Thesis

On Some Complications of the Puerperal State with Notes of Cases

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The Complications of the Puerperal State mentioned in the following pages, occurred in my midwifery practice in a colliery district in the North of England. They are the most important anomalies noticed in over 1000 cases of labour, extending over a period of 7 years. No notice is taken of complications arising that had no aetiological connection with the peculiar physiological condition of the patient after childbirth, that is to say, only "Puerperal Diseases" are included in this paper, a distinction noted by Dr. Matthews Duncan as complications of childbed not in childbed. (1)

That complications do arise during the puerperium is unfortunately too well known to medical men, and

some idea of their frequency may be gathered from the estimate of Matthews Duncan of the mortality of childbed. He estimates that in primiparae 1 in every 74 confined dies of childbed, while in multiparae he calculates the mortality at 1 in 123 or all over he reckons the mortality of childbed at 1 in every 120 confined.(2)

These figures have been accepted as giving a pretty accurate estimate, and coming from such an authority must command respect.

The study of these complications, their Etiology, and therefore in many cases the means that can be taken in their prevention, and when they do occur, how they can be successfully treated is of great importance to the general practitioner. Nothing

tends to make or mar a man's ~~repute~~ reputation in general practice so much as his success or otherwise in his treatment of puerperal cases. The man who would be successful in midwifery practice must take pains, and the amount of success he attains is in the proportion to the amount of pains and trouble he brings to bear in each particular case. In this, as in every thing else, there is no royal road to success.

But apart from any mere consideration of professional success or otherwise, the safety and comfort of the patients entrusted to our care should receive our first and best attention. The attendants ideal should be to pilot his patient safely through the dangers of the puerperal period

independent of any thought of monetary advantage or merely that his professional reputation should be thereby enhanced.

This cannot be done without a good deal of self-sacrifice, and close and unremitting attention on the part of the medical man towards his patient during the whole of the puerperal period.

We belong to a self sacrificing profession, but nowhere and at no time does this come so much into prominence as in attendance on cases where complications have arisen during lying in the period.

These cases occurred for the most part in a mining village where the people, as a rule, are very poor and are unable to afford the luxury of a trained nurse. In the most of cases the services of young unmarried girls in their teens are brought into requisition

to perform the double duties of looking after the house and attending to the patient and as may be imagined neither the house nor the patient receives the attention they merit. In a few cases, elderly widows are hired as monthly nurses, and in these instances the lying-in-woman fares better, but as it is only the comparatively well to do who can afford to do this, the majority of the women have to depend on the young girls or on the friendly services of their neighbours. And so, when any complications arise the unfortunate woman cannot receive the care and attention she deserves.

In the absence of skilled nursing all the responsibilities of the case rest upon the medical man, if vaginal douches are required for example, the

medical man has to do this himself as it is only in rare instances he can trust any of the women to perform this or a like duty. He is thus often compelled to see the case several times a day, which is sometimes not easily done in the midst of a busy practice.

This fact, I believe, and also because the hygienic surroundings of the patient are often far from being what they should, and in many cases because a poor woman has often to be out of bed and doing her household duties before she is able, accounts, in a great measure for the great number of bad recoveries that are so common after labour in working class practice.

Contrasted with the case of the woman in better class circumstances with skilled nursing, good hygienic

surroundings and with everything for her comfort that can be devised, the woman of the working class has a poor chance indeed in making a good recovery, but with all these disadvantages the poorer woman has often one thing in her favour which stands her in good stead at this time, I refer to her usually superior physique and this alone may be her mainstay during the puerperium and may tide her over an illness, to which, with all her advantages her sister in better circumstances socially, but physically inferior, may succumb.

Regarding the habits of the people in this mining village I may say that as a rule they are cleanly, though unfortunately there are many exceptions to this rule. The houses are well built

are large and airy, the situation of the village is good, but the general hygienic surroundings in common with other mining villages leave much to be desired, though I am glad to say, since the formation of County and Parish Councils and by the adoption of the Infectious Diseases (Notification) Act with consequent more careful sanitary supervision we are seeing a much needed improvement in these villages in respect to sanitary matters and cleanliness in general, which, it is to be hoped, will have a beneficial influence upon the general health of the community, and not least upon the mortality following parturition.

The puerperal period may be defined as the time taken by the uterus and other pelvic organs to return to their pregravid condition after childbirth.

The changes take place principally in the womb in which there is a gradual diminution in weight and size and the formation of a new mucous membrane. The womb is reduced from about 25 to 30 z. which it weighs at the birth of the child to about 2 oz when involution is complete though it does not come down to the exact weight it was before pregnancy. There is also a gradual reduction in the cavity from 7½" to 8¼" long to about 3" at the end of the period.(3)

These measurements are only approximate and may have to be varied for different cases. This decrease in the weight

and size of the organ is due to fatty degeneration and absorption of ~~the~~ its muscular fibres. Caused by the after pains producing shortening of the fibres and inaction of the muscle and by cutting off the blood supply producing anaemia and then fatty degeneration of the fibre cells. This process is most active during the first 14 days and is called involution of the uterus.

A new formation of muscular fibres is not seen till the 4th week, but it is not known whether this is a true new formation or if these are embryonic cells that had not undergone enlargement in the previous pregnancy but which now become active, probably they are (*) the latter kept in reserve for this purpose.

These 2 processes viz. disintegration and reconstruction are going on in the

uterus simultaneously.

Coincidently with the process of involution there is also going on in the uterus, the formation of a new mucous membrane; the formation of this membrane may be completed before the involution is complete which on an average takes 4 weeks, but according to Kolliker the new mucous membrane is not fully reproduced before the end of the 2nd or 3rd month.

After labour as the pelvic organs are undergoing these retrograde and reconstructive changes the mammary glands quickly enlarge in anticipation of performing their function.

Because of these physiological changes the puerperal woman is peculiarly susceptible to morbid influences. The borderland between physiology & pathology

— between normal and abnormal functions — is by no means well defined. The changes brought about by labour, both physiological and pathological such as tears in the soft parts &c, predispose in a great degree to disease. There is an overlapping so to speak of the healthy and the morbid that it is extremely difficult in many cases to say where the one ends and the other begins. Any slight disturbance of the functions such as an indiscretion in diet or exposure to chill may, in this state, produce alarming symptoms and may be followed by disastrous results, which, at any other time, would not have arisen on the patient being exposed to the same influences or would be followed by results so slight as to escape notice and would cause

no inconvenience. For example rises of temperature are frequently brought about in the puerperal state by very trivial causes, and a very great and alarming rise of temperature is often quite unaccountable.

Before entering into the complications of the puerperium natural puerperal convalescence must first be considered

This, for the reasons given above does not admit of easy definition, before attempting to define natural puerperal convalescence we must examine the clinical phenomena attending a woman in convalescence in childbed

The temperature is as a rule higher in puerperal convalescence than at other times "This is no doubt due to the disturbance produced by small wounds associated with labour, to the resorption

of the products of degeneration formed in the generative organs and to the irritation of the mammae which accompanies the development of their secretion"(5)

This rise of temperature is usually most marked about the 3rd day, that being coincident with the breasts assuming their functions but it is never from this cause alone higher than 100·5°F. This rise of temperature may be accompanied by the constitutional signs of fever which pass off with sweating and a copious secretion of milk. If the temperature rises higher than 100·5°F. then we may assume some other cause or causes are at work to produce it and which it is our duty to discover.

The elevation of temperature continues

about 6 or 7 days when it usually falls to the normal; as mentioned above, during the puerperal period there is a greater sensitiveness in regard to the temperature than at other times, any slight disturbance may be a means of considerable elevation e.g. a loaded bowel, or attack of indigestion or a slight catarrh. And often there may be no assignable cause to account for a rise which may give us no little anxiety.

Pulse rate is usually slower, but I have not seen the pulse so much lessened in frequency as mentioned by some authorities. In normal cases I find it ranging from 50 to 80 per minute. This slowing of the pulse is probably due to the physical and mental rest that takes place at this time, perhaps also in part to the partial [illegible]

produced by the losses at labour and subsequently. The pulse rate like the temperature recovers its normal rate about the 6th or 7th day.

The temperature and pulse are the most important clinical data upon which we rely in estimating how a patient is progressing towards recovery. If any complication arises it will shew itself in the temperature and very shortly afterwards in the pulse rate. If we find these within the limits I have mentioned we may assure ourselves our patient is not doing badly and we may confidently look forward to a satisfactory termination of the lying-in-period.

