DIAGNOSTIC POINTS IN GYNÆCOLOGY*

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AN apology is almost expected nowadays from the reader of a paper if he deals with a clinical subject from a purely clinical point of view and has not something to give in the way of statistics or of more or less advanced biochemical, bacteriological, or serological studies. I shall make no apology, because I think that it becomes more and more necessary that we should get back from time to time to simple clinical observations and study these in relation to diagnosis and treatment. I have it increasingly impressed upon me that the training of our medical students to-day is erring on the side of teaching them to rely too much on laboratory investigations and too little on clinical observation. Do not for a moment think that I believe the former to be unnecessary—every accurate observation of any kind in relation to a patient is of value and the laboratory observation is likely to be more accurate than the clinical one in the hands of the average man. It is in the interpretation of these observations that error is likely to creep in, and to counteract this tendency, clinical observation and, what I may call "clinical sense" are necessary. We all know the thoroughly scientific physician or surgeon who without this "clinical sense" will investigate in the most thorough way a particular case and yet may miss the essentials of it. We also know that the pure clinician who cannot or will not make use of modern scientific methods will fall into error in many instances. The properly equipped practitioner is he who possesses both "clinical sense" and scientific training. Medicine is becoming more and more an exact science but it will never absolutely attain to it because we are dealing with individuals, each of whom differs in some way from all the rest. However accurate our scientific methods become, the erratic, incalculable, human element will always remain and an understanding of it will always be necessary.

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PAIN

Take for instance the symptom of pain. This always requires careful investigation, first as to its real existence, and second, as to its severity, its exact site, and its relation to various functional activities. What may be interpreted as pain by one patient may be regarded as only slight discomfort by another. When this is the only symptom complained of, we must be very sure before we undertake any operative treatment for its relief that what we propose to do is likely to relieve it. In a very large number of gynæcological and lower abdominal lesions, backache and pain over the brim of the pelvis on one or both sides are present, but these symptoms may exist without any palpable anatomical abnormality in the pelvic organs. Therefore, when we do discover some definite anatomical or pathological lesion, such as a retroverted uterus, we must not at once jump to the conclusion that by the correction of this we are necessarily going to afford complete relief. We are happily getting away from the idea that pain low down in one or on both sides of the abdomen is probably ovarian, that right-sided pain and tenderness are invariably indicative of appendicitis, and that in a woman with backache and a retroverted uterus the latter is necessarily the cause of the former.

A constant or nearly constant dull ache in the lower abdomen or back is often indicative of some lack of support of an organ or structure—a dragging on its mesentery or vascular attachment. The ptosis which so results often leads also to passive congestion. The two together may give rise to considerable pain and aching. The characteristic of such pain is that it is aggravated by long standing or by fatigue and is relieved by lying down, or by supporting the abdominal walls with the hand or with a properly applied belt or corset. Such pain may be due to a movable kidney, a prolapsed atonic cæcum, a retroflexed prolapsed uterus, or a prolapsed ovary. Each of these conditions may exist alone, but quite frequently two or more are present in the same patient. I have been struck with the frequency of atonic prolapsed cæcum in cases of uterine prolapse. I believe this is a condition which ought to be looked for in every such case and remedied when present. In many of those cases the lower end of the cæcum is so low and so distended as to be easily felt between the hands on vagino-abdominal examination, giving a peculiar gurgling sensation on bimanual palpation.

The same sort of symptoms may be present, without any actual displacement of organs, as the result of a varicose condition of the pampiniform plexus, with a consequent impairment of the venous return. This condition, as in the male, is commoner on the left than on the right side. When asked to describe the pain the patient assumes a characteristic attitude, bending over towards the affected side and placing her hand on the lower abdomen to support it. Bimanual examination may reveal an indefinite soft fullness in the upper part of the broad ligament, and in some cases the distended veins may be felt. This condition, as I say, may exist alone or it may be associated with the other conditions mentioned. It is something which ought always to be looked for, not only before but after the abdomen has been opened. It is often missed owing to the veins emptying themselves when the patient is in the Trendelenburg position.

