vagina, behind the uterus, everything was favorable; but, unfortunately, in ignorance I removed the placenta, and the result was fatal. If these conditions are not possible, then the fœtus must be removed from above, and the sac must be treated as already described. I am bound, however, to say that I am not in any way in favor of vaginal section. I have never resorted to it but once, in the case before alluded to, and my growing experience makes me think that abdominal section is in every case preferable. The golden rule for this operation is to avoid touching the placenta.

CHAPTER III.

OÖPHORITIS AND PERI-OÖPHORITIS—CIRRHOSIS OF THE OVARY—ABSCESS OF THE OVARY.

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Chronic Ovaritis. THOMAS. New York Med. Jour. V. XIX.
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THE accession of puberty alters the nutrition of the ovary to the extent that, at the monthly periods, it shares in the general state of hyperæmia and excitement then common to all the sexual organs, and the whole economy seems to participate in the disturbance. Normally, this change takes place in the fourteenth or fifteenth year of life in this country; at an earlier date in hot climates. In strong, healthy girls, especially those engaged in active out-door work—still more those living a life approaching to the primitive state—the moliminal change is effected without suffering; but in girls brought up in refinement, of delicate habit and strumous parentage, there is much trouble. As a rule, this seems to be due to the onset of menstruation, and the

other signs of the change while the ovary is still in its infantile or incompletely developed condition; that is, while it is forming incomplete cells, whose nuclei are incapable of fulfilling their great functions, and the whole mechanism of ovulation is out of gear. In such cases we find that the menstrual flux comes on either at irregular times or in insufficient quantity; or that, if it comes regularly, it is over-abundant, and it is always accompanied by severe pelvic pain.

There is a large class of ovarian disease due to altered hæmic nutrition of the gland, which clinical experience proves to be far more common than pathological investigation has yet shown. Of the prime factors in these cases we are as yet comparatively ignorant; but the opportunities now afforded us of seeing the actual lesions of the ovaries, in those cases where they are removed for diseases other than large cystoma, are rapidly opening up some of the most difficult questions of ovarian pathology. Until two or three years ago, when Keith's success in ovariotomy induced us to extend our efforts in abdominal surgery, we knew no more of those obscure diseases of the ovary which make the lives of so many women burdensome, than was afforded by the evidence of a few stray post-mortem examinations. As the clinical histories of the cases in which these examinations were made were usually entirely absent, it is not surprising that we knew little or nothing of the pathology of the ovaries, save in the instance of cystoma.

So far as my own experience goes, I think I can now say with confidence that I know a great deal more than I did three years ago, not only of the pathology of the ovaries, but how to cure the sufferings inflicted by their diseases.

I propose to retain the division of the diseases of the ovaries due to alteration in the hæmic nutrition, which I introduced nearly ten years ago, and therefore I divide them into three groups, differing probably only in degree of severity, save in the cases where acute ovaritis has a specific origin. They are: 1. Ovarian hyperæmia; 2. Acute ovaritis; 3. Chronic ovaritis.

It may seem a metaphysical refinement to make a distinction between the first and second of these classes, but I have long satisfied myself that it actually exists. Ovarian hyperæmia is the result of an over-sufficient and generally precocious ovarian activity, and is, therefore, the converse of the condition I have detailed under the terms amenorrhœa and dysmenorrhœa. It is far from being a rare affection, and is invariably well marked in its history, the chief detail of which will generally be found to be menorrhagia. In a typical case which I have now under my care, the following is a summary of the facts: The young

lady is the child of parents of markedly nervous temperament, is well-grown, I might almost say prematurely developed in every way, and, when little over thirteen, began to menstruate. From the beginning her periods were profuse, and at first painless. She enjoyed excellent health for many months after the accession of menstruation, during which time the flow continued profuse, generally lasting for six days or a week, and necessitating the use of from four to six napkins daily. By the time she was fourteen it was, however, evident that her health was suffering. She became listless, sleepy, fainted when at her lessons, gave indications of loss of memory, and, when I saw her first, she was decidedly anæmic. At that time it wanted but two or three days before the accession of her period, and steady pressure over the ovaries gave her great pain, which she described as turning her quite sick. During menstruation this pain was induced by less pressure, but in the intermenstrual period it could not be produced at all. She always seemed better in health during the flow, and it was this very common peculiarity that prevented her parents from applying earlier for the much-needed advice.