But besides the differences in the temperature and pulse rate there are differences in the various functions

which require notice for example the skin. The secreting function of the skin is very much increased, we may have complaints from patients of this being too free twitching for something to be given for its relief which we should guard against doing as being physiological it should not be checked. There is no doubt, by means of this increased function of the skin, we have an important way of eliminating the products of degeneration proceeding in the generative organs. This tendency to increased perspiration may continue a long time after the patient is up and doing her household duties, it is very common in suckling women, being left as a legacy so to speak from the puerperal period, in these cases it is right to administer for its relief as

then it has become pathological and if allowed to go on may be a cause of great debility to the patient.

The digestive functions for the first few days are impaired, there is loss of appetite, the action of the bowels is sluggish, the functions agreeing with the quiescent condition of the patient.

The secretion of urine is increased but the total amount of urea excreted remains unaltered. The increased secretion is probably due to the large quantity of liquids the patient usually takes at this time. Retention of urine is by no means uncommon especially during the first few days necessitating the use of the catheter. This is probably due to the removal of the pressure exercised by the gravid uterus and

also to the flaccid condition of the abdominal wall. It is often also due to paralysis of the bladder or to a swollen condition of the urethra owing to the pressure of the head during labour.

This may continue for some time before the bladder recovers the power of emptying itself. In one of my cases I had to use the catheter night and morning for 2 weeks before the patient recovered the power of emptying the bladder.

Lochial discharge. "This is due to the blood oozing from the ruptured vessels of the placental site, to the disintegration of the mucous membrane, to the products of degeneration of the muscle of the womb and to the secretions from the cervix and vagina." (6)

The quantity varies in different cases, during the first 24 hours the

patient may soil 1 doz napkins, but the quantity is markedly reduced on the 2nd and 3rd days. indeed it may leave the patient altogether when the breasts assume their functions, but it commonly returns after that.

The quality also varies in different cases, at first it is pure blood mixed with shreds of membrane and clots, but about the 3rd day it begins to get paler in colour due to an increase in the number of white blood corpuscles, the white corpuscles gradually increasing at the same time the red corpuscles are decreasing. The duration of the lochia varies from a few days to 3 or 4 weeks but the sanguineous discharge continues only a few days. Before the discharge ceases it gets thin and serous If the sanguineous discharge continues

longer than 2 weeks it is well to examine the uterus to find if anything abnormal locally can be found to account for it. The odour is peculiar but it should not be foetid. if the odour gets foetid this may be due to decomposition of coagula in utero, or it may indicate a serious condition of the womb or it may be simply due to decomposition of the discharge in the vagina. I always regard foetid lochia as a call for vaginal or sometimes uterine douches and I have found it wise not to disregard this call. As I have before mentioned the lochia may stop before the time usually considered normal this, if not accompanied by other symptoms of inflammation such as high temperature, is not usually of any great consequence and need not

cause any anxiety, but at the same time it should not be forgotten this may be the first symptom of a serious puerperal disease and therefore in all cases where the lochial discharge ceases before the usual time, the patient should be carefully examined for other signs of puerperal disease.

After pains are due to the contractions of the womb and are to be regarded as normal if they are not too severe or if they do not remain too long. They usually continue about 3 days. I get suspicious of after pains persisting longer especially if they be severe. I have on more than one occasion seen this to be the first symptom to call attention to the womb in incipient metritis. We can understand how these pains may be very ~~severe~~ severe if the

uterine tissue is inflamed when we remember that pressure always increases the pain in inflammation.

We should be on our guard therefor and never make a superficial diagnosis of "after pains" in cases where the womb may be inflamed. If the pains are due simply to the contractions of the womb there will be no pain when pressure is applied over the uterus, if inflammation is present then we expect the pressure of the hand to increase the pain. The temperature also guides us.

After pains vary in different cases they are seldom present in primiparae but in multiparae they may be so severe as to demand the administration of sedatives for their relief; so long as they are moderate nothing is to be given for we know the safety of the

patient from haemorrhage depends on the efficient contraction of the womb. Cases of abnormal pains are often caused by retention of clots and are to be considered as efforts of nature to dislodge them. Much may be done to prevent clots from accumulating in the womb & therefore of preventing pains. if steady pressure is applied by the hand to the uterus, during the expulsion of the body of the child which pressure should be continued till the placenta is expressed. If the labour have been severe or prolonged, small and repeated doses of ergot should be given, and if the pains be very troublesome the clots should be pressed out of the womb but in so doing we must be careful not excite inflammation.

They me be due also to a loaded state

of the rectum and these are most effectually relieved by a clyster or purgative. If the pains still continue after their cause has been removed Opium may be given for their relief and hot applications applied over the abdomen

The uterus, which, after labour is felt like a cricket ball midway between the pubes and umbilicus gradually diminishes in size, the fundus sinking lower every day till the 6th-10th day after which in normal cases it can be no longer felt above the pubes. If the uterus can be felt above the pubes after that time it may be taken as a sign of subinvolution and inquiry should be made to discover the cause.

This diminishing size of the uterus noted day by day is a most important

indication of the puerperal state and therefore may be of great consequence in medico-legal cases.

Mammary Function

The mammary glands, which have been preparing for this during pregnancy, assume their function, usually about the 3rd day after labour. The breasts get enlarged and tender, the skin is tense and there is a general turgescence of the whole gland. With this there is usually a rise in temperature but generally this is not much but it may be accompanied by thirst, headache and other signs of constitutional disturbance, this usually passes away with a free perspiration and a copious secretion of milk. In some cases it may go beyond this and then it may be said to have become pathological

the temperature may be high and perspiration may be delayed in which cases it is our duty to encourage perspiration and to quieten the vascular and nervous excitement. A saline purgative should be given followed by a diaphoretic mixture and opium may be given at night if the patient is restless. The breasts should be rubbed from the circumference to the nipple with warm olive oil every 3 or 4 hours and the child should be frequently applied to relieve the distension.

Having considered the most important physiological changes that take place during the puerperal period we are now in a position to define natural puerperal convalescence

If we find the pulse and temperature keep within the bounds I have mentioned

if the lochial discharge keeps sweet, if the uterus gradually diminishes in size and if the function of lactation is established without hurt to the patient then we may say we have natural puerperal convalescence.

Fordyce Barker defines it thus:- "Puerperal Convalescence is normal when these two conditions (involution and lactation) are perfectly attained without injury to health of mother or child." (Puerperal Diseases page 2)

Spiegelberg's definition is:- "We may regard normal Convalescence as such when we only find phenomena which are necessarily connected with and consequent upon involution and when the puerperal woman both subjectively and objectively appears to be doing well" Spiegelberg Midwifery. New Sydenham Society page 284

Management of Puerperal State

The great aim of management of puerperal cases should be to avoid all complications that may arise to prevent our patients proceeding to a satisfactory termination of the lying-in-period. It is therefore our duty to use every means in our power both during pregnancy, parturition and the puerperal state whereby all conditions inimical to the safety and comfort of the patient should be avoided. Very much can be done towards this end by proper prophylactic measures being taken both by the patient and also by the medical attendant.

The childbearing woman should first be put into the best condition physically in order that she may be able to withstand the severe tax laid

upon her strength during parturition and convalescence. In pregnancy she should not be encouraged in the belief she is an invalid (as so many women are so fond of thinking) unless there are reasons for so doing. Her secreting organs should be in a regular and healthy condition, her food should be plain, wholesome and nutritious and if possible should be such as to give her an evacuation from the bowel at least once daily. She should be encouraged to take moderate exercise in the open air.

The practitioner should be careful to give instructions about the management of the nipple, if he has an opportunity during the later months of pregnancy, and especially if the patient be a primipara or if the nipple has a

tendency to be retracted. Although sore nipples may seem a trifling ailment, it is known to all of us to be a cause of most acute suffering. Sore nipples may not be dangerous to the life of the patient, but they may have a material influence in retarding recovery not only per se but in the mastitis which they are important factors in causing. Indirectly, they have a great influence on infant mortality it is an every day experience to find women who are unable to suckle their children from sore nipples and then of course the feeding bottle is the next resource. Having these things in mind I think the consideration of the management of the nipples worthy of attention.

In cases where the opportunity and the necessity occur before parturition

I give instructions to wash the nipple every night with soap and water and after thoroughly drying to apply with a camel hair brush the B.P. Glycerine of Tannic Acid, this to be left on all night and Lard to be carefully applied in the morning. The dress should be worn loose so as not to press upon the nipple. If there be any tendency to retraction a metallic shield should be worn the one known as the Wansbrough Metallic Shield is the best for this purpose this effectually protects the nipple from the dress.

