

CUMSTON (C. G.)

Hæmorrhagic Metritis.

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*Reprinted from Annals of Gynæcology
and Pædiatry.*

BOSTON, 1896.

presented by the author -



Hæmorrhagic Metritis.

A CLINICAL LECTURE DELIVERED BY

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GENTLEMEN: The patient that I have taken for today's clinic presents a form of uterine disease which is of importance to you, as it is met with frequently, and you should be familiar with its symptoms and treatment.

The patient's history is briefly as follows: She is thirty-six years of age, and works in a box factory. Menstruation appeared at the age of fourteen, and was regular, although rather painful during the first twenty-four hours.

Married at twenty-eight; she has had two normal labors at term, the last one two years ago. Both children living and well. No specific history.

Seven months ago, the patient aborted at three months. The miscarriage was followed by hæmorrhage, and she kept her bed for three weeks. Since then she has been subject to metrorrhagia, which is very profuse with clots, lasting ten or more days, and occurring every three, and lately every two weeks. The quantity of blood passed is very considerable, and has produced an advanced anæmic condition, so much so that she has been obliged to give up work.

By bimanual examination I find an enlarged tender uterus in anteversion. The adnexa appear normal, and no pain is experienced by the patient when I press upon them. There is an incomplete left-sided laceration of the cervix, which is somewhat enlarged and hard to the feel.

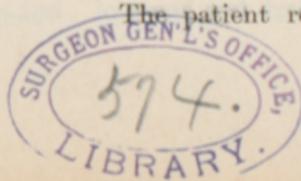
By the speculum you notice that the cervix is free from erosions or cystic degeneration.

The principal symptom in this case is the metrorrhagia, and from the history and examination, I make a diagnosis of hæmorrhagic metritis or metritis post abortum.

In this type of metritis the metrorrhagia is the all-important symptom on which to base your diagnosis.

By questioning your patient you will obtain a history similar to this. She will tell you that the abortion was accompanied by a severe loss of blood with clots. The ovum expelled, this very abundant flooding, which lasts for some hours, diminishes in quantity, but a bloody discharge is present for eight or ten days.

The patient remains quiet during



this time, and, with or without treatment, the hæmorrhage finally ceases completely, and everything appears to be normal, when, two or three weeks later (sometimes sooner, rarely longer), a new hæmorrhage makes its appearance.

The patient thinks that this is the return of her menses, but it is nothing of the kind. Instead of coming on at the normal time, it appears several weeks too soon, and is a very abundant flooding containing *clots*; its duration, moreover, is from eight to twelve days. Thus it is plainly seen that this flooding in no way presents the character of the menses, such as occurred before her pregnancy.

The flow finally stops, but a repetition of the hæmorrhage will occur in ten days or two weeks later.

Now, gentlemen, from this time on you may be sure that a hæmorrhagic metritis is present; the patient is always losing blood and the flow will finally be present twenty days out of each month. The menstrual period can no longer be determined, and there are even cases in which the hæmorrhage will only disappear for a few days. Some patients are flowing continually, with variations in the quantity of blood only.

When the disease has reached this condition, menorrhagia can no longer be distinguished from metrorrhagia, and in reality the latter term is the more exact when applied to the condition under consideration.

This metrorrhagia is always accompanied by clots during the first few days, or simply the first few hours of

the flow. In those patients who never entirely cease flooding, the moments of increase in the quantity are announced by the reappearance of these clots. In other cases only liquid blood is lost, but the quantity is greater during the first few days of the metrorrhagia.

However, this clinical picture may present many variations. For example, you may have to do with a metrorrhagia in which there is a continual discharge of clots, and merits the term of metrorrhagia more from its quantity than from its duration; the clots may also mark the end of the flow instead of the commencement.

Generally speaking, hæmorrhagic metritis is not painful; the pains are only present when clots are being expelled, and cease as soon as this is accomplished.

As in all other diseases, there are exceptions to the rule, and pains occurring in other types of metritis are met with in the hæmorrhagic form, although in less intensity.

The patient will be more likely to complain of a sensation of weight in the pelvis; *she feels her uterus* so to speak, and this painful symptom is particularly noted in the median line. In some cases the pains are those of painful metritis, seated in the pelvis, kidneys, and internal aspect of the thighs, with irradiations through the rectum, bladder and abdomino-genital nerves.