Now a large number of parous women have permanently relaxed abdominal walls with a certain degree of ptosis of all the abdominal and pelvic organs. As a result they suffer from this type of chronic ache. They are relieved by properly directed exercises and by the use of a supporting corset or belt. In cases where operative treatment of prolapsed pelvic organs has been perfectly carried out the ache may remain if the abdominal wall is neglected in the post-operative period. It should be a rule to examine all such cases in the erect position, when the sag of the wall is easily demonstrated.

The other great cause of dull aching pain in the lower abdomen is chronic inflammation, with its resultant fibrous overgrowth and condensation of tissue. Here it would be well to interject a protest against the diagnosis of ovaritis in so many cases of pain low down over the brim of the pelvis. How often is a patient put off with this diagnosis and various office "treatments" applied, or the ovary sacrificed at operation. It is time that we all realized that the ovary is not subject to inflammation except when infection has extended to it from contiguous structures, notably the tube

and the appendix. We are not justified in making a diagnosis of ovaritis unless we get a definite history of trouble in these structures and find on examination tender, thickened, and fixed organs. In many cases where a diagnosis of ovaritis has been made and the ovary removed there has been relief from the pain, but the same end could have been attained and the ovary saved had the organ been suspended when prolapsed, or had the offending veins in the broad ligament been ligated and excised, in cases of varicocele. Ovaritis is always accompanied by salpingitis or appendicitis and the condition in tube or appendix is the primary one.

In chronic inflammation of the female pelvic organs the pain is usually aggravated for a day or two before the menstrual periods and relieved after the flow is well established. The point of tenderness on palpation is low down over the brim of the pelvis, below McBurney's point, and there is always thickening, fixation and tenderness to be detected on bimanual examination. The detection of such thickening and tenderness on the right side does not exclude a diagnosis of appendicitis, for a pelvic appendix may lead to a pelvic inflammation, and one frequently finds the appendix adherent to a tubo-ovarian inflammatory mass, but in the vast majority of cases a definite thickening felt on the right side of the uterus on vagino-abdominal examination means a tubal rather than an appendiceal condition.

The so-called "cystic ovary" in itself seldom gives rise to definite symptoms; the condition of chronic inflammation and thickening of the capsule which, in some cases, leads to the cyst formation may cause pain. The chocolate cyst of the ovary is an exception however. This we now know, thanks to the work of Sampson, is due to the growth in the ovary of endometrial tissue which menstruates. Such a cystic ovary is invariably adherent to surrounding structures. It causes constant pain, aggravated in the premenstrual and menstrual period. A history of such pain occurring in a woman who has not hitherto suffered in this way, and in whom an infection from below can be excluded, together with the detection of a tender, large and fixed ovary, is practically diagnostic of this condition. In such cases removal is the only means of relief.

A very common cause of pain low down over the brim of the pelvis is a lacerated, catarrhal cervix. It has been my teaching to students for many years that when a parous woman comes complaining of such pain we must at once think of the possibility of this condition and have it constantly in mind in the investigation of the case. Cervical catarrh in the virgin may cause the same symptom. We are too apt to regard leucorrhœa and perhaps menorrhagia as the only symptom of cervical catarrh. In my experience, pain low down, especially on the left side over the pelvic brim, is just as common. Such patients are usually in poor health; they are anæmic and flabby, easily tired and nervous. The pain is more marked in those cases where the laceration extends to the vaginal fornix and there is scar tissue at the bases of the broad ligaments. A properly executed repair or amputation gives relief. It must, however, be borne in mind that along with this condition of long standing cervical catarrh there is often a chronic metritis or fibrosis of the uterine body. This will be indicated by severe and intractable menorrhagia and the presence of a large, hard, heavy, often tender, uterus. In such cases complete hysterectomy gives the most certain relief. Radium or x-ray therapy will stop the hæmorrhage, but not always, in my experience, the chronic ache and general ill health from which these patients suffer.

I need only refer to the necessity in all cases of abdominal pain of excluding cystitis and especially pyelitis and ureteritis. These are conditions which are commoner in the female than in the male, especially in those recently confined. Very often a pyelo-ureteritis is present without cystitis and there are no bladder symptoms. These are the cases which are apt to be missed. Palpation of the kidney, examination of a catheter specimen of urine, and catheterization of the ureters will settle the diagnosis.