If these measures have been carefully carried out for 2 months previous to the confinement they have a powerful influence in preventing excoriation. I do not think the tannin in the B.P. solution is too strong to harden the

skin too much, as in that case we may easily have the hardened skin cracking and so we may easily bring about by our preventive measures the very thing we are most anxious to avoid.

It is during parturition that the most important measures are to be taken to prevent septic infection of the patient and thus avoid one of the most dreaded complications viz. puerperal fever. For this to be done most painstaking measures are to be taken both by the medical attendant and the patient herself. This, unfortunately, is not so easily done in private as compared with hospital practice. Many patients in private practice either will not, or cannot obey your orders, especially if they do not see the necessity for so

doing and it must be familiar to every medical man the utter hopelessness of instructing some patients, whereas in a hospital, every patient has to conform to the rules of the institution which are usually framed with particular regard to avoid infection, and if the patients make any objection to obeying the rules they are liable to dismissal.

Regarding what can be done by the patient herself. She should take a bath on the first warning of labour, and the vulva, nates perineum, lower part of the abdomen, and upper and inner part of the thighs should be well washed with soap and water. An enema should also be taken in order to thoroughly empty the rectum. The clothing - bed linen and napkins &c should be thoroughly clean and she should have a sufficient

supply of these for use after the labour is over and they should have been kept from coming into contact with anything that could soil them.

The patient should occupy a large well aired room with plenty of light and fresh pure air and the sanitary surroundings of the house should not be forgotten. Unfortunately there are many cases where one has no choice of a room especially in working class practice. In most of the cases I attend the women are confined in the ordinary living room and of course in these cases, there is no other choice, but where one can choose this may not be the least important matter in the preparation for a confinement.

Regarding the precautions to be adopted by the medical attendant. No

should not presume to attend a midwifery case if he has had any connection with decomposing or putrid animal matter such as one meets with in the dissecting room without first carefully attending to the cleanliness of the hands with soap and water and afterwards rinsing in perchloride or carbolic solutions. The same rigid attention should be given to his hands and clothes if he has been attending a case of puerperal fever or erysipelas or scarlet fever. Before touching the patient the accoucheur should, in all cases, thoroughly wash his hands with soap and water and freely use the nail brush and after this should immerse them in an antiseptic solution such as 1-20 carbolic acid, or preferably 1-1000 corrosive sublimate which on the

whole I believe to be the most reliable and convenient antiseptic we have for use in the lying-in room.

The clothes of the attendant should be clean, if they have been soiled with putrescible matter they should be dealt with antiseptically (such as dry baking in a hot air chamber) before being used again. Special attention is to be directed to the sleeve of the coat which is more apt to get soiled than any other part of the clothing, and which is also more liable to come into contact with the person of the patient and therefore of infecting her during vaginal examination. These remarks also apply to the clothing of the nurse if a nurse is to be there at all.

Before vaginal examination the finger should be lubricated with

carbolised vaseline (1 - 15 I use), as far as possible all that is to be ~~made~~ made out should be made out at the first examination in order to avoid the necessity of making repeated examinations, special care must be taken not to injure or scratch the cervix during examination, If the head is low down in the vagina, examinations may be made more frequently, as then there is not the same danger of injuring the cervix as there is when the head is lying higher.

If there are no special indications vaginal douches are not necessary, if there is leucorrhoea with bad smelling discharge then vaginal douches are imperative both before and after labour but in the healthy vagina douches are unnecessary as it has been found by experiment that in the healthy vagina

septic organisms do not breed.

The same care is to be adopted in the sterilising of instruments as the hands and clothing. The best and handiest means for this is the use of boiling water this disinfects instruments more quickly and thoroughly than any other method that could be readily adopted a supply of boiling water can soon be got in any house. to make "assurance doubly sure" after boiling I usually immerse my instruments for 10 or 15 minutes in a 1-1000 perchloride solution.

In all cases of instrumental delivery and where there has been repeated vaginal examinations or where the hand has been introduced into the womb for the purpose of turning or removal of the placenta &c I give a uterine douche after the expulsion of

the placenta using in these cases 1-2000 perchloride solution, but where the labour has terminated naturally I never give a douche and dont do so during the puerperium if the lochia keep sweet or if there are no special indications for douching.

After labour, the external genitalo may be sponged with the perchloride and if possible antiseptic diapers should be applied to the vulva, which should be renewed at frequent intervals.

If the practitioner has had 2 cases of puerperal fever shortly after each other in his practice he should at once relinquish all his obstetric engagements and should abstain from midwifery practice for at least 2 months, during which time he should take ample mean to free himself from all infection

The period of 2 months may seem to be a long time (to some) to abstain from midwifery practice but it is not too much to judge from the experience of a freind of mine Dr William Gemmell late of Walsall who recently had an outbreak of puerperal fever in his practice. He gave up obstetric practice for 6 weeks at the end of which time he resumed practice but had in the meantime exercised great care in personal disinfection, but with the unfortunate result that the epidemic broke out afresh, thus shewing how infection may still linger about, and be carried by the doctor even after an abstinence from practice of 6 weeks –

Preservation of the Perinaeum.

Unfortunately, we cannot always save tearing the perinaeum but we

should spare no pains in our endeavours to save that structure from injury during labour. The importance of this is self apparent. I have found laceration of the perineum a fruitful source of mischief during the puerperium. this need give us no surprise when we consider how easily septic matter may be absorbed at this point. We are all agreed as to the desirability of preserving the perineum but unfortunately we are by no means agreed as to the best method of doing this. What is known as "Supporting the perineum" in too many cases only brings about what we are trying to avoid. When the hand is pressed against the perineum, this, by reflex action, tends to increase the force of the uterine pains forcing the head through the Ostium Vaginae

before the parts have had time to dilate and thus greater risk is run in tearing the parts.

I believe with the late Professor Leishman that the less we do with the perineum the better, and that the man who does most supporting of the perineum is the man who has to do with the most tears of that structure in his practice. It may be legitimate enough, in some cases, to encourage rotation if that is delayed, or if the head is coming down too quickly to try and delay that.

We can assist nature in getting the occiput to rotate round the symphysis by the following manoeuvre:

We do this by pressing on the perineum with the left hand and pressing directly forward not backward. At the same time we can delay the advance of the head if we press ~~backwards~~ with the right hand

directly backward upon the head itself, and thus give time for the parts to dilate At the same time the patient should be told to cease making expulsive efforts so that time should be given.

In cases of rigidity of the perineum I have often found the administration of chloroform of signal benefit, it seems to so increase the distensibility of the part that in all cases where I have the opportunity I never fail to give it. I have tried chloral as a substitute but not with the same satisfactory results as with Chloroform possibly due to the slow action of the chloral. I am also old fashioned enough to believe in the efficacy of lubricants rubbed into the perineum I commonly use for this purpose Lanoline with I believe good results. I have seen

the distensibility of the parts increased in a wonderful degree after rubbing with this lubricant.

In a certain number of cases it will be found that nothing will prevent rupture, in these cases, where rupture is inevitable, it is better to make a small incision on each side of the vulva, an incision being more easily healed than a tear and you have the place of election for the breach.

All danger of rupture is not over on the birth of the head on several occasions I have found the shoulders to tear the perineum after the head has passed without the slightest injury, the great desideratum here, as with the head, is to give plenty of time and to push the shoulders forward to rotate round the Symphysis in the same way as was done

in the case of the head.

If rupture has occurred to any great extent it must be attended to at once, after carefully stopping all bleeding and washing with carbolic solution stitches are to be put in and the edges brought accurately together the part to be dusted with Iodoform the patient to lie on her back with the knees tied together to ensure that the part may not be dragged upon. The stitches may be removed about the 6th day

During the birth of the body the hand of the accoucheur should be upon the uterus and, by gentle pressure ensure equable contraction and thus avoid the risk of hour-glass contraction - the commonest cause of delay in the birth of the placenta -. If this is done Efficiently it is also a very great

great help in avoiding excessive after-pains. as clots are prevented in being formed the blood not being poured out in any great quantity if the uterus is efficiently contracted. This precaution is thus a preventative of post partum haemorrhage.

