INTRODUCTION TO A DISCUSSION ON OBSTRUCTIVE DYSMENORRHOEA AND STERILITY.

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THE discussion which I have been asked to inaugurate seems to open such a wide field, that it is difficult to know how and where to begin.

Dysmenorrhœa is but a symptom, and a symptom of such varying conditions that any discussion as to its relation to sterility would probably resolve itself into a discussion of the various diseases with which it is associated. Menorrhagia, amenorrhœa, dyspareunia occupy a precisely similar position. Dysmenorrhœa, as a general question, is a difficult one. The views with regard to it are various, conflicting, and most of them require revision. There are no end of classifications of dysmenorrhœa, but such classifications only cause confusion, and empirically laid down and acted on cause unsatisfactory treatment and disappointing results. Wylie has well said: "If we knew definitely the physiological processes of normal menstruation, we could soon determine the pathology of dysmenorrhœa; but since our knowledge is so slight, and the views of the best investigators so conflicting, we are obliged to rely on clinical experience to guide us."

Clinically these fine distinctions cannot be made. I regard dysmenorrhœa as mainly due to some hyperæmic conditions of the endometrium or Fallopian tubes or ovaries. To use the term obstructive dysmenorrhœa is a misnomer. I regard the term as misleading; and so far as the pain of menstruation is due to some obstruction to the flow of the menstrual discharge, I believe it to be non-existent. Let us look, for example, at the ordinary varieties of dysmenorrhœa, and we shall see that congestion characterises them all. First, there are those which are simply diathetic, due to gout and rheumatism, or which are purely neurotic in their origin. That these form a large class of dysmenorrhœas there can be no reasonable doubt. How else account for the persistence of dysmenorrhœa in members of the same family? How else account for the persistence of sterility associated with dysmenorrhœa in members of the same family? I have frequently seen large families of daughters all dysmenorrhœic and sterile. Now in this case I believe that the dysmenorrhœa was due to gouty or rheumatic inflammation of the endometrium, along with resulting spasm of the os uteri internum, and that the sterility was due, not to interference with conception, but rather to the congested mucous membrane forming a bad nidus for gestation.

Again, take the question of membranous dysmenorrhœa, which is uniformly associated with sterility: it will scarcely be denied that this is inflammatory in its origin; and if the views advocated by Kundrat and Engelman be correct, this is merely an exaggerated form of normal process due to endometritis. With regard to the ovarian and tubal form, it also is unquestionably congestive in its essence. In this form the pain is usually pre-menstrual, and often relieved after the menstrual flow is developed. The explanation of this is not far to seek: take a case of salpingo ovaritis, either specific or simple. The organs are chronically inflamed and congested, pelvic pain is constantly present, but gradually grows worse towards the menstrual epoch, as the organs become more and more congested, with corresponding relief after the discharge is established, displaying, therefore, that the flow relieves the vascular tension, and thus lessens the pressure on the sensitive ovaries, tubes, or peri-uterine tissue.

When we come now to the variety called obstructive dysmenorrhœa, and which forms the title of the discussion, I feel inclined to discard it altogether, and to regard all such forms of dysmenorrhœa as due entirely either to non-development of the uterus or some change in the endometrium, or both. No doubt

associated with dysmenorrhœa there are to be found frequent deviations in the size, shape, and position of the uterus. For example, the uterus may be small with a conical cervix. The dysmenorrhœa here will be due to an imperfectly developed uterus imperfectly performing its function. In like manner, in the case of an acute antelexion, so often found in nulliparous women, the dysmenorrhœa is due partly to an imperfectly developed uterus and partly to a hyperæmic condition of the endometrium. Again, in cases of retroflexion the dysmenorrhœa is mainly due to a congested condition of the endometrium brought about no doubt in great part from an alteration in the circulation due to the flexion.

It seems to me, therefore, that displacements, flexions, versions, although they are unquestionably associated with dysmenorrhœa, yet are not in themselves the cause of it—that the cause is to be found essentially in a hyperæmic, hyperæsthetic condition of the endometrium.

With regard to the relation existing between dysmenorrhœa and sterility, this has been frequently enough observed. "We know that disordered function is always dependent on structural change." It is by no means ascertained what the exact relationship is which exists between them. In many cases it is entirely accidental. As far as I am able to judge, the association of dysmenorrhœa with sterility is not so pronounced as is generally supposed.

