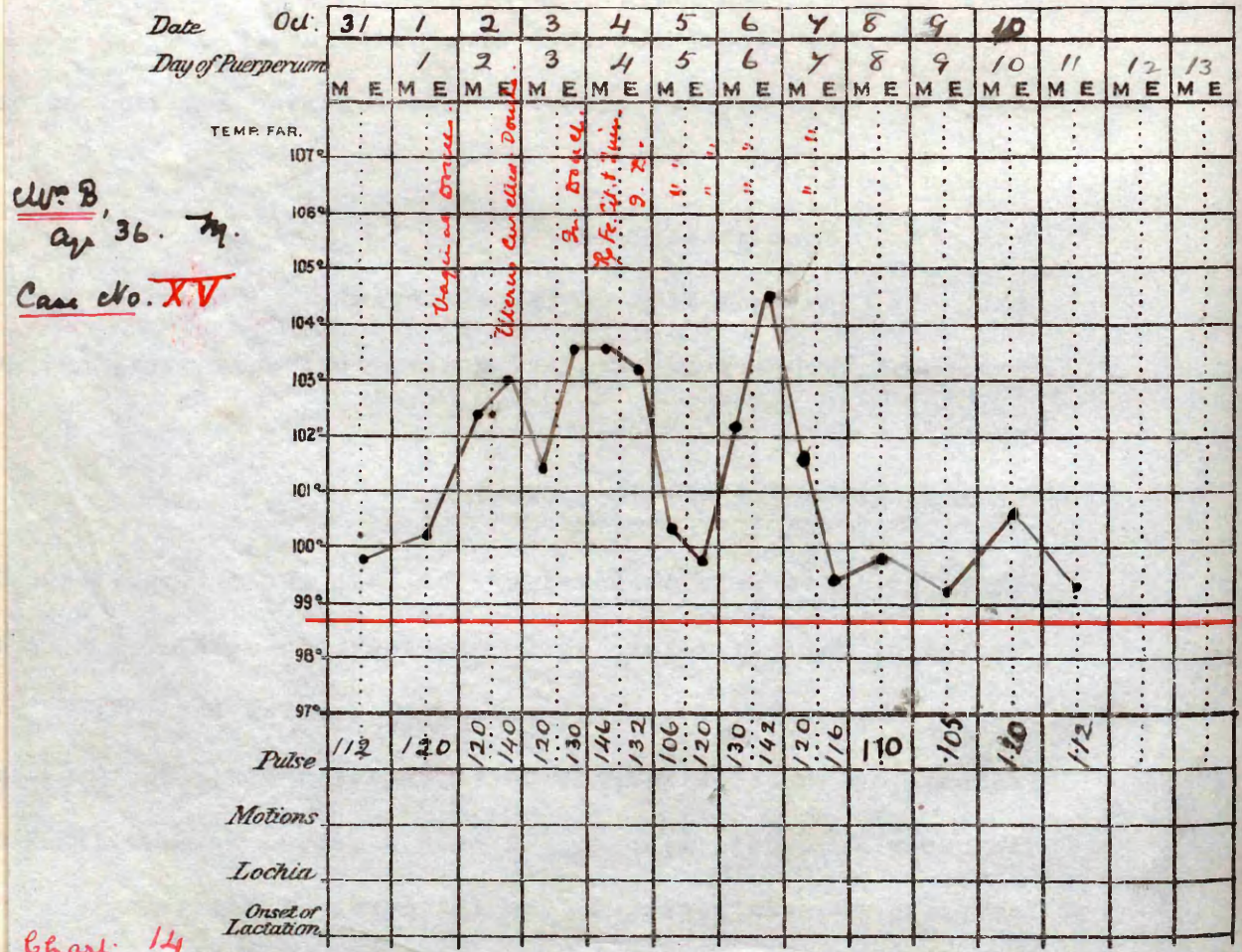
8th. " Patient died of "Septicaemia".