Between the periods of metrorrhagia, leucorrhœa is frequently present. It is usually of a whitish-

yellow color, rather thick, and comes from the uterus. The gelatinous leucorrhœa of the cervix is rarely met with in these cases, because the lesions in this form of metritis are seated in the corpus and not in the cervix.

By digital examination the cervix will be found enlarged, although not greatly, as in the case I have shown you; while the uterus is larger than normal and movable and not usually tender. The adnexa, if not previously diseased, will be found healthy and will remain so.

By the speculum, the cervix is seen in a state of hypertrophy, thus participating in the enlargement of the entire organ. It is healthy as in the case of the adnexa, and if you find granulations, ulceration or ectropion of the lips, it is more than probable that these lesions have been produced by a former cervicitis.

As you see, the diagnosis of this type of metritis is easily made. You will base it on the history of the case as well as by the absence of a fibroid tumor or affections of the adnexa which produce metrorrhagia. When you find by digital and bimanual examination, as well as by a careful palpation, that the uterus is slightly hypertrophied, that the culs-de-sac are normal, and still more, that the patient attributes the trouble to a miscarriage, no doubt should remain in your minds as to the nature of the affection.

A fibroid polypus could not cause a mistake, for it is always easily detected through the half dilated

cervical canal. On the other hand, a mucous polypus presents more difficulty, for as I shall show you, there is a kind of polypus to which Mayer has given the name of deciduoma, and which has its starting point in the remains of the decidua. But this is a complication of decidual metritis rather than a different affection.

It is also the same for the neoplasms described by Sænger, which are nearly entirely made up of large decidual cells and which are in reality a kind of sarcoma.

But, gentlemen, these are complications of *post abortum* metritis, and the diagnosis can only be made when the neoplasm has attained some size. If they should be present along with a hæmorrhagic metritis, it would be far more important for you to make a differential diagnosis of the other varieties of mucous polypi, so that when you have removed them, the ablation may be followed by a curettement of the uterus, thus curing the hæmorrhagic metritis.

The progress of hæmorrhagic metritis does not tend towards cure, and neither does it generally incline towards aggravation. The patients, as in our case of today, become weak after a more or less length of time from the repeated loss of blood; they become decidedly anæmic, and in this condition their organism is less resistant against other intercurrent maladies, and it is really most astonishing how many women afflicted with this condition will go on for months and even years without their life being in serious danger.

The prognosis is, however, relatively serious, because these metrorrhagias render the patient so weak that she is in most cases obliged to give up her work. The flooding forces her to remain in bed at least several days out of each month, while the rest of the time anæmia is so marked that she has not the vitality to attend to her duties.

As to the pathology, this type of metritis is usually *interstitial* or is *mixed*, that is to say, both glandular and interstitial, but with a predominance of lesions in the stroma. The hæmorrhagic metritis of old age is the one in which you find the purely interstitial form, while in young women the lesions of the stroma predominate and the glands do not completely disappear.

There is a great vascular proliferation in the type under consideration. The new formed vessels, which are only capillary, are irregular and of relatively large caliber. They are generally very superficially situated at the free surface of the endometrium, while the greater part of the culs-de-sac of the glands are situated below them. The hæmorrhages are thus accounted for by the considerable number of vessels and their superficial situation; consequently the characteristic lesions of hæmorrhagic metritis are the marked changes in the stroma.

Now, as I have said, in the *post abortum* metritis the principal lesions are in the stroma, consisting of changes in the vessels, and, according to Schröder, an interstitial endome-

tritis is the most frequent form, while the glands only become diseased after a certain time. But as is pointed out by Potherat, a miscarriage can only favor infection, consequently this is not the *post abortum* metritis as we understand it.

It is infection that plays the principal part, while a metritis following abortion, and whose symptom is hæmorrhage, it plays only a secondary part; it is the remains of the decidua that produces the lesions. The débris of the decidua are retained, and it is around this foreign matter that the lesions of interstitial metritis commence.

A few words now regarding the formation and transformation of the decidua, which will refresh your memories and make what I am about to explain more clear.

According to Coste, Robin, Friedlander and de Sinety, when the fecundated ovum comes into the uterine cavity some eight or ten days after leaving the ovary, it comes in contact with the congested endometrium. It is stopped in the neighborhood of the orifice of the tube by one of the many folds which exist in the mucosa, and being pressed between the folds it finally becomes *planted*, so to speak, in the mucous membrane.

Soon the borders of this depression caused by the implanted ovum come up and surround it and become hypertrophied, thus progressively closing in the germ, which is at last completely imprisoned in a sort of cyst whose walls are made up by the endometrium.