Keherer, who has gone into this matter at some length, has shown that a history of painful menstruation before marriage was only slightly more common in sterile than fertile women. Kammerer, in the *Transactions of the New York Academy of Medicine*, gives a table of 408 cases of sterility in which dysmenorrhœa was a prominent symptom in 67. Jackson gives a table of 72 cases of sterility in which dysmenorrhœa was a prominent symptom in 16. Certainly, looking over my own experience, I should not be inclined to give dysmenorrhœa a prominent place in relation to sterility. Obstructive dysmenorrhœa, putting the term conversely, and regarding various conditions of the uterus as obstacles to conception, scarcely appears to me to have any foundation—in fact, as Jackson says: "The obstacles which are overcome by spermatozoa in their progress towards the uterine cavity are, to say the least, remarkable." Bozeman relates a case occurring in his own practice "in which there was a continuous flow of urine through the os arising from a vesico-utero-cervical fistula. Notwithstanding this adverse current they reached their destination in the cavity of the uterus, and conception, gestation, and safe delivery followed."

Simon relates "a case in which a vesico-vaginal fistula complicated with stenosis of the vagina had been operated on for incontinence of urine by closing the mouth of the vagina about half an inch behind the meatus urinarius. The operation was so nearly successful that an opening only the size of a cambric needle was left. Strangely enough the spermatozoa passed through this minute orifice, traversed the stenosed vagina which was then the receptacle of the urine from the bladder, and made their entrance through the os uteri into the cavity of the organ. Conception and gestation followed but the woman died." And most of us must be acquainted with cases where, notwithstanding a small external os, impregnation and gestation have followed.

The view which commends itself to me is that in cases of dysmenorrhœa associated with sterility, the explanation of both conditions is to be sought for rather in general congestion of the pelvic organs, more especially of the endometrium, than in any mechanical cause. The dysmenorrhœa is accounted for by a hyperæsthetic condition of the uterus brought about by hyperæmia, and the sterility seems to be explained not by any mechanical interference with conception, but rather to some condition of the endometrium interfering with the continuance of gestation. In other words, the dysmenorrhœa is due to congestion of the uterus associated with spasm of the os uteri internum, and the sterility to a hyperæmic condition of the endometrium.

Such a view as this explains how it is that, after treating various conditions of apparent mechanical obstruction, such as antelexion, stenosis, and so on, the sterility remains unaffected. A very large number, no doubt, of the processes concerned in generation are wholly mechanical, and it is therefore not surprising that in cases of sterility presenting some apparent obstacle of a physical character this condition should be promptly accepted as the efficient cause, and mechanical means should be re-

sorted to for its relief. It is certain that the cure of an ante flexion or a retro flexion, or in other words the removal of the apparent mechanical causes, has resulted in the cure of dysmenorrhœa, and we have learned clinically that it has sometimes been followed by a pregnancy. Far oftener, however, these mechanical means, while relieving the dysmenorrhœa, have failed entirely to remove the sterility; failed, no doubt, because they did not remove some condition other than the mere narrowing of the cervical canal, which condition seems to me to be a morbidly hyperæmic condition of the endometrium, rendering the grafting of the ovule an impossibility.

Such women become frequently enough pregnant, but their pregnancy ends in a menstrual miscarriage. Even in those cases in which conception has followed the use of surgical means for enlarging a narrow cervix or straightening a flexion, it does not at all prove that the conception was the result of mere enlargement of the passage. For whether this operation be performed by cutting or stretching, something more is effected than the mere increase of the lumen of the tube. "Such an operation, if conducted properly with the adjuncts of hot douching, purgation, and so forth, produces a distinct effect upon the congested endometrium, and I have myself no doubt that such operations, so far as sterility is concerned, do more to promote pregnancy by relieving longstanding congestion and inflammation, which have hitherto prevented the uterus from receiving and nourishing the ovum, than by any mechanical aid."

Such is the view as to the nature of the condition under consideration. The treatment, therefore, consists in removing the cause of the dysmenorrhœa, namely, the congestion, by means of careful attention to the condition of the bowels, which in nineteen cases out of twenty require careful regulation. I always avoid the use of opium, chloral, and alcohol, as likely to increase congestion, and recommend the use of the hot vaginal douche. When the congestion is confined to the uterus proper, say, in the case of an acute version or flexion, and where there is no tenderness nor any morbid condition to be detected in the appendages, the use of the dilator or graduated bougie, by destroying the spasm at the os internum and generally relieving uterine congestion, will give relief; but unless the cases are carefully chosen, ovaritis and so forth is apt to be set up, and the patient's sufferings increased rather than relieved.