Treatment. Daily vaginal and intra-uterine douches. -stimulants - quinine - Etc.

Scarlet Fever and Septic Infection.

It is now generally believed by the best authorities that the poison of Scarlet Fever, when conveyed to a puerperal patient produces scarlet fever and not puerperal Septicaemia. Rashes closely resembling those of Scarlet fever, measles etc., are well known to occur in septic disease. I have attended several puerperal cases in private practice, who had never at any time suffered from Scarlet Fever, in houses and rooms where it was epidemic, and not one of these developed scarlet fever or Septicaemia. If it be true, that Scarlet Fever gives rises to Septicaemia, one would naturally expect the latter to be prevalent during epidemic time. Such is not the case however. Although there can be little doubt, that

Septic Endometritis – Septicaemia



Mrs B, Age 36. M.

Case No. XV

Chart 14

occasionally puerperal women are affected by the real contagion and suffer from true Scarlatina yet they are by no means predisposed to attack by that poison and the large majority of grave diseases diagnosed as Puerperal Scarlatina are nothing else but Septicaemia with an erythematous dermatitis extending over the surface of the body. The differential diagnosis between septic infection and true scarlatina is sometimes difficult.

Case XV. Mrs. B. Age 36. Multipara (3) Attended 31st. Oct. 1898. A case of pain-haemarrhage and incomplete abortion in the early months of pregnancy. Owing to the resistance of the patient and the small size of the os, a part of the ovum, which was felt adhering to the fundus, could not entirely be taken away. Owing to the development of pyrexia on the second day (temp.102.4°F. pulse 120) it was deemed advisable to remove this which was about the size of half a walnut by the curette. Subsequently patient developed symptoms of septic toxaemia. On the seventh day, there was noticed a salmon coloured flush over the chest, resembling very much a scarlatina rash and two days afterwards (i.e. the 9th) patient complained of a sore throat. On examination a severe tonsillitis was found present, but not having the characteristic features of that of scarlet fever. (See Chart 14 for records of pyrexia.)

Treatment: Gargle of Tinct. Ferri Perchlor. and Potass. Chlorat, and hot fomentations. Intra-uterine douches given twice and sometimes thrice daily. Quinine and Iron mixtures, and Pulv. Ipecac.Co. Stimulants etc.

Remarks:

The symptoms of this case resembled those of Scarlet fever to a great extent. No epidemic was prevalent at the time. About the fourteenth day of the puerperium patient had progressed so much that she was considered capable of being left in charge of a charity nurse, which her husband arranged to do.
Enquiring months later, elicited the information that on Nov. 20. 1898, the patient having had a relapse, was sent to Belvidere by a local doctor, who was called in. She died there on December 6th. and the certified cause of death was Septic endometritis. Septic Thrombosis - Septicaemia - Puerperal. A relapse must have occurred in this case and the fact is of interest, in determining when a patient is safe in convalescence from Septic Infection.

Case XVI. I am indebted to Dr. Macfarlane of Busby for the history of this case.

Mrs. A.B., Multipara. Was confined in 1897. Patient at her several previous confinements suffered from suppurative breast troubles. On this occasion she was ordered to apply Belladonna plasters, over her breasts, on the first day after labour.
Two or three days later there appeared over the body a scarlet rash, accompanied with sore throat and a rise of temperature to 101°F . The pupils were also dilated.
The treatment was expectant and the symptoms passed off satisfactorily there being no subsequent desquamation of the cuticle.

the plasters had evidently caused an eczema of the breasts, and the absorption of the Belladona was the real cause of the symptoms. The diagnosis was chiefly based on the dilatation of the pupils and the good recovery.

In the Lancet Oct. 30th. 1897 John G. Stack reports a case of Puerperal Erythema; in this case the pupils were also dilated, but this feature was not due to the use of Belladona.