In such a case there cannot be a doubt that there is hyperæmia, not only of the ovary, but of the whole sexual apparatus, due to, it may be, or more probably only accompanying, the increased ovarian activity. This of itself is not a source of danger, for that lies in the menstrual loss producing anæmia. I have not yet had an experience sufficiently extended to trace such a case throughout its course; but, meeting with many instances which I have had reason to regard as identically of the same nature in later stages, I believe that their menstrual history is much the same as that of other women after they have had a child, the process of gestation seeming to rectify in great measure the abnormal excitement. If they remain unmarried, they go on suffering from menorrhagia, become extremely anæmic, and have the menopause at the usual time, but marked with abnormal profuseness, as might be expected. I have repeatedly had occasion to observe that marriage, even without resulting pregnancies, often seems to do good in the way of modifying the monthly hemorrhage. In other cases, however, marriage seems to make them very much worse, to induce chronic ovaritis, displacement of the ovaries, and finally to destroy their health entirely.

The treatment of such cases should, if possible, be begun in the first stage. There is no cause of deteriorated general health so certain for a young woman as profuse menstruation due to ovarian hyperæmia. The spanæmic condition induced by a few

years' continuation of it is one over which iron seems to have no control; indeed, all ferruginous preparations ought to be sedulously avoided until the menorrhagia has completely ceased.

In the cases such as I have narrated, my first advice is that the patient should be removed from school; and that, for six months, all instruction, especially in music, should cease. I notice music especially, for I am quite certain that instruction in that art, as carried out in boarding-schools, has to answer for a great deal of menstrual mischief. To keep a young girl, during her first efforts of sexual development, seated upright on a music-stool, with her back unsupported, drumming vigorously at a piano for several hours, can only be detrimental. It is usually the habit of those who superintend the education of girls to make no difference whatever in their physical and mental exercises during their menstrual periods; and, at a time when the great necessity of the system is perfect rest, laborious efforts have to be made. This is most pernicious, and I have repeatedly had to trace to it the existence of serious disease in young ladies. Musical exercises are especially hurtful, for the further reason that music, in those who are devoted to it and gifted with its necessary peculiarities, is a strong excitant of the emotions; while to those not so gifted, and who do not care for it, musical exercises are an intolerable and useless burden. Absolute rest is an essential part of the treatment of the early stage of ovarian hyperæmia, and I need scarcely say that it is in its early stage that the treatment is most likely to be successful. This rest ought to be rigorously carried out by the patient being confined to the prone position for a few days before, during, and for a few days after, the catamenial flow. The application of a counter-irritant over the ovarian region, just before the period, is very useful; but the most potent part of the treatment consists in the administration of ergot before and during the period, and of the salts of potassium continuously during the intermenstrual time. The ergot is best given in the form of ergotin, my favorite formula being half a grain of Bonjean's ergotin made into a pill with sufficient lupulin. The bromide I give night and morning, after meals, in doses from five to ten grains. There is a great deal to be done in moral treatment. It may be only a coincidence, but I have noticed this affection chiefly in girls who have had no brothers, or brothers only younger than themselves; and I am quite certain that great harm is done to many girls by their rigid social seclusion, in youth, from the companionship of boys. Under proper supervision, no wrong could happen from more unrestricted association of boys and girls at their critical periods; and it seems to me that it is a mischievous plan to draw wide

barrier-lines between the sexes at a time when they ought to begin to understand themselves and each other; and, by harmless intercourse, many of the risks may be obviated which afterward beset them when an unaccustomed association is opened out at an age when instinct has the chief ascendancy.

While upon this subject, I should neglect my duty were I to refrain from speaking on another subject concerning the education of girls. There has grown up a desire to educate women in exactly the same way and to the same extent as men. It would be easy for me to show, were any charge of obstructiveness or want of liberality to be made against me, that throughout my public life I have ever been in the front rank of those who advocate perfect freedom of every kind of instruction for every one who may desire it; and I have been particularly strong in the expression of my views that there should be restriction of neither class nor sex. But it is useless to disguise the fact that, inasmuch as women have functions to fulfil which men are free from, it is not to be expected that women can, with safety, do the work of men, and at the same time properly fulfil their own special functions as women. The questions raised by the advanced advocates of women's rights are to be settled, not on the platform of the political economist, but in the consulting-room of the gynecologist. This is no place to air political crotchets, but I may own myself an advanced advocate of women's rights; at the same time I cannot help seeing the mischief women will do to themselves, and to the race generally, if they avail themselves too fully of these rights when conceded. It may be, and probably is, a very gratifying circumstance for a young woman to go to a college, and show that she could take as high a degree as a man; but, considering the fact that she has a monthly disturbance, she would take this degree at a price which a man would not have to pay for it. To fulfil the necessary conditions she will tax herself to such an extent as will, in all probability, make her functions imperfect. To continue the career begun at college, she must deny herself the congenial occupations of a wife and the pleasures of maternity, and thus she robs the human race of what it wants most, brain-power on the part of the mother. To leave only the inferior women to perpetuate the species will do more to deteriorate the human race than all the individual victories at Girton will do to benefit it. This over-training of young women is wholly unnecessary in the interests of human progress, and it is mischievous alike to themselves and to humanity. To hear an elderly maiden lady read a learned paper on mathematics may be a gratifying circumstance, but it is largely qualified by regrets when we speculate what supe-