Management during Convalescence. After labour the puerperal woman should be allowed some time for repose. she is exhausted as a result of the labour she suffers more or less from shock and nothing tends to help her more than a few hours sleep. in practice this is usually not easily managed I find here that the neighbours think it their duty, the moment I have gone out of the house, to crowd in and see for themselves how the patient is progressing

and this they do in spite of anything you can say to the contrary, indeed in many cases I find if the neighbours do not ~~come~~ go in they are sent for to come to "eat, drink and be merry". It is uphill work to try to break down these customs and I find they take little or no notice of what one says unless you give peremptory orders the patient is to be kept quiet, orders they only respect if they know the patient has had a "bad time"

During the first few hours after labour, the state of the uterus demands our earnest attention, we must see, before leaving the house, that it is in a state of efficient contraction, to ensure this I do not apply the abdominal binder for at least half an hour after the expulsion of the placenta, during this interval by pressing and kneading

the uterus. the expulsion of all clots is ensured. when the bandage may be applied. It is a good plan to give a full dose of liquid Extract of Ergot immediately after the labour, so as to ensure Contraction of the uterus. I make it a point if at all practicable to see the patient again in the course of 5 or 6 hours to satisfy myself as to the condition of the womb.

The condition of the bladder should be our next care, the woman should be instructed to try and pass urine within the first few hours, she should be told that although she may not feel the sensation of a distended bladder she should nevertheless make the attempt to void urine. If she fails to do so in the ordinary way she may be successful on her hands and knees and in this

position also, the dislodgment of clots from the vagina is encouraged. If this is not sufficient, warm fomentations may be applied to the vulva. If the condition be due to paralysis of the bladder it is a good plan to give 20 drops of liquid Extract of ergot every 15 minutes for an
(8) hour or two as recommended by Barker.

Of course, in some cases it may be necessary to use the catheter to evacuate the bladder when we must be very careful that the catheter is perfectly clean, and we should be careful to prevent the introduction of air into the bladder and also to avoid secretion from the genital tract to get upon the point of the catheter and so into the bladder where it may set up Septic cystitis. Where catheterisation is necessary it should be done every 8 hours

The lying in room should be kept well aired and clean and plenty of light should be admitted. the air of the room is to be frequently changed care being at the same time taken that the lying in woman is protected from draughts all soiled clothing, napkins &c are to be removed from the room immediately on being taken from the person of the patient. The bed must be kept clean, there should be a draw sheet which should be removed at least once a day and everything managed that no ~~odors~~ foul odour should greet the nostrils on entering the chamber.

The patient should not be smothered in blankets, the covering should be light in preference to heavy wraps when we consider the tendency to perspiration. she should not be prohibited from doing

her own toilet every day, Sitting up in bed some part of every day is good inasmuch as this encourages the lochia to come away and not to stagnate in the vagina.

The external genitals are to be sponged with water to which some permanganate has been added at least once a day preferably morning and evening. If possible antiseptic diapers are to be used to absorb the discharges those sent out by Hartmann are very useful and convenient.

Vaginal douches are not to be used during the puerperium unless there is some indication for their use

The diet of the puerperal woman is of some importance, we no longer believe in the starvation method of treatment in vogue 20 years ago or less, and which

still survives in the minds of many nurses. We should take care to impress upon nurses that the lying in woman is not suffering from an inflammatory complaint and therefore there is no need to put her upon an antiphlogistic diet. I encourage the patient to take as good nutritious food as she has appetite for and can digest, from the very first, and not to be restricted to the old-fashioned "slop diet" so common until a few years ago. Of course we must to a great extent be guided by the feelings of the patient what she can eat and assimilate but we do not now necessarily limit the diet for 9 days simply because she has been confined.

The question of alcoholic liquors comes up here. I am of opinion that no puerperal woman should be allowed alcohol

in any form unless there are reasons for allowing it. The taking of stout and beer is far too common both during the lying in month and afterwards under the erroneous impression that these encourage increase of milk and improve the quality but I have found of far greater service for this is teaspoonful doses of Extract of malt 3 times a day and the patient to have plenty of milk in her regimen. I find women increase in weight with this, the supply of milk is increased and the nutritious quality improved, as after use, I find children to thrive and improve wonderfully who before that were puny and weak and in danger of death from malnutrition.

If we were more careful of the use of alcoholic beverages in the lying in room we would hear less of the baneful Effects

of drink upon the women of this country as there is no doubt very many acquire the habit of tippling from the use of drink at the lying in period and subsequently, and after a time when they would give over taking stimulants they may find, to their cost, the habit is much more easily acquired than given up.

The bowels should be freely opened the 2nd day after delivery. I usually order a dose of castor oil to be taken on the 2nd day. I believe early use of the bowel has a tendency to prevent severe after pains, as well as relieve many of the minor complaints to which a lying in woman is subject.

She should keep her bed for at least 8 days but may be allowed to sit up in bed before that. Too early getting out of bed is a fruitful cause

of subinvolutions and flexions of the uterus and this is the reason these are so common amongst the women of the working classes, the structures are still in a flaccid condition and are easily stretched if care is not taken.

If at all practicable, every lying in woman should suckle her own child, involution of the uterus is favoured by this and there is less risk of haemorrhage As a rule we have no trouble with this with women of the poorer classes, as a rule they are anxious to suckle their children, it is only when they cannot perform this function that they will consent to bring up the child by artificial means and in many cases they struggle on and may thus endanger their own lives as by so doing they are able to prolong the time before they bring

another child into the world.

She should not be out of bed before 8 days and should not be out the room before the end of 3 weeks when she may be able to do light work. The abdominal binder is to be worn all this time and for a few weeks after.

In many cases when recovery may be progressing slowly it may be necessary to advise a change of air and tonics may be given to hasten convalescence such as the following

℞ Acid Sulph dil ℥j
Quin Sulph gr xvj
Tinct Nucis Vomicae m 80
Infus Gentian Co ad ℥viij
Sig. ℥ß ter in die in aqua p.c.

Subinvolution of the Uterus.

This is one of the commonest complications we have in the puerperal state. This is to be explained by the fact that it arises from a great variety of conditions, being present as a symptom in very many of the diseases attending puerperal convalescence, so that in the majority of cases we are not justified in looking upon this as a disease but only as a symptom, though cases are met with where this condition has not been preceded by disease of the uterus, and these cases may fairly claim to be looked upon as cases of Subinvolution. The influence of Subinvolution is, as a rule, felt on the health of the patient long after the lying in period is over. the cause it may be, of life long ill health

It may be defined as that condition of the womb where the reduction in size after childbirth has been arrested, or where this reduction is proceeding very slowly.

For involution to proceed satisfactorily there must be efficient contraction of the uterine muscle and thus get the blood supply cut off, the process of degeneration which depends upon this must be natural and in addition to these the functions of absorption and elimination must also be in a healthy condition. For these processes to go on satisfactorily the woman herself must be in a healthy condition hence we see the importance of having the patient in a healthy condition before labour. The local conditions should be such that these processes should not

be interfered with the local conditions are by far the most important.

Subinvolution is much more common after abortion than after labours, as pieces of membrane and placenta are more liable to be left after abortion, and the womb is not prepared to undergo the process of involution as at labours.

The causes of Subinvolution may be General and Local.

Among general causes may be mentioned uterine inertia depending on general debility, Cardiac and lung affections causing passive congestion of the womb. Anything increasing the Vis a tergo such as mental emotion or alcoholism Failure of lactation by means of which the uterus is stimulated to contract, too early rising and too early return to marital relations, and too long

continuation in the dorsal position in a soft bed, but this is not very common.

Among local causes the following take a prominent place:-
Retention of clots, pieces of membrane or placenta, injury to the cervix during labour, loaded rectum, injury to the uterus during operative midwifery, flexions either retro- or anteflexion and endometritis.

The most prominent symptom that calls attention to this condition is haemorrhage, this is more profuse and lasts much longer than it should do. If haemorrhage continues after the second week it should be an indication to make a local examination and discover the cause, if possible.

Examination will reveal the Sub-involuted uterus above the pubes where

it should not be felt after the tenth day. There may be no discharge so long as the patient keeps at rest, but as soon as she gets up to go about the haemorrhage begins, and this is accompanied by a dragging in the loins and sense of weight caused by the increased weight of the uterus.

The constant haemorrhage very soon tells upon the patient, she gets anaemic, feeble and debilitated, sinking very often into a condition of chronic ill-health if this condition is not properly treated

Case I This case illustrates some of the points mentioned above:-

Mrs B. aet. 33 confined on August 13th of her 5th child. The labour was natural and easy and during the first 2 days nothing of any consequence occurred

On the 4th day at my visit I found her sitting up out of bed. I afterwards found she had been up the day previously.