If the patient be married, such treatment, along with prolonged absence from her husband, is often followed by the most beneficial effects. As the point under discussion is the relation of so-called obstructive dysmenorrhœa with sterility, I should be travelling beyond my subject were I to allude to the treatment of sterility more in detail. This much I, perhaps, may be allowed to say, that where there is no marked dysmenorrhœa nor any very definite local condition to treat, sterile women had better be left alone. I venture to think that there is too much interference with such women, and with comparatively little benefit. Sterility depends on so many slight irreconcilable causes entirely beyond treatment—a fact proved by the reports of Winckel on 160 necropsies of women between 15 and 45 years of age—that unless some very definite local cause be found, local treatment should be avoided.

I do not wish to underrate the importance of the subject, but when we consider that statistics based upon many thousands of observations show that one marriage in about ten is unfruitful, this fact alone is sufficient to establish the importance of sterility, whether it be viewed from a scientific or social point. And when we further consider that any opportunity of studying the conditions leading to sterility *post mortem* are exceedingly infrequent, it is only by the record of clinical experience which I trust these remarks of mine may elicit, that we can hope to advance a knowledge of the subject.

Dr. BARNES believed that dysmenorrhœa in a large proportion depended upon obstruction. To begin with the most absolute case, that of complete occlusion, was in imperforate hymen; then ascend to the os externum uteri partially closed; here they had dysmenorrhœa frequent, not indeed constant. It was in accordance with the laws of physics and of gravitation that a narrow outlet and flexion would obstruct the flow of menstrual fluid. It had been said that flexions would no more cause dysmenorrhœa than the bends of the Thames would hinder the flow. Now, as an old sailor, and one who had spent much time on the river, he was in a position to affirm that these bends did obstruct the flow, causing back eddies. Then, again, the comparison with a river was false; the cervix uteri was a closed conduit. Now,

anyone who had handled a Higginson's syringe must know that flexion of the tube would obstruct the flow, and he knew that he must straighten the tube to facilitate the flow. As to treatment, he appealed to very long experience. He had begun, as the late Professor Simpson did, by dilating by bougies, and [as many had done since he had made for himself graduated dilators. The method was unsatisfactory; it was tedious, painful, and the contraction often returned. He had, therefore, adopted the method of "discission" of Dr. Peaslee, that was a carefully defined bilateral incision, extending only half way between the os externum and the reflexion of the vagina. If you incised beyond this point you were apt to divide vessels, which remained gaping, giving rise perhaps to septicæmia and pelvic peritonitis. He found it unnecessary to use intra-uterine stems. Nothing but the limited incision and rest was required. He could say honestly that for the last fifteen years he had had no accident to regret, and the success was almost uniform. In reply to Dr. Stephenson, Dr. Barnes said he fully recognised that there were cases due to other causes than obstruction, but the cases he had treated by incision came to him after the methods described by Dr. Stephenson had failed.—Dr. DUKE said it would no doubt be generally conceded that the most common cause of dysmenorrhœa was a narrowing of either the inner or outer os, in which cases either the cutting or dilating operation was sufficient to cure the affection; but what he wished to draw attention to was that the cure was not due to the dilatation *per se*, but the exit given to the unhealthy discharges collected in the uterus, and the operation afforded more room afterwards for the use of the curette, so as to remove the entire unhealthy surface, and thus put the endometrium into a more suitable condition as a nidus for the growth of the ovum.—Professor STEPHENSON (Aberdeen) remarked that this stock question might be discussed for months and years without a true conclusion being come to. The past history of dysmenorrhœa was not creditable to the profession, and the future was likely to judge us as we judged those before us. The "personal equation" of the operator as well as the patient was too much overlooked, and in some cases he was disposed to make it a very large negative one. He disputed the theory of obstruction, and referred to the well-known facts against it. Obstruction did not explain the nature of the suffering, and where obstruction undoubtedly existed, the pain was of a different character. From experience he now trusted to dilatation by bougie, he had the greatest faith in it, but not because it removed obstruction. He remembered Dr. Mackintosh's first case, where the patient had never menstruated, and in whom therefore there was no discharge to be obstructed; there were many elements in this complicated condition, and men who were keen for operation too frequently overlooked the constitutional element.—Dr. BYRNS said he had listened with the greatest pleasure to the admirable, concise, and full address of Dr. Croom, but after hearing this and Dr. Barnes's and Professor Stephenson's addresses, he was convinced those present, seeing how much leaders of the profession differed, would feel that the causes of dysmenorrhœa were numerous. His experience was that in a case of dysmenorrhœa associated with sterility, and with absence of any disease in the uterine annexæ, dilatation was a method which would in the majority of cases cure, or at any rate relieve, the dysmenorrhœa. In a few cases also with sterility, the dilatation would be followed by pregnancy. In cases where this line of treatment failed he curetted the uterus, but he would insist in all such cases in the most careful use of antiseptic precautions. He agreed very thoroughly with Dr. Croom, that the causes of sterility were very numerous, and that in every case the most careful examination of both constitutional and local conditions was necessary.—Dr. AUST LAWRENCE considered the most important point to be that women should not be treated for sterility *per se*, if nothing local could be found it was not advisable to do anything. He related two cases; in the first case an operation was performed for laceration of cervix uteri, with the result that only a penhole was left. There had been no dysmenorrhœa before this operation, and six children had been born; since the operation dysmenorrhœa and sterility had existed. In the second case the woman was sterile for fourteen years, with dysmenorrhœa and a discharge at end of every two weeks. The cause appeared to be acute ante flexion; this was treated with a stem pessary, the dysmenorrhœa was cured and pregnancy ensued.—Dr. BRAITHWAITE observed that a stranger listening to the discussion would be somewhat confused as to the best course of treatment in any case which might come before him. This arose from the fact that dysmenorrhœa was only a symptom, and might