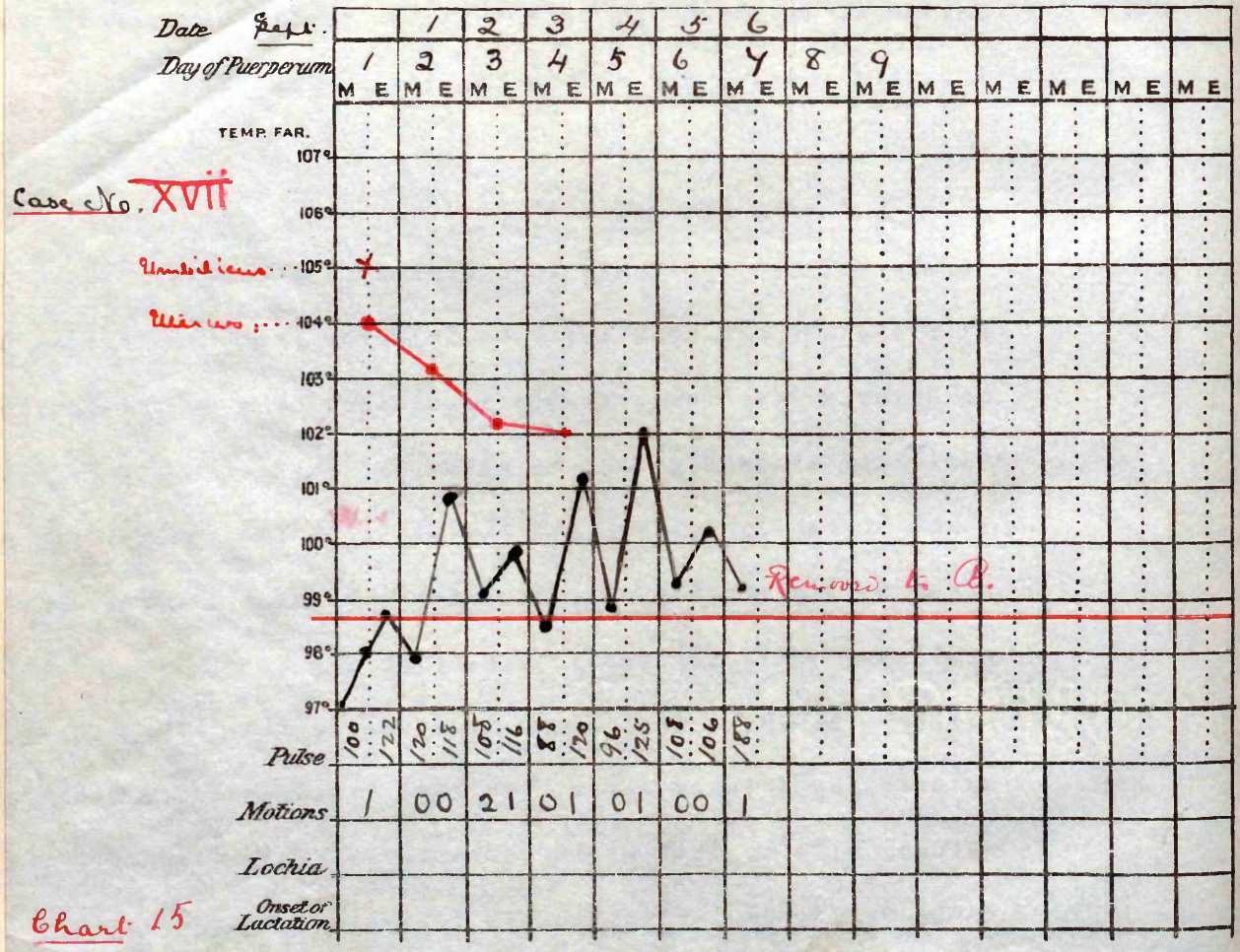
ENTERIC FEVER AND SEPTIC INFECTION.