That part covering the ovum is called the *fetal decidua*, or decidua reflexa, while that which has been pressed in by the ovum and on which it is implanted, forming later on the placenta, bears the name of *inter-utero-placental decidua*, or decidua serätina. And, lastly, the endometrium which has no relation to the ovum is designated as the *uterine decidua* or *decidua vera*.

At the commencement of pregnancy the ovum, as you know, is extremely small, and the decidua covering it is in contact with only a very small portion of the uterine decidua; but towards the end of the third month the decidua reflexa is in direct contact with the entire decidua vera.

After the commencement of the fourth month the decidua vera and reflexa begin to close together, and from that time on both membranes are so intimate that they only form one. At the same time, many very solid adhesions are formed with the chorion, the latter being, as you are aware, the external envelope of the ovum.

During the first two months the decidua vera is thick, very vascular, covered with numerous folds, while its internal aspect is riddled with small openings which are nothing more than the orifices of the uterine glands. But from this time it progressively loses its considerable vitality, the folds disappear, it decreases in thickness, while the greater part of the vessels and their elements vanish.

This atrophy is most marked at

about the fourth month, and at the same time the adhesion between the decidua vera and reflexa is about complete.

According to Friedlander, changes take place which end in the detachment of the decidua. These begin at the third month and have the following characters at the end of pregnancy: The decidua vera has no epithelial lining, being reduced to two layers, one glandular, the other made up of special cells.

The first named is in contact with the muscular tissue of the uterus and composed of glands lined with epithelium and united by connective tissue. The second is made up of large round cells in the most superficial part, while that part which is in the proximity of the glands is composed of spindle-shaped cells.

It is in the middle of the spindle cell layer that is to be found the marking line of the decidua when this is expelled, thus leaving the glandular layer adhering to the muscular tissue with part of the spindle-shaped cells. Robin, I would say, although giving an entirely different explanation as to the detachment of the decidua, specifies that, although the decidua vera loses part of its adhesions with the uterus at the fourth month of gestation, is more easily separated from it the farther pregnancy is advanced.

Now, what takes place in the decidua reflexa during this time? At the commencement of pregnancy it undergoes the same histological

changes as the decidua vera, but the atrophy occurs much sooner, generally one month after conception.

According to Kölliker, the glands, vessels and epithelium diminish little by little as the decidua reflexa becomes atrophied, and during pregnancy all its elements disappear.

The decidua serotina takes on an entirely different growth. Quite in the beginning it presents no difference in structure from the decidua reflexa and hypertrophies along with it. The vessels increase in size and come into relation with the corresponding villousities of the chorion, and a hypertrophic condition results which is just the opposite from the atrophic changes in the decidua reflexa.

This hypertrophy results in the formation of the maternal placenta, while at the same time the villousities of the chorion which are atrophied on the side of the decidua reflexa become hypertrophied as well as the vessels it contains, and the result is the development of the fetal placenta.

The atrophy of the villousities which extend into the decidua reflexa is complete at the end of the third month, the placenta then being a distinct organ developing proportionally to the growth of the fetus.

You will see from what I have said that the line of division of the decidua, which gives place to the detachment of that membrane, is only well marked at the fourth month of pregnancy. It is consequently not to be wondered at that an abortion occurring during the first three months has as a result a partial ex-

pulsion of the decidua. It is evident that where the most active work is going on, namely, in the decidua serotina, that separation is accomplished with more difficulty, and it is precisely here that pieces of the decidua will remain undetached.

But the decidua vera is better placed to give rise to the production of hæmorrhagic metritis, for it is only in a marked condition of atrophy at the end of the fourth month; and during the first three, especially the first two, it is very thick and vascular.

The etiology of decidual metritis is clearly one produced by an abortion occurring in the first three months of pregnancy.

As to the pathogenesis of this form of metritis, there is much difference of opinion. Pozzi and the regretted Prof. Trélat believe that in all metrites there is infection, and in the type of metritis in question, this infection is limited and local, the decidual débris acting as a good culture media.

Other writers hold that the affection is due to the arrest of involution of the endometrium, which is caused by the retained decidua. For my part, I am inclined to adopt the latter view, although the question will be settled when well conducted bacteriological studies are attempted in this direction.