be produced by many different causes. Each case required separate and careful consideration. The usual cause of dysmenorrhœa was undoubtedly spasm at the os internum (case related showing the spasm intermittent, sometimes absent). The best way of treating this variety was over-dilatation, for, unless it was well and thoroughly done, it returned. Dysmenorrhœa from flexions required treatment of the flexion; that from tubal or ovarian disease might require oophorectomy, or what was known as Tait's operation; that from constitutional, and especially from nerve causes, required general treatment.—Dr. WALTER (Manchester) considered that the most common cause of obstructive dysmenorrhœa and sterility was stenosis of the cervix, either of the entire canal or of the internal or external os. Before giving a prognosis in such cases, especially with regard to overcoming the sterility, he recommended care to be taken in ascertaining whether the stenosis existed alone, or whether any ill results such as endometritis, metritis, or general enlargement of the body or fundus uteri were superadded. When any marked disease was discovered above the inner os, he did not feel justified in giving so favourable a prognosis. As regarded the treatment of stenosis, he advocated greater care in the antiseptic precautions adopted, and especially to the advisability of inserting into the uterus a bougie or suppository of iodoform, unless a solution of corrosive sublimate was thoroughly applied to the parts after the dilatation.—Dr. W. L. REID believed very strongly in obstructive dysmenorrhœa, but not at all so strongly in obstructive sterility. Treatment of obstructive dysmenorrhœa often so altered the condition of the uterus in important respects, that sterility was thereby cured.—Dr. HEYWOOD SMITH, while agreeing with Dr. Halliday Croom as to inflammation of the endometrium being a factor in some cases of dysmenorrhœa, yet joined issue with him as regarded the actual existence of dysmenorrhœa due to definite obstruction. He thought that the pain of dysmenorrhœa was the great guide to the diagnosis, as there was a distinct pain arising from ovarian trouble, and the pain which we called uterine dysmenorrhœa was due to the effort "pains" made by the uterus to expel the accumulating fluid of the menstrual flow. With regard to what Dr. H. Croom said about an undeveloped uterus, there was no doubt but that such a uterus would have an undeveloped vascular system, and so there would not necessarily arise any pain from disproportion between a uterus and its vessels. There was no doubt that in his (Dr. Smith's) experience there was such a thing as obstructive dysmenorrhœa, and also that he had seen much good by proper incision when combined with dilatation. He was greatly against the use of scissors for the purpose of incision, as by their means the injury was often produced that Emmet's operation was devised to obviate. The method he pursued and recommended was to draw down the uterus, pass graduated sounds up to Nos. 9 or 11, then pass a blunt-pointed bistoury or Sims's knife, and divide slightly the whole cervical canal from the inner os downwards; then the canal was to be dilated with some dilator, and the best he knew of was Sims's; and here he would give a warning against using any screw appliance, the dilator should be used with the hand alone, as then they were able to feel the amount of tearing of the fibres that went on, and there was less risk of injuring the uterus. After this operation it was only necessary to pass a warm sound of about size 13 or 15 once or twice after a day or two's interval. Of course, in this discussion they were considering not only the dysmenorrhœa, but the sterility. Now in the ordinary position of the uterus the os tince acted by imbibing the semen, which in the supine position gravitated towards the posterior *cul-de-sac*. If the shape of the os uteri was much interfered with this process of imbibition was interfered with. In cases of retroflexion the position of the os uteri with regard to this posterior *cul-de-sac* (or pond) was but little altered, but in cases of ante flexion the os uteri was lifted out of this pond. Mere dilatation of the uterine canal by sounds or bougies only was comparatively ineffective, as the uterus invariably returned to its abnormal construction, but the proper combination of slight incision and dilatation was in his (Dr. Smith's) opinion the best for their patients.—Dr. AMAND ROUTH thought obstructive dysmenorrhœa rare, and that it was advisable when true obstruction did exist to try to divide cases into (1) congenital contraction, (2) secondary (congestive or inflammatory). The congenital forms were especially important, as, according to Emmet, 73 per cent. of these cases were sterile when married. Of the inflammatory causes of obstructive sterility, Dr. Routh believed that gonorrhœa, arising from a neglected gleet in the male, remaining perhaps for years without symptoms in the female (so-called latent), was the most