It may be very difficult to differentiate between Septic Infection with obscure pus foci and Enteric Fever, Certain typical symptoms of Enteric Fever such as the appearance of the eruption and intestinal haemorrhage may be absent as well as ascertainable evidence of pus formation; yet the state of the temperature and other symptoms may readily suggest Enteric Fever and eventually after a protracted illness, septic infection may be diagnosed by the presence of pus. Then again a severe septic infection may mark an existing enteric fever. In such instances of a doubtful nature, Widal's test might be employed with advantage, but it would only prove useful in the following instances:-

1. Cases of Enteric fever seen early.
2. Cases of obscure sepsis.

However Widal's test is not altogether to be relied upon, as it is quite possible according to Dr. Tuttle to get a positive reaction, four or six months, sometimes a year after the disease has run its course. Consequently it is evident that if the re-

J— R— Age 24



Case No. XVII

Chart 15

action is shown to be obtainable after a period of convalescence, a subsequent disease might occur and be wrongly diagnosed as Enteric.

The following case is illustrative of this class.

Case XVII. J.R. Age 27. Primipara. Confined 31st. Aug.1898.

First and second stages occupied 30 hours, third stage 30 minutes. Patient applied for admission to the Maternity Hospital on 30th. August at 4 p.m. The doctor who was on duty, asked me to see the case in the reception room, as he thought it suspiciously like Enteric Fever. I cursorily examined the patient and thought the pyrexia, uhich registered 101° F. due to Capillary Bronchitis, and favoured her admission which was immediately carried out. The following brief extract is from the Hospital Journal. Patient's physical condition is bad, being thin and emaciated. She is very weakly - pulse 120 and very feeble - tongue dry, coated brown and cracked. Respiratory murmur at right side of chest very weak-slight râles audible.

On 31st.August labour came on, forceps were applied the following day and the perinaeum was slightly torn. Child alive but puny, a 7 months child - weighing 3½ lbs. - length 15 in.

1st. Sept: Patient's condition is better - tongue moist - pulse still accelerated but stronger.

6th. Sept: Intra-uterine douche given. For the past few days, the condition of the patient has been one of prostration. In the absence of physical signs and the fact of a history of an illness

previous to labour, it was decided to submit her blood for examination by Widal's test to Dr. R.M. Buchanan, Glasgow, - The result was a positive reaction.

His report is as follows:-

The specimen of J.R's blood yields the serum reaction of Typhoid Fever in a very characteristic manner:-

Diarrhoea consisting of yellow stools set in yesterday and to-day - the bowels previous to this being moved only once daily. At 12.30 a.m., 1 a.m. and 4 a.m. patient had attacks of cyanosis, her pulse reaching 138 and respiration 31. The distress in breathing continued. At 11 a.m. patient was removed to Belvidere but in a very weakly condition, and evidences of mucous râles in the chest; there was no tenderness of abdomen.

Patient died in Belvidere a few hours after her admission, and the cause of death was certified by the authorities there as due to "Pneumonia". (See chart 15)

Remarks: Enquiring several months afterwards revealed the following facts:-

Patient had been ill a month previous to her admission to the Maternity Hospital and was treated by her medical attendant for "inflammation of the bowels". Within a few days of her death, her sister with whom she was living was removed to Belvidehe suffering from Enteric Fever.

From the above facts, there is not the slightest doubt that patient had also suffered from Enteric fever, and that Pneumonia

had supervened and carried her off.

In the Lancet of August 28th. 1897 Dr. H.B. Shaw reports on Widal's Reaction in the infant child of a mother who during gestation had contracted Typhoid Fever. The result was positive which goes to prove that the examination even of the blood of the infant might help to clear up doubtful cases and lead to an accurate diagnosis.

Pyrexial conditions in cases of Inevitable Abortion particularly with reference to treatment by curettage.