rior children she might have produced if she had been a little less learned in books. Those who advocate the equal treatment of the sexes must bear in mind that great culture in a man does not unfit him for paternity, but, on the contrary, will help him, in the struggle for existence, to maintain a family. For women, on the contrary, exceptional culture will have infallibly the tendency to remove the fittest individuals, those most likely to add to the production of children of high class brain-power, from out of the rank of motherhood.

All the cases of ovarian hyperæmia which I have met with at puberty have yielded to the treatment I have detailed, and many cases which I have had reason to regard as of this nature, but in a later stage, have been benefited by it. It is, however, in the perfect fulfilment of the function of the utero-ovarian organs that we have the radical cure.

Ovarian hyperæmia is sometimes met with as the result of marriage, especially when the marital acts have been indulged in to excess, and particularly when pregnancy has not resulted. This, in fact, is only the mildest form of a serious disease which may end in total inflammatory disorganization of the ovaries of newly married women. It is not unusual to find a delicate woman, who had menstruated normally previous to her marriage, suffer from severe menorrhagia for the first three or four years of married life, and to find an explanation of this in the vigor of the husband. In these cases ovarian tenderness is always present, and very frequently there is violent pain and tenesmus, lasting for hours after connection, so that soon the unfortunate sufferer dreads the idea of a marital embrace. The menstrual period becomes prolonged, so that there is left only an intermenstrual interval of a few days. In prostitutes of a tender age this affection is of extreme frequency, and often ends in the chronic ovaritis with adhesion of the Fallopian fimbriæ to the ovary, and the subsequent atrophy of all the sexual structures so often found in their bodies. The recurrent inflammatory attacks thus induced in these unfortunates have been termed *colica scortorum*. The cure depends, of course, on the removal of the exciting cause and the employment of such treatment as has been before alluded to, but in severe and protracted cases it will be effected only by removal of the ovaries and tubes. This step is to be resorted to only after the failure of everything else, but many times I have been obliged to adopt it, and always with the best results. The idea that removal of the ovaries will unsex a woman is founded on ignorance. So far as maternity is concerned, it of course destroys the function completely; but that has already been done by the disease for which the operation has been performed. A woman who has suffered for years from chronic ovaritis with adherent tubes, and possibly hydro-salpinx or pyo-salpinx, is necessarily barren, so that to remove the uterine appendages is to make her no worse than she was. But such a disease as this will oblige her to suspend marital relations, or to endure them only as a matter of duty, and with great suffering. To remove the diseased structures will be to enable her satisfactorily to perform her marital duties, and the operation, if successful, will be found really to reinstate her in her sexual functions, and not to unsex her.

In very many of the cases of which I now speak, no line can be drawn which will define where simple hyperæmia ends and acute or chronic ovaritis begins. In many of them we get a distinct history of an acute attack, which was probably ovaritis, while in others the symptoms came on gradually, without any noticeable starting-point, and ovarian hyperæmia probably in these passes insensibly into chronic ovaritis. I propose here to give a series of cases illustrating these different classes.

E. S—— was a young married lady, whom I first saw in May, 1879, with Mr. Arthur Newton, of Newhall Street. Her menstruation commenced when she was thirteen years of age, was always so painful that she was confined to bed while it lasted, being wholly unable to get about or sit up. This pain came on invariably two days before the period lasted, so that she began her sexual life with diseased ovaries. She was married in 1876, and marriage made her very much worse. She became pregnant in three months, and it was hoped that this would cure her, but it did not. After her confinement she had an acute attack of pelvic peritonitis, which seems to have been a very serious illness. She became pregnant again, and was confined in January, 1879, and had another inflammatory attack, and from that time she was never out of bed till after the recovery from the ovariotomy which I performed on her on February 9, 1880.