There remain a number of cases in which more or less constant pain in the lower abdomen is present, and in which we can find no definite evidence of the existence of any of the previously mentioned conditions. Yet these patients may suffer quite as much as those having lesions such as we have described. What then is the explanation? Is it not simply this? that in such individuals the spinal centres for the pelvic organs are in a state of hyperexcitability so

that the normal stimuli reaching them from these organs produce exaggerated effects. The stimuli overflow to the sensory and motor cells in the neighbourhood, which also become hyperactive, so that pain, tenderness, and muscular contraction are reflexly induced in the area supplied by these nerves. The hyperexcitability of these spinal centres is usually but a part of a more general affection of the nervous system, and this is, in turn, but a part of a general want of adjustment throughout the other systems of the body. There is something fundamentally wrong in the actions and interactions of the various organs. In many there are distinct stigmata of arrested development or maldevelopment and, undoubtedly, in many these and other defects in structure and function are due to a disturbance of the endocrine system. Such cases require careful and prolonged study, for we are still very much in the dark as to how to determine the particular gland or glands which may be at fault, and how to correct that fault by the means at our disposal.

In such cases it is obvious that local treatment is useless and that surgery has no place; and let me say here that gynæcologists are by no means the worst offenders in failing to recognize this. How often have we seen such patients started on their downward career of yearly or half-yearly abdominal operations by the general surgeon, who labelled the case chronic appendicitis and removed the appendix, nearly always with relief from symptoms for, at any rate, the duration of the patient's stay in bed. With a recurrence of pain the case is labelled "adhesions" and the abdomen again opened. The pain again recurs and the right ovary is removed, and then the left, and so it goes on until the abdominal wall looks like a gridiron. The patient is usually worse at the end of her operative career than at the beginning and is certainly poorer. The man who starts a patient on such a program is taking a great responsibility on his shoulders. It takes strong conviction to advise the patient against that first operation, for she is ready to fall in with any suggestion which holds out the slightest hope of relief.

ACUTE CONDITIONS

Coming to acute conditions in which pain is a prominent symptom the chief are, in order of frequency: salpingitis, ectopic pregnancy, twisting of the pedicle of an ovarian tumour, hæmorrhage from a ruptured Graafian follicle. All of these are associated with acute pain in the lower abdomen, accompanied by the other symptoms of a severe peritoneal lesion. When they occur on the right side a differential diagnosis must be made between them and acute appendicitis and acute pyelitis. The last condition is one of common occurrence, especially during pregnancy, and ought to be thought of in every case presenting acute pain on the right side, of sudden onset and accompanied by high fever.

It is extremely difficult to state categorically the distinguishing points between salpingitis and appendicitis. In making a differential diagnosis there is no question that what I have called "clinical sense" plays a great part, and it is not easy to put into words just what this is. In salpingitis there is usually a history of infection, gonococcal or septic, and, if no definite history can be obtained, evidence of the former condition may be found in the cervical or urethral discharge when showing the characteristic organisms. There may be little or no difference in the degree of pain the patient complains of, but in the case of appendicitis the face of the patient is more anxious and drawn; she looks more distressed. In salpingitis she may be flushed. The temperature is as a rule higher—up to 102° or 103°, which is rather the exception at the beginning of appendicitis. Leucocytosis is as a rule higher in salpingitis than in appendicitis. Tenderness is lower down in salpingitis, and there is less rigidity of the muscles than in appendicitis. The tenderness and rigidity often extend beyond the midline, and may be as marked on the left as on the right side when the tube or tubes are the seat of infection.

A careful recto-vagino-abdominal examination will practically always reveal characteristic findings in cases of salpingitis—marked tenderness in the fornix or definite thickening. When these are present on both sides it is strong presumptive evidence of tubal rather than appendiceal infection. When these are associated with the finding of gonococci in the urethral or cervical smears the diagnosis is clinched.