serious, producing both occlusion of the Fallopian tubes and an intractable endometritis. As regarded contractions of the uterine canal, which were rarely productive of dysmenorrhœa, he did not believe that dilatation alone would permanently cure. Dilatation, with subsequent introduction of a stem over a few periods, would permanently cure true stenosis. Many of the cases of so-called obstructive dysmenorrhœa were really caused by congestion of the endometrium, and these would, of course, require quite a different treatment.—The PRESIDENT (Dr. MORRIS MADDEN) congratulated the Section on the discussion on Dr. Halliday Croom's valuable paper. That discussion, however, forcibly exemplified the first aphorism of Hippocrates—namely, "Experience is fallacious and judgment is difficult," inasmuch as this discussion had turned mainly on the obstructive or non-obstructive general origin of dysmenorrhœa and sterility. On this point more than a dozen gentlemen of great eminence and experience in this special branch of practice had just spoken, and no two of these gentlemen had been of the same opinion with regard to the relative frequency of the different factors in the causation of the morbid conditions under discussion. These causes had been sufficiently discussed, and therefore he would not again refer to them further than to say that the result of his experience, and it was not a limited one, was that obstruction was by far the most frequent of all the causes both of dysmenorrhœa and of the sterility so commonly associated therewith. And, secondly, whether that obstruction was due to a displacement or flexion, or merely to stenosis of the cervical canal, in either case the removal of the resulting sterility or dysmenorrhœa could only be obtained by recognition and effectual curative treatment of the obstruction; in the former case by the rectification of the displacement, and in the latter case by dilatation or incision of the stenosed cervical canal.—Dr. CROOM briefly replied.

INSTRUMENT FOR THE RAPID DILATATION OF THE CERVIX UTERI.

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It is generally conceded that where dilatation of the canal of the cervix uteri is necessary, rapid dilatation is the most satisfactory proceeding. Bladed dilators are either too large for introduction in cases of stenosis, or, when opened, too weak to be effective. Ordinary conical dilators are extremely painful in the application.

To dilate an organic structure thoroughly, it is necessary to rupture the tissues, and the question is, how this may be most safely accomplished. The conical screws shown are graduated from a point which is small enough to pass in any ordinary case of stenosis up to one which, on its withdrawal, permits of the finger being freely inserted into the uterine cavity. The threads are sufficiently blunt to prevent their cutting the tissues, yet prominent enough to make the tissues act as a female screw, and so draw the uterus down over the instrument, instead of requiring the instrument to be forced into the uterus. As the screw-head dilates equally in every direction, the damage to the parts concerned is reduced to a minimum. There is no fear of injury to the body of the organ, as the screw-heads are only an inch and three-quarters in length. Considerable experience in its use shows that it is comparatively safe and perfectly efficient.