I saw her, as I have said, first in May, 1879, and I then found the fundus very large and retroverted, with the ovaries also much enlarged, extremely tender, and lying down below the fundus. She could bear no kind of pessary; the menstruation was regular and profuse, and the pain during its continuance amounted to agony. I advised blistering, morphia, pessaries, and the abundant administration of bromide of potassium and ergot. This treatment had no effect, nor had the efforts of another specialist under whose care she was afterward placed. I saw her again, with Mr. Newton, in January, 1880, and found her condition much worse. She had all the old symptoms, but

in addition she was feverish, worn, and hectic. Everything had been tried and had failed, and ovariotomy only remained. To this Mr. Newton agreed, and so did the patient, her husband, and friends. I found both ovaries adherent in the cul-de-sac, and much care had to be exercised in detaching them. They were very soft, greatly enlarged, and covered with lymph. She made an uninterrupted recovery, and got up on March 5th. On April 1st she walked about the house for the first time in eighteen months, and had gained greatly in every respect. On July 20th she was able to walk a mile, and had got quite stout, was entirely free from pain, marital relations had been resumed with perfect satisfaction, and this, as she frankly told me, for the first time in her life. On September 9th I saw her get down without assistance from a high dog-cart, and run briskly up some steps, as if she had never ailed. She has not had the slightest appearance of menstruation since the operation, and the climacteric disturbance is quite over (February, 1881), and she is in perfect health.

The patient, her friends, her attendant Mr. Newton, are all quite as well satisfied as I am with the result of this case, and that nothing short of ovariotomy would have saved her life. The only thing I regret is that I did not operate many months earlier than I did. In this case the patient probably suffered from ovarian hyperæmia during the whole of her menstrual life, and this was transformed into chronic ovaritis by an acute attack in the puerperal state.

On February 20, 1880, a lady was brought to me from London, who had been confined to the recumbent position for seven years, and to bed absolutely for nearly four years. Her menstruation began at twelve years of age, was not very regular, and was always accompanied by pain. It continued much the same till she was about twenty-eight years of age, when she had an illness, and, ever since, the pain during menstruation has been much more severe, and had become progressively so for the last nine years. During the four years she had been under the care of Dr. Graily Hewitt, and had undergone prolonged, careful, and various treatments by pessaries, etc., but without the slightest benefit; in fact, she got continuously worse. When I first saw her, the history was given that menstruation was perfectly regular, lasting from six to eight days, and was very profuse. Just before the period severe pain came on, and lasted, with slight intermission, the whole time. The pain in her back was incessant, and utterly prevented her walking. I found the uterus quite bent upon itself backward, and so retroverted as to be almost turned upside down. The fundus was very large and soft, and the ovaries, much enlarged, were alongside and below it. The organs were so excessively tender that without ether examination was impossible, so that I am not surprised no pessary could be endured.

I explained to the lady and her friends that the conditions were such that no effort at rectification by pessary need be attempted; that, if Dr. Hewitt had failed, I was not likely to succeed; and that the radical cure of ovariotomy was the only one which promised success. This they accepted, and I performed the operation on the 26th. The ovaries were enormously enlarged, but not cystic; the fundus was soft and spongy, and nearly three times the size it ought to be in a virgin. There were no adhesions. After removing the ovaries, and whilst closing the wound, I passed a stitch through the fundus, and fastened it up to the abdominal wall. She recovered perfectly, has never menstruated since, is getting fat and well, and can now walk about the house and garden. The recovery of her power of locomotion is slow, but steady, and I need hardly say that, after seven years of their suspension, we can hardly expect any very rapid progress. The uterus is now perfectly straight and normally hung, and it is quite of the senile size.

The next case was that of a lady, aged thirty-three, who began to menstruate at thirteen, was married at twenty, and in eleven years had seven children. Her first child was born prematurely, and she had never been well since, for she got up and undertook a railway journey on the fourteenth day. After this she had continuous hemorrhage for several months. She had several premature and dead children after this, and then one living child, and the seventh dead. Three years previous to my seeing her she consulted a distinguished metropolitan specialist, who, upon his consulting-room couch, "did something to her which gave her immediately a violent pain in the back," and that pain she never lost for an hour, save when asleep or narcotized, till the day I operated upon her. What this was which was done to her, of course I do not know, though I have little doubt it was the rectification of her remarkable retroversion by the sound. If it was, it is another example which we may quote against this mischievous practice. When I first saw her I got the story that ever since this incident the patient's life was a misery to her and her surroundings—that she could not get about—was on the couch all day long—her menstruation so protracted and profuse that it lasted quite half the month—and she had hardly recov-