As to the treatment of hæmorrhagic metritis, there is but one, and that is curetting the uterine cavity. This should be done as soon as you are certain that the metrorrhagia is not simply due to the miscarriage, but

is a symptom of a lesion of the endometrium that will only disappear by the removal of the retained membranes; for by operating as early as is possible, you will prevent your patient from becoming anæmic by abundant and prolonged flooding.

Curetting should be done immediately, if the life of the patient is in danger; but in the greater number of cases you will be able to stop a metrorrhagia due to a miscarriage occurring in the first few months of pregnancy. This is accomplished by hot vaginal irrigations or by a careful aseptic vaginal tamponade, and attacking the endometrium with the curette should only be resorted to when the metrorrhagia has become symptomatic of a decidual metritis.

However, if the metrorrhagia is of such degree as will necessitate an intra-uterine tamponade, I should advise you in this case to first curette the cavity and then pack with iodoform gauze.

Curetting is clearly indicated when hæmorrhagic metritis has declared itself, and this may safely be said to exist as soon as a second metrorrhagia appears. For example, when a woman who has had a miscarriage accompanied by a very profuse flooding, has what she thinks are her menses two or three weeks after the flooding, and this supposed menstruation is a real hæmorrhage, surgical measures are indicated.

In performing a curettement you should be perfect in your antiseptics; the bowels should be moved the night before, and a warm vaginal douch of

a 1 per cent. solution of sulpho-naphtol or creolin should be given the night and morning before the operation; the quantity should be three litres. The vagina is scrubbed with soap and brush, and the bladder emptied with a glass catheter; the latter should be kept in a glass filled with a 1 in 1000 solution of bichloride of mercury.

When the miscarriage dates back several months you must dilate the organ, but if the operation is performed soon after this has occurred, dilatation will not be necessary. The dilator should be either that of Reverdin with its irrigator, or Hegar's sounds may be used.

You all know the technique of curettement, so I will not insist on this point at length. The patient should be put under complete narcosis, with ether or chloroform, but in cases in which the heart, lungs or kidneys are in a condition contra-indicating their exhibition, local anæsthesia may be obtained with a 25 per cent. solution of hydrochlorate of cocaine applied to the endometrium. This method is safe, I think, because the curetting of the mucous surface destroys the absorbing membrane.

The floor of the vagina is depressed with a Simon speculum, and the cervix is lowered by a pair of forceps, taking care not to exercise too much force in so doing. You thus steady the organ while you scrape.

As to the curette, I consider Recamier's and Rheinstädter's by far the best. With the former instrument

you are able to attain all the corners of the uterine cavity, while with the latter you can curette the anterior and posterior surfaces; at the same time the irrigation through the latter curette washes away the débris.

Never use a dull curette, excepting in obstetrical practise, and then use a *dull* Rheinstædter, which is an invaluable instrument in these cases.

You must curette thoroughly on each surface, the fundus, sides and angles of the organ until you hear the characteristic *scratching sound* indicating that the muscular tissue is reached.

One reason for my preference for Rheinstædter's instrument is that the spoon is large and the endometrium is more surely and completely removed. Werth examined uteri which were removed at various periods after curettement had been performed, and found that the entire mucosa was never removed, as he found patches which were untouched by the curette, while in some places the superficial layer was wanting and in others the muscular tissue was denuded.

A hot intra-uterine irrigation of a sulpho-naphtol, or other antiseptic solution should be kept up by means of a Rheinstædter curette or a Fritsch sound during the operation, thus removing the débris. I have never seen a case in which there was serious hæmorrhage from curettement, and if you are careful as to your antiseptis, there is absolutely no danger of infection.

The operation should be completed by a drainage of the uterine cavity with iodoform gauze, which may be dipped in a solution of creosote in glycerine, which has a favorable action on the uterine cavity.

There should be no elevation of temperature after the operation, and if there should be, the drainage is to be renewed and an intra-uterine irrigation given.

When all goes well, the gauze is to be removed on the second day and a new strip inserted, after an intra-uterine douche of one litre has been given, as this irrigation will remove any débris of the mucosa which may possibly remain in the cavity, and which is sometimes the cause of an elevation of the temperature. Remember that *the change of dressings must be done with as much antiseptic precautions as the operation itself*.

You will renew the gauze again in two days, after which time a daily vaginal douche will be quite sufficient.

The patient must remain in bed for two weeks, and at the end of the third may take up her usual manner of life.

This patient will be curretted to-morrow and the above treatment will be applied; but on account of her considerable anæmia I shall give her iron in the form of *ferratin*, which is an easily assimilated preparation, during her convalescence.