On my protesting against her getting up so early, she said she had always got up as soon at her previous confinements and had taken no harm, and she felt as well this time as before, moreover, she had her household duties to attend to and really she could not lie in bed any longer. Such were the arguments she used in defence of her conduct. I warned her she might regret that she had got up so soon.

On August 22 I was called to see her, she had had a good deal of bleeding and was frightened she was going to take a "flooding". This bleeding was worse when she moved about and was accompanied by a good deal of

bearing down - I prescribed the following mixture. Rx

Extract Ergot ℥ß
Tinct Nucis Vom
Tinct Ferri perchloria ää ℥j

Sig. ℥j in water 3 or 4 times a day

and to have as much rest as possible though I was not sure she would take rest unless she was absolutely forced to. I did not examine her at this time as she would not go to bed.

She took the mixture for a week without any appreciable diminution in the amount of the haemorrhage, which was now telling on her general condition, she was getting anaemic and debilitated.

I now made an examination and found the uterus considerably prolapsed, no laceration of the cervix, the uterine cavity measured 3½". There was no evidence

of membrane or bit of placenta in utero
The treatment was continued and in addition I ordered her to wash out the vagina once daily with hot water with the result that the bleeding ceased but was followed by a discharge of "whites" I found this was uterine the result of endometritis. for this, I applied, at intervals of a week, Iodised phenol on a Playfairs' probe. She improved upon this the size of the cavity gradually reduced but latterly she sank into a condition of ill health which all the tonics I could give her would not remove. It is but fair to say she could not or would not do things she was told such as lying in bed or using the vaginal douches regularly. When I urged upon her the advisability of going to the hospital where I thought she would be compelled

to do as she was ordered she refused to listen to me with the result that at the present time she occupies a conspicuous place on my chronic list, the picture of ill health and a victim to all the ills that follow on prolapse and endometritis which would have been avoided if the patient had kept her bed as she should immediately after her confinement

Phlegmasia Alba Dolens.

The condition of the blood during the puerperal state is peculiarly favourable to coagulation. There is an excess in the amount of the fibrin and serum and a diminution in the blood corpuscles, this condition is called hyperinosis. This tendency to the coagulation of the blood is increased if there has been haemorrhage at the labour, or if there has been anaemia during pregnancy, as in the case I have noted. This abnormal tendency to coagulation is not peculiar to the puerperal state as it is well known that hyperinosis is a common condition of the cachexiae such as in the later stages of tubercular disease and cancer, a fact which explains the occurrence of phlegmasia in

certain stages of these cachexiae.

As a complication during the lying in period this is not very common at least when it attacks the thigh in a severe form. We have no idea how often the pelvic veins may be the seat of this disease seeing we have no symptoms when these veins are attacked. We know that thrombi of the veins of the uterus are present in almost all cases but how often that condition extends along the pelvic veins we can only conjecture.

That the blood possesses peculiar properties of coagulating goes some way in explaining the cause of this disease, but that cannot explain all the phenomena, something else is necessary and that something is now considered to be sepsis, a morbific element circulating with the blood

causing a change in the lining membrane of the vein and thus altering the relation between the blood vessels and the blood and coagulation thereby encouraged. Phlebitis alone & therefore thrombosis alone will not explain all the symptoms. This view is favoured by the fact that an interval of 2 or 3 weeks usually elapses after parturition, before the characteristic signs of phlegmasia appear. This interval may be regarded as an incubating period. If the phlegmasia depended solely upon the condition of the blood in pregnancy, then we would be more likely to get it just after the birth, when the state of the blood is most favourable for coagulation.

There is also some degree of pyrexia which cannot be explained away by simply assuming that thrombosis is

the cause. The brawny solidity of the oedema cannot be due alone to coagulation in the veins; this solidity is probably due to plugging of the lymphatic vessels.

In cases of inflammation of the lymphatics such as we get from poisoned wounds we get the same brawny feeling along the course of the inflamed lymphatics as we do in phlegmasia. Lymphangitis has been seen in some cases of phlegmasia, but it cannot be regarded as a constant or very common lesion, but reasoning from analogy we would be led to expect that there was always lymphatic obstruction but this question cannot be settled until we have a better knowledge of the functions of the lymphatic system than we have at present.

One great hindrance to a complete knowledge of the pathology of phlegmasia

is that it is very rarely fatal and therfore the opportunities for post mortem examination are very rare."

The disease usually attacks the left thigh, there are various theories why this should be

(1) The left iliac vein is crossed at almost right angles by the right iliac artery and thus has a tendency to press upon the vein and obstruct the circulation. Cases are reported where, on post mortem examination this has actually been seen, the vein being indented by the pressure of the artery. This seems to be the most feasible explanation, the other reasons given for this seem to be far fetched

(2) The rectum is on the left side of the pelvis, and is apt to press upon the pelvic veins and so retard the circulation

(3) "The parts of the left side are more subject to bruising in labour, due to the right lateral obliquity of the uterus throwing the direction of the uterine pains across the mesial line to the left side of the pelvis" Quains Dictionary of Medicine Vol II page 390

Case III Mrs R. aet. 31 confined of her first child without anything calling for special notice on December 12th. She had been married 12 months and before marriage had been repeatedly under my care suffering from anaemia. There never had been any lung symptoms. During the late months of pregnancy she had been in better health than she had been for some years, though she was still rather anaemic. Labour was normal, rather protracted, with

perhaps more haemorrhage than usual Placenta came away without any trouble and the uterus contracted well after. The perinaeum was entire.

She progressed satisfactorily for the first 12 days. She had not a bad symptom. Involution was natural. On the 13th day she complained of pain in the left thigh just where the saphenous vein joins the femoral, the pain was very marked but nothing could be made out on examination, but next day the pain was more pronounced extending down the thigh along the course of the femoral vein, and there was now swelling of the affected part, the vein could be felt hard and knotty, she was quite unable to move the limb. Temperature 100°F, pulse 100 with the constitutional signs of fever

The mammary secretion and the lochia were normal.

I ordered a purgative, the limb to be elevated, hot poppy fomentations to be applied the limb to have absolute rest and the following pills for the relief of pain

℞ Zinci Sulph. grs ij
Extract. Opii gr ½ M
Ft. pil.
Sig. One every 6 hours

On the following day the limb was more swelled, had a glossy appearance, the swelling and pain now extended to the toes and the left side of the vulva was also much swollen. Temp 102°F Pulse 110. Paralysis of the limb complete she could not move the toes principally on account of the pain evoked when she attempted movement

4th day. The swelling of the leg does not improve, gets worse if anything, pain still very bad. Gave 4 minims Liq: Morph: Hypoderm: last night to induce sleep, the limb is hard and brawny, but the pain does not seem to be so severe

8th day. The limb begins to get oedematous pitting on pressure. Pain now almost gone, took off fomentations, encased the leg in cotton wool from the ~~ankle~~ toes this was covered by a Macintosh. The wool was changed from day to day,

For the next few days satisfactory progress was made, the size of the limb was being reduced, the pain had practically ~~all~~ gone, the constitutional symptoms had ~~all~~ vanished she was recovering the use of the limb when on the 13th day from her taking the illness on the left side, she developed pain and swelling on the

right limb and in the same position as the left and with identical symptoms.
The same treatment was pursued as before and for about the same length of time before distinct signs of improvement set in. Her strength was now being exhausted although she was taking tonics, stimulants and nourishing food such as egg milk &c. When the swelling began to disappear from the right side I was now confident she would go on all right towards recovery but unfortunately, I was disappointed, for the phlegmasia again attacked the left limb, from which the swelling of the first attack had all disappeared, but the course was not so severe as in the former attack as it passed away in a few days. The power gradually returned to both limbs so that she could move her about in

all directions; but the temperature and pulse did not improve, the temp. kept up about 100° F. she took her food very badly, she began to develop cough, sweats &c. Acute phthisis set in from which she died 4 months after confinement that is about 6 weeks after the signs of phthisis appeared.

This case presents some points of interest It occurred in a primipara. From the swelling of the 2 limbs and of the vulva it would seem to shew the thrombosis had travelled to the common iliac vein. It is not very common for the phlegmasia to return to the limb first affected as it did in this case. The setting in of phthisis raises the question if it was the result of pulmonary embolism, minute emboli getting into the circulation and being arrested in the lung. This may have been the case here

as the phthisis developed almost simultaneously from the bases of the lungs and not from the apices.