ered from the exhaustion consequent upon the loss and the increase of her sufferings when she was ill again. She had been under the hands of quite a number of specialists both here and in London; and after reading up her case, and comparing the opinions expressed about it, and having come across one of my cases of spaying, she came to me deliberately, to ask me if I thought I could spay her, and, if I could, if I thought it would do her good. She had been told that the womb was bent backward, but that there was a tumor on either side of it. The tumors in question I found to be enormously enlarged and very tender ovaries lying behind and below a retroflected and retroverted fundus, which felt so large that it really might have been a question whether or not there was a myoma in it. From my previous experience, I was of opinion that fundal enlargement was due merely to chronic fundal metritis, though I was quite prepared to find a myoma at the operation.

I had no difficulty, in such a case as this, in recommending the removal of the ovaries, for the mere names of the gentlemen under whose care she had previously been, without benefit, were sufficient guarantee that everything short of that had been tried. Moreover, the patient, a clever, intelligent woman, knew all about her case, and told me pretty accurately all that had been done. I had, besides, the advantage of the history given by one of her medical attendants.

The immediate arrest of the hemorrhage, which had been uncontrolled even by hypodermic injection of ergotin, would alone have been a sufficient warrant for the ovariotomy, but there were numerous other reasons in its favor. I therefore performed it on April 9th, and found the fundus enlarged from chronic fundal metritis only, the ovaries enlarged from chronic interstitial inflammation, and the displacement as I have described it. I removed the ovaries and stitched the uterus up to the wound as in the previous case. She made an uninterrupted recovery, and has never menstruated since. She is now full of color, stout, and well in every respect but one. She went through the early stage of the climacteria without much suffering, and these disagreeables are passing off rapidly. For six weeks after the operation she was absolutely free from the terrible pain in the back; but as she began to get about it came back, and for a time was as bad as ever, despite the uterus being absolutely normal in position and speedily regaining its normal size. This pain in the back still continues in a modified form, and is, I believe, slowly fading away; and I have not the least doubt it will entirely disappear in time. Why it has returned, and why it has lingered so long, I do not know, for there is no physical reason

for it perceptible. In every other respect the results of the operation fully justify its performance.

In very many cases such as these, there will be found no incident in the history from which it can be said that ovarian hyperæmia was transformed into chronic ovaritis. In others a distinct history can be given of an acute attack, from which the chronic suffering can be dated; and my belief is that the two classes may be more carefully defined by further observation, and that their pathological features are wholly different.

So far as I know, acute ovaritis is the result of four conditions only:

1. Injury;
2. Gonorrhœal infection;
3. Septic poisoning in the parturient condition;
4. Exanthematic fevers and acute rheumatism.

In one woman I diagnosed acute ovaritis following injuries inflicted by her paramour kicking her; and though it may have been general pelvic peritonitis, yet the uterus never became fixed as it does in that condition, and the subsequent permanent disturbance of menstruation, accompanied by other signs of chronic ovaritis, confirmed me in my opinion.

Acute ovaritis from gonorrhœa is a common result of the infection, and is a frequent cause of sterility. It seems to be precisely similar to the acute epididymitis of the male, as was first pointed out by Bernutz and Victor de Méric. In this affection the patient is found with an anxious face, agonizing pelvic pain, generally only on one side, the knees drawn up, and all the signs of a severe inflammatory attack. The patient can lie with comfort only on the back, and micturition and defecation are productive sometimes of excruciating pain. It is often impossible to make a vaginal examination without an anæsthetic, and this had better be used at once, for it is a matter of consequence to diagnose between acute ovaritis and pelvic cellulitis. In the latter the tumor will be found attached to the uterus, and moving with it and with the whole roof of the pelvis, and will be found to be more or less fixed; while in ovaritis the enlarged ovary may, as a rule, easily be made out. The treatment should consist in leeches to the perineum, a blister over the ovary, diuretics, and small, frequent doses of opium. The rectum should be well evacuated by an enema, and the bowels kept quiet for a few days. The great risk of the disease is that of its spreading into general peritonitis. In the event of the attack appearing to threaten the life of any patient under my care, I would not hesitate to open the abdomen, cleanse out the cavity, and possibly