Pyrexial conditions are sometimes associated with abortion. The pyrexia may be due to pre-existing morbid states and to the existing cause of the mishap. This occurs more especially in those fevers like small-pox and Scarlet fever where the temperature rises suddenly. On the other hand the pyrexia may be the result of the process of abortion and in many cases is due to part of the ovum remaining in the uterus. When a threatened abortion has become inevitable or finally incomplete it is of the greatest importance that the uterus be thoroughly emptied and that too at an early period. It is a much more dangerous operation to remove an ovum which is decomposed than one which is not so.

Consequently by removing the ovum at an early stage the chance of recovery is better because the patient will not have lost so much blood, as she would otherwise have done, and therefore will be less likely to be attacked by Septic infection.

During my residence at the Maternity Hospital I had the opportunity

of dealing with eight cases of Inevitable Abortion and the treatment adopted was as follows:- The uterus was first of all douched out with an antiseptic solution (Creolin), and the cervix pulled down with volsella forceps. As much as possible of the ovum was then removed with the fingers and the uterus curetted. Finally an intra-uterine douche was again given followed by Ergotinin hypodermically.

Chloroform was administered in some cases but not in all. The progress of these cases was very good with the exception of one previously mentioned (Case XV which see)

The following advantages to be derived I believe from Curettage at the first in cases of Inevitable abortion are these:-

1. The uterus is completely emptied - a state most difficult to determine or even to do satisfactorily without the use of the curette.

2. Any existing endometritis is greatly benefited by the operation, so preventing a subsequent abortion.

3. It removes to some extent any existing subinvolution and prevents its future development.

4. It lessens the possibility of future displacement.

5. It affords the best chance of recovery.

Other methods of operation are advocated and put in practice:- Schroeder advocates the use of a tampon. Höning recommends combined manipulation.

Garrogues recommends instrumental dilatation of the cervix, re-

Chart 16

DISEASE.

Abortion : uterus curetted.

Notes of Case.

Name Mrs G.

Age 35.

Diet

Case Book No. XVIII

Uterus Curetted

Date of operation admission. 4th Sept. 1898

Result Recovery

Time.	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E
Bowels.																														
Urine.																														
Pulse Day of Dis.			1		2		3		4		5		6		7															
Pulse.	120	120	130		120		116		110		116		100		100															
Resp.																														
Date.	4		5		6		7		8		9		10		11															

Uterus irregular, uterus curetted & douched at once.

Patient well

Temperature (Fahrenheit)

107° 106° 105° 104° 103° 102° 101° 100° 99° 98° 97°

Normal Temperat. of body.

42° 41° 40° 39° 38° 37° 36° 35°

Temperature. (Centigrade)

Entered at Stationer's Hall. *Printed and Published by Wodderspoon & Co, 7 Serle Street, Lincoln's Inn* *Gould's Clinical Chart.*

moving the ovum, and using the curette if necessary. Lee condemns manipulation, and advises the use of a tampon made of lint soaked in Corrosive sublimate Solution. (1 in 3000)

Goldsberg curettes in every case, and in his experience the bad results are due to retained ovum. The following cases of my own are illustrations:-

Case XIII. Mrs. G. Age 35 Multipara (4) Date 4th. Sept.1898.

A macerated foetus of about four months was extracted by the fingers, the temperature at the time being 101.4°F and the pulse 120. In the evening I removed the placenta with the curette the temperature being 100.4°F. and the pulse 120. The case progressed very satisfactorily, the pyrexia never rising above 100.8°and that on the first day. (See chart 16).

Case XIX. Mrs. W. Abortion at the third month, occurred on September 8th. 1898. I attended the case, douched curetted and douched the uterus. The patient made an excellent recovery, the temperature never rising above 99°.

The object of this paper is to show the extreme importance of the pyrexial conditions of childbed, as they might appeal to a general medical practitioner. These conditions cover a very large field and our aim in practice should be to do all in our power to prevent their development, or when they have set in to treat them at the earliest possible moment. None should be neglected. The practitioner must adopt the strictest aseptic and antiseptic precautions in all puerperal cases.