Thrombosis of the Pulmonary Artery. This subject is closely allied to the last, being dependent upon the same condition of the blood (hypernosis), but in this case the pathology is simplified because coagulation and the resulting phenomena is sufficient to explain all that takes place.

Venous thrombosis is common in the uterine veins and Virchow established the fact that a portion of the clot may get broken off and washed into the blood current, and get arrested in the pulmonary artery or its branches. He considered that thrombosis of the pulmonary vein was always due to embolism, but later

researches have proved that thrombosis may occur as a primary lesion.

This is the commonest cause of sudden death during the puerperium in many cases the patient dying in a few minutes from the commencement of the attack. These deaths were formerly attributed to idiopathic syncope.

But embolism of the pulmonary artery is not always fatal, the gravity of the attack depends upon the size of the embolus and therefore of the size of the artery or its branch that is occluded. But a clot from a small vein may be a cause of serious symptoms and even death, as though the clot may be small at first it may become larger by agglutination as it approaches the heart and then may have become large enough to completely plug the

pulmonary artery and thus cause sudden death.

Case III Mrs C. 4th confinement. being some distance away the baby was born before I arrived She had had very severe post partum haemorrhage due to the woman in charge pulling at the cord in trying to remove the placenta. The patient was lying on the floor, when I arrived, where she had been delivered. The pains had been pretty severe and the labour had not lasted altogether more than 3 hours. She was literally lying in a pool of blood her face blanched, unconscious and almost pulseless.

On examination I found the bleeding had ceased, the cord had been torn away from the placenta by the efforts of the woman to remove it. I gave the patient 20 minims of Tinct Opii with a tablespoonful

of brandy and had her gently lifted into bed. I then introduced my hand into the womb and removed the placenta which I found adherent in about half its extent. The uterus contracted well and firmly. I gave stimulants and ergot and injected a pint of a solution of salt (3j to Oj) into the rectum. I waited about 2 hours but there was no more bleeding, before I left she was recovering from the shock. her pulse was fuller and better and altogether she looked as well as possible after so severe a haemorrhage.

She progressed favorably towards convalescence and was so far recovered by the 11th day as to be up and out of bed though even then the anaemia was very great. She never had had a bad symptom from the date of the

confinement. She sat 2 hours the first day she was up without anything occurring of any consequence. Next day she again got out of bed and was no sooner up than she commenced to breathe badly and her face to get very pale. She was instantly carried back to bed. I saw her very shortly afterwards. found her propped up with pillows. the breathing very hurried and distressed. the face livid and evident signs of anxiety imprinted thereon. there were great drops of perspiration on the brow. the pulse was small, hurried and almost imperceptible at the wrist. I satisfied myself there was no haemorrhage. She was perfectly conscious. I gave her a tablespoonful of brandy with 25 minims of laudanum and the following every 3 hours.

℞ Ammon Carb grs x
Tinct Digitalis m vj
Liq Strychnin m ij
Aquam ad ℥j h-

and a tablespoonful of brandy to be given every half hour. On seeing her again 4 hours after she was rather better, the dyspnoea was not so marked and the pulse was stronger. Her temperature was subnormal, she had coughed up some rusty coloured sputum like what we get in pneumonia in the stage of congestion. I did not examine the chest posteriorly as I did not want to disturb her.

Next day. She was again rather better the heart action was stronger, the stimulants were continued though not in the same quantity as formerly. She progressed favorably without any other attack

of dyspnoea but remained feeble for a long time, she was kept as much as possible from movement. Her diet was light and nourishing. She was well enough at the end of 4 weeks to be out of bed she ultimately made a fair recovery though the anaemia was very persistent remaining for a long time.

The diagnosis was made of a thrombus obstructing a smaller branch of the pulmonary artery. There had been no phlegmasia visible and I suspect the clot had come from one of the uterine veins which had got larger in its passage towards the heart, having become large enough to cause serious obstruction so much so as to endanger the life of the patient to a very considerable degree.

Case IV The following are the notes of a case of progressive pernicious anaemia which occurred lately in my practice:-

On March 19th/96 I was called to see Mrs C. aet 23 who had been complaining of increasing weakness, palpitation and shortness of breath ever since she became pregnant 5½ months ago but these symptoms had become much more pronounced the last few weeks.

This was her second pregnancy, she had enjoyed good health during the first pregnancy and had had a good delivery but recovery had been retarded by an attack of metritis. She had not been able to suckle the child her milk having left her. this child was now 13 months old. She had enjoyed good health as a child and until she was 17 years of age when she had suffered from anaemia but

which had readily yielded to treatment
She had enjoyed good health from then
till the present time.

I was much struck by the appearance
of the face, she was very anaemic, the
lips and mucous membranes very pale
she had a listless languid look, She
was not confined to bed but said she
felt as though she could scarcely walk
about. I found a distinct Laennic
murmur at the base of the heart, there
was no organic disease of the heart. the
bruit de diable was very distinct at the
root of the neck, No cough or nothing
abnormal to be made out in the chest.
The tongue was clean but pale, the appetite
was impaired, the stomach often rejected
food but she had never vomited blood
The urine was rather high coloured, ~~Ph~~
Sp. Gr. 1015 but contained no albumen
the spleen was rather enlarged.

there never had been any haemorrhages from any of the mucous membranes

I put her upon the following mixture

℞ Ferri et Ammon. Cit: ℥ij
Liq Arsenicalis ℥j
Tinct Nucis Vom ℥j
Aquam ad ℥viij ℞

Liq. ℥ss 3 times a day after meals and gave some necessary directions as to diet &c.

April 3rd She has not improved any with the above treatment, her general condition is worse, the palpitation is at times distressing, the anaemia of the face and mucous membranes much more marked the stomach rejects almost everything the bowels are very costive, relieved by Glycerine enemata.

I put her upon ℥ss Extract of Bone Marrow tabellae (Brady & Martin) 3 times a day and

the iron and arsenic to be continued.

April 17th The patient is again worse but she is able to take more nourishment than she did, today Dr Lepson of Durham saw the case with me in consultation, the question of inducing premature labour was discussed but for various reasons it was thought advisable to let nature take its course - and in the meantime do all we could to get nourishment into the patient. Dr Lepson thought we might try the following

℞ Ferri Sulph grs V
Magnes Sulph ℥j
Aquam ℥j ℥ss

For one dose

Blands pills ij to be taken with each dose of the medicine 3 times a day.
Feeding by the bowel to be persevered with and Saline injections (℥j to Oj) every other day. The bone marrow still to be continued the dose to be increased to 5 tabellae per diem

She rejected every dose of the medicine so that it had to be discontinued. I put her upon Arsenic alone instead, but in spite of all this she gradually got worse, took to her bed, complained a good deal of shortness of breath "air hunger" The stomach again got very irritable so that the food and medicines were vomited immediately after being taken I gave ice, iced Champagne & small quantities of milk and Vichy water and continued feeding per rectum soon the rectum got so irritable it would not tolerate that.

On April 26th labour commenced, the pains came regularly, she could not lie on her side for the palpitation and shortness of breath, she had to be propped up with pillows. I dilated the Os with the finger until I

could get the forceps on which I did and rapidly delivered in the dorsal position. During the course of the labour which lasted about 2 hours I had to feed her with brandy and champagne (which were retained). She complained very much of the shortness of breath and was in great danger of collapsing which was only warded off by the stimulants. After delivery I injected 1 pint of Saline solution into the rectum but some of it was rejected She never recovered from the shock and died 1½ hours after delivery. There was very little bleeding on the birth of the placenta which was rather difficult to get away. The day before labour came on she had had some bleeding from the nose, but that was the only occasion upon which she had had any haemorrhage during the course of pregnancy and this was very slight.

Puerperal Septicaemia

Under this term we may include all forms of pyrexial disease occurring as a consequence of parturition. In this sense it may be taken to include the inflammations.

The study of puerperal septicaemia is of immense interest and importance not only because it is the most common cause of death following parturition and therefore the most dreaded complication with which we have to deal, but also because a clear understanding of its Etiology is essential that rational prophylactic measures may be taken in its prevention and also if we would avoid mere empiric treatment in the established disease.

It is now almost universally regarded as one of the infective traumatic diseases. The brilliant results of the antiseptic

method of treatment of the so-called septic diseases has not been less successful in the prevention and treatment of this disease.

Though puerperal septicaemia has been known since the earliest times, being mentioned in the writings of Hippocrates and Celsus, it was not till near the end of the 17th century that Willis pointed to the true nature of the disease. He introduced the name "febris puerperarum" and went so far as to connect the malady with wounds of the uterus got during the process of childbearing.

It was about this time too that puerperal fever came to take such an important place in the statistics of mortality that it has held ever since, this fact is no doubt connected with the establishment of Lying-in-Hospitals which took place

then, as we know that this disease has been specially prevalent both in the sporadic and epidemic form in these hospitals, till within recent times.

From this period till 1843, very little progress was made towards elucidating the solution of the true Etiology of the disease Observers were led to look upon puerperal fever as a specific fever like small pox or typhus, they did not consider the condition of the woman was peculiar and favourable to the production of a septic fever: this had been entirely overlooked in their efforts to solve the problem We now know that clinically puerperal fever may arise from a great many different causes and is not due to one specific cause as was at one time thought.

In 1843 Dr. Oliver Wendell Holmes, the genial "Autocrat of the Breakfast Table" in a

paper read before the Boston Medical Society laid down and formulated rules of practice for guidance for the physician in attendance on ~~medical~~ midwifery cases, rules which prove that Holmes was fully alive to the fact that puerperal fever may be carried from one patient to another by medical men. He may therefore fairly claim with Semmelweiss the honors of pioneer in the field of antiseptic midwifery.

Semmelweiss of Vienna in 1847 noticed there had been a great increase in the mortality from childbed fever in the lying in hospital there, after the time the study of morbid anatomy had become so common. He connected the one with the other, and working on the theory that the cadaveric poison was the cause of the disease, he reasoned, if proper means were taken to keep the cadaveric poison

from the patient by rendering the hands so thoroughly clean he would be able to eradicate the disease. He got the professors and students engaged in midwifery to wash the hands in chlorinated water with the result that almost immediately the death rate fell.

Hirsch advanced on the theory of Semmelweiss that it was due to cadaveric poison he says "the virus inheres equally in the products of cadaveric decomposition and in those of suppurating or ichorous tissues in diseases of all kinds. The virus can develope in the putrifying membranes and lochia when brought into contact with air as well as in the morbid products which arise in the course of childbed fever itself". (11)

This reflects pretty accurately all that is known at the present day as to the

cause of childbed, &c.

According to Heiberg micrococci * have been found in all the organs affected by this disease, but as this microbe has not yet been artificially cultivated and therefore as we have no means of applying Kochs test we cannot yet say if this is the cause of the disease.

Undoubtedly, if we could keep septic germs from the parturient woman as easily as we can do in surgical wounds puerperal fever would be a rare thing indeed, but puerperal fever still ranks high in the percentage of the death rate, this is not due so much to Epidemics of the disease as formerly but rather because in the sporadic form puerperal fever is still very common, we have not yet come to the time when this can be said to be a disease of the past

* like the streptococci of erysipelas & other infective

In Maternity hospitals, where midwifery is carried on under strict antiseptic precautions, childbed fever has been almost eradicated, so that now instead of being the most dangerous places to be confined in as they once were, Maternity hospitals have become the safest.

The same improvement in the mortality of childbed cannot be said for private practice where the conditions are not so very much improved to what they were 50 years ago. The medical man may have a perfect knowledge of the theory of antiseptic midwifery but may find it a very difficult thing to apply it in practice Sporadic cases will arise, they cannot be avoided in the surroundings amid which many women are confined and it is not only in the poorer classes that we meet with this but also among

the well to do, though among the latter this as a rule is not so common.

The clinical features and treatment of puerperal fever are sufficiently indicated in the notes of the following cases:—

Case V Mrs A. aet. 35 confined on March 3rd of her 6th child, the labour was natural.

She progressed favourably till the 8th March when I noticed the pulse was rapid 120 temp 100°F. foul tongue and slight headache no pain over the uterus. the lochia was not foul smelling, there had been no shivering, her bowels had been moved on the 3rd day, but not since, ~~there had been no rigor~~. I ordered her to take a saline purgative.

March 9th Temp 101°F. pulse ca 120, her bowels had been moved freely during the night She was inclined to be delirious and had been more so during the night. the lochia

was inclined to be nasty, there was some amount of pain on pressure over the uterus but which seemed to be undergoing involution naturally, No Cough or anything abnormal in the chest, I put her upon small doses of Quinine, douched out the vagina with hot water and ordered poultices to the abdomen

March 18th She is much worse Temp 104·5°F pulse 135 she is very delirious and has been all the night, she has a good deal of pain over the uterus, the lochia was suppressed as also was the milk I douched the uterus with a 1-40 solution of Carbolic with a Rozemanns Cannula the poultices to be kept on over the bowels and the following mixture

℞ Quin Sulph 3ii
Acid Sulph dil 3ij
Aquam ad 3vj
Sig. 3ij every 4 hours

March 11th Her temp is lower & the delirium not so marked though she is still inclined to be so. I now lessened the dose of the quinine as she complained of deafness. ~~The~~ Per vaginam I could make out a fulness to the left of the uterus, the organ being somewhat fixed, the abdomen was rather tympanitic which was relieved by Ol Terebinthinae m. XX in an emulsion

Hot vaginal and uterine douches were continued twice daily for a week, the temperature kept down, the appetite returned and practically at the end of 2 weeks she seemed to be convalescent the fulness at the left side of the womb seemed to be going away, there was no pain, but the uterus was somewhat fixed. I asked her to continue a hot douche daily for some time longer

She got out of bed and began to do her household duties she did well for 2 or 3 weeks when she began to complain of loss of appetite. languor. sweats her temperature about 100° F. There was nothing abnormal in the chest, the douches had not been continued as ordered. P.V. the condition of the womb was about the same as when last examined but there was distinct tenderness to the left of the cervix. I ordered her to keep her bed to have hot douches 3 times a day, an opiate to be given at night for sleeplessness.

In a few days a swelling appeared at the upper part of the thigh which soon increased to the size of an orange It was diagnosed as pus. the patient was put under chloroform and the abscess opened under antiseptic precautions

I found the matter had come from the pelvis through the thyroid foramen, a drainage tube was inserted after thoroughly washing the cavity with Carbolic The tube was kept in 10 days when it was taken out and the wound dressed with some simple dressing which healed well. After opening the abscess and evacuating the pus the general condition of the patient underwent a great change the temperature came down to normal the sweats disappeared. the appetite soon returned, she took on flesh rapidly and in a short time she was perfectly well. She has since then been confined again and this time recovered without a bad symptom.

Case VI

Mrs S. act 21 confined of her second child on March 30th forceps applied

because of uterine inertia. There was a slight laceration of the soft parts no stitch was required, the vagina was douched with a weak solution of Condy. She did well till the 2nd April when after a severe rigor she complained of headache temperature 104° F. pulse rapid and complaining of great pain in the abdomen, she was inclined to be delirious, the flow of milk had ceased and the lochial discharge suppressed.

She was given 10grs of quinine in mixture every 2 hours. poultices to be applied over the abdomen, I washed out the uterus with a weak carbolic solution

April 3rd The quinine had kept down the temperature, it was now 101° F. the pain over the abdomen was greater, the uterus

was felt to be enlarged and tender and a certain amount of tympanites was present, this was relieved by turpentine stupes to the abdomen, for the pain I gave Niemeyers pill as follows:-

℞ Pulv Opii gr ½
Quin Sulph gr ½
Pulv Digitalis gr ¼ M
Ft pil One every 3 hours

When this was not sufficient to kept the temperature in check, it was easily done by giving 10ps of Quinine.

The uterus was douched out twice daily with carbolic solution, but the pain and enlargement continued, she complained a great deal of headache which was only sometimes relieved by 10gr doses of antipyrin. The tympanites was a source of great trouble, it was treated by turpentine externally and internally

the pain continued over the abdomen the bowels were at first obstinately costive but latterly diarrhoea set in which exhausted the patient who died 14 days after the onset of the symptoms, before death the tympanites was extreme I tried puncture of the bowel with a fine needle but I do not think with any benefit. I do not know the cause of this case unless it was the very unsanitary condition of the house, being a "back to back" house there was no ventilation whatever, and the middenstead was about 5 yards from the door,

Case VII Mrs. L. act 38 confined on May 10th of her 7th child, the labour was natural and easy. She progressed favourably till May 14th when she had a severe rigor followed by pain over the uterus, during

the night was summoned to see her and found her with a temperature of 104° F and great pain over the uterus There were the other symptoms of septicaemia She was treated with 5 grs doses of quinine, hot vaginal and uterine douches twice a day, hot poultices over the abdomen, This treatment was continued for 2 days when the temp. was still high, acute pain still over the abdomen which was tympanitic Turpentine stupes were now applied over the abdomen and 2 gr doses of Carbolic acid were given alternately with the quinine and uterine douches continued twice daily.

The inflammation spread over the peritoneum with no appreciable diminution of the temperature for 2 days, She vomited all nourishment

given which was principally milk and lime water. As the symptoms in the abdomen began to abate she was attacked by pleurisy on the left side which was evidently due to the extension of the inflammation through the diaphragm from the peritoneum. This was treated in the usual way and after 3 days shewed signs of abating when signs of pneumonia on the same side appeared. this was treated by poultices and the following mixture given

℞ Vin Specac 3ij
Ammon Carbon 3ij ß
Tinct Digitalis 3ij ß
Aq Camph ad 3viij ℥m

Sig 3ß every 4 hours

The inflammation also attacked the right side and it looked now as if she would not have strength to fight

against this but she began to make improvement. She had severe gastritis during the most of her illness which rendered the feeding a ~~great~~ source of great anxiety. She made slow progress towards recovery which is not to be wondered at when the extremely serious condition of the patient is taken into consideration.

I was of opinion that this house too was to blame for this. The drainage was very bad, the house was small and damp. Since the above case I have had another confinement in the same house which although the patient did not give rise to the great anxiety of the above case, did cause me some trouble by the temperature rising but which soon returned to normal with one or two doses of Gummi

Case VIII Mrs P. aet. 25 primipara confined on August 11th by my locum tenens, the labour was natural but when the shoulders swept over the perineum that structure was ruptured almost to the sphincter, the placenta came away entire. The wound in the perineum was washed and 2 stitches inserted. She had pretty severe vomiting after the labour was over. I saw her on the 3rd day she seemed to be progressing favourably with the exception that owing to the contused condition of the vulva the urine has to be taken off every 8 hours by catheter. The temperature when I saw her on the 3rd day was 99·6 F. pulse 80. No pain over the abdomen but said she felt sore about the vulva: there was a good deal of tumefaction there.

Aug. 14th Had had a rigor during the night temp 105. pulse 140 had some pain over

the bowels but not very severe, her mind was quite clear. I took out the stitches from the perineal wound which had an unhealthy look there had been no attempt at healing. douches out the uterus with weak perchloride solution, dusted the wound with Iodoform inserted some iodoform gauze ~~but~~ to keep the lips of the wound separate. Gave her 5 grs of quinine every 2 hours, the temperature was 99 pulse 90
the following morning, the bowels were moved by an enema. I reduced the dose of quinine giving 2gr every 4 hours and the uterine douches twice daily. The pain continued over the bowels but not very severely. there was no tympanites. This treatment was continued till the 18th when she had another rigor the temperature rising to 104 and the pulse to 125, the quinine quickly reduced it to 99.6

Four days afterwards

On the 22 she had another rigor the temp rising to 104·4 ♀ pulse 126 which was again brought down to 98 the following day by the quinine. She made water on the 23rd Augt and continued to do so afterwards without the aid of the catheter

The vulvo vaginal gland of the left side got enlarged and painful and discharged pus from an opening in a few days, from this point, no doubt ~~exact~~ brought on by the discharge coming into contact with this small wound, Erysipelas appeared and the temperature again rose to 104·8 I put her upon Iron and Quinine and continued the antiseptic douches, the erysipelatous part was smeared with

℞ Acid Carbolic ℥j
Vaselini ℥ij M

ft Ung

The erysipelas spread from the left

labium over the left hip and about half way down the thigh, it also spread up over the sacrum and the right hip. Her temperature remained high for about a week after the appearance of the Erysipelas when it fell and did not rise again convalescence being established. The wound in the perineum healed slowly. The pain in the abdomen gradually disappeared, there had been some pelvic cellulitis but happily it did not leave any bad symptoms behind it. The patient was confined to bed for 6 weeks and recovered her strength very slowly.

This case presents some interest inasmuch as the erysipelas appeared after the Symptoms of puerperal septicaemia had and not before it as is usually the case. It would seem that if Erysipelas may produce puerperal fever, the septic discharges of septicaemia are able to produce erysipelas

Puerperal Eclampsia.

The following are the notes of a case of puerperal eclampsia the only one that has occurred in my experience:-

Case IX Mrs A. act 34. 3rd child. the previous labours had been normal. She had been under my care for about 2 months suffering from albuminuria, she had had oedema of the feet and legs and puffiness under the eyes, the urine had contained a good quantity of albumen, this had almost disappeared under treatment.

On 4th May she complained of pain in the Epigastrium about an hour after dinner which [redacted] was relieved by 15gr Lactopeptine On that night she went to bed about 11 felling quite well, was quite cheerful and talked of the prospect of her mother coming to stay with her till her confinement was over which was expected in about 2 weeks

at 1-30 a.m. her nurse, who occupied the same room with her woke and found her in a fit - I was at once summoned and when I arrived I found her unconscious She had only one fit as far as the nurse knew - The Os was about the size of a shilling and dilatable the uterus was contracting regularly but not strongly two drops of Croton oil were dropped on the tongue. She took another convulsion shortly afterwards, lasting about 5 minutes Chloroform was then administered. The pains continued to come regularly. The bowels were moved about 3/4 hour after giving the croton oil - The Chloroform was discontinued and chloral given instead but as another convulsion came on the Chloroform was resorted to again. I dilated the Os until I could apply forceps which I did and delivered her

of an asphyxiated male child which died shortly after. Twenty minutes later the placenta with some clots came away. The uterus contracted well. The chloroform was again discontinued. The patient lay in a semi comatose condition, chloral was now given.

Three hours after the birth of the child the convulsions returned, ~~coming~~ she had several coming on in quick succession and lasting about 5 minutes, the pulse was becoming smaller and more rapid I injected 4 minims Inject. Morph. Hypoderm this had the effect of warding off the convulsions for about 2 hours after which they returned with great severity She would have about 6 convulsions when they were followed by elevations ~~but~~ comp which lasted an hour when she died. I applied dry cups over the

loins, withdrew some urine by catheter and found it highly albuminous

She never recovered consciousness from taking the first convulsion.

Case of Puerperal Mania

Case X Mrs G. confined of her 5th child. the labour was normal. During labour I detected incoherencies in her talk but did not take much notice of it as I thought this was natural to the woman. This was the first time I had attended her. I left her in bed and pretty quiet about 10 at night. The following morning about 4 A.M I found her, barefooted and with nothing but her night dress on ~~walking~~ walking about in my garden a distance of about 150 yards from her house. I took her home and found she had risen out of bed and had gone

out without anyone in the house knowing anything about it. She talked very ramblingly and threatened her husband with all sorts of things. She would take his life &c. She was not violent unless perhaps against the husband with whom she did not live happily. She was very restless and difficult to control. it was with great difficulty I persuaded her to lie in bed. I gave her 25 grs of Bromide and 25 of Chloral and to be given every 3 hours. At 10 p.m. she had not slept any. I increased the dose of the sedative the lochia was natural and there was very slight Elevation of the temperature

At 10 p.m. she had had no sleep and had been restless all the day - it was with great difficulty she was kept in bed I gave 4 min. ds Morph Hyp dermic. She got no sleep until I increased the dose

of Morphia to 6 minims. I gave her this every night for nearly a fortnight. Her temperature did not rise and involution proceeded naturally. She got out of bed at the 8th day and could not be kept in the house, she wandered about amongst the neighbours houses doing all sorts of silly things. The baby was taken from her on the 2nd day as we were frightened she would injure it

A fortnight after her confinement I got her away to the County Asylum where she is now. She has not improved any since being taken there (August 1895)

There is a history of insanity in the family her mother and a sister having been in the Asylum but not however for puerperal insanity.

References

(1) Dmeans Mortality of childbed and maternity Hospitals page 2

(2) do do do 24

(3) Barkers Puerperal Diseases page 2

(4) Spiegelbergs Midwifery Vol I page 292

(5) do do " 288

(6) do do " 299

(7) Barkers Puerperal Diseases " 3

(8) do do do " 4

(9) Leichmans Midwifery " 254

(10) Quains Dictionary of Medicine Vol II. 390

(11) Hirschs Handbook of Geographical & Historical Pathology Vol II 466