Tubal pregnancy usually presents such a typical clinical picture as to be easily diagnosed —a period of amenorrhœa followed by slight

irregular vaginal bleeding, accompanied by cramp-like abdominal pain, terminating at the time of rupture in sudden severe pain, nausea, faintness, and collapse, and other symptoms of shock. On examination a tender mass is felt to one side of the uterus. There are, however, atypical cases where, for instance, the irregular bleeding begins before the patient has missed a period and where the sudden severe pain is not preceded by lesser cramps. These are cases of early rupture usually in the isthmic portion of the tube. So small is the swelling that nothing definite can be felt on bimanual examination, and the diagnosis must be made simply on the evidence of shock and internal hæmorrhage. This evidence may not include areas of dullness in the flanks or over the pubes. These usual signs of free fluid in the abdomen may be entirely absent even when the peritoneal cavity is full of blood. The blood remains among the coils of intestine and often does not gravitate to the flanks as ascitic fluid does. Slight vaginal bleeding is one of the important things in the history of a case of tubal pregnancy, and in my experience is nearly always present. Such bleeding may also occur in inflammatory conditions of the tubes and ovaries, and, as there is a history of pain and a mass can be felt on examination, differential diagnosis may be difficult. A leucocyte count and observation of the temperature may help, but not always, as some rise of temperature and a polymorphonuclear leucocytosis may be present in cases of tubal pregnancy.

Mistakes occasionally occur in the differential diagnosis of intra- and extra-uterine pregnancy. It must be remembered that in the early months of pregnancy the uterus sometimes contracts irregularly, one half being contracted and the other relaxed, giving the impression on bimanual examination that there are two swellings in the pelvis. We have met this difficulty several times. A second examination after a short interval, or next day, reveals the true state of affairs, for then we usually find the uterus either contracted or relaxed uniformly.

Along with ectopic pregnancy one should mention those very rare cases of extensive hæmorrhage from a ruptured Graafian follicle. In such cases a positive diagnosis is hardly possible until the condition has been actually seen at operation which is undertaken simply on the indication of an acute intraperitoneal lesion.

Torsion of the pedicle of an ovarian cyst usually presents no difficulty in diagnosis. Many of the cases are missed and only diagnosed after the abdomen is opened because a rectal or vaginal examination has been neglected in the course of examining the patient. Very often the tumour is not of such a size as to reach into the abdomen, and can only be detected by such an examination. We have noted that in two cases the torsion was accompanied by a slight vaginal bleeding, as in the case of ectopic gestation, but this is not the rule.

BACKACHE

The interpretation of the symptom of pain in the back in women may be quite difficult. Backache is so common in association with such conditions as retroflexion of the uterus, prolapse, pelvic cellulitis, chronic metritis, etc., that we who practise gynæcology are apt to forget that it may be due to other causes, and are surprised to find it persist after the supposed causal conditions have been corrected. As in the case of lower abdominal pain, a relaxed abdominal wall and visceroptosis are among the commonest causes, and are usually overlooked. Postural defects play a part. In the case of parous women overstrain of the sacro-iliac joints on one or on both sides is not infrequent, or the lumbo-sacral articulation may be the one at fault. Every case of backache ought to be investigated with these things in mind.

HÆMORRHAGE

Taking up now the symptom of bleeding I intend to mention only a few conditions in which after careful inquiry into its nature, time of occurrence, and character, it may be interpreted as being due to certain definite conditions. In teaching students the groundwork and elementary part of a subject I believe in being dogmatic, leaving to a later stage of their course the discussion of exceptions to the general rules laid down. I believe that in this way we give them a point from which to start in their investigation of cases, and an idea of the lines their interrogation of a patient ought to follow. They are encouraged to build up a clinical picture. When the different parts do not blend to form the picture of which they thought at

first they must try to blend them to form another, always remembering that along with symptoms must go physical signs and other diagnostic aids. In this way a certain train of symptoms calls up in their minds the possibility of certain conditions and the case is investigated with these in mind, but not to the exclusion of other possibilities which may emerge as the investigation proceeds. Every clinician, consciously or unconsciously, practises this method. Thus, when we say that menorrhagia in young girls is almost invariably due to an endocrine maladjustment and not to a pathological lesion of the uterus, we are making a broad generalization which will ensure that this aspect of the case will receive the consideration that is its due, and that we shall not at once plunge into surgical procedures, such as curettage which, in the vast majority of instances, will do more harm than good. When we say that constant or irregular bleeding in a woman in the twenties or early thirties is more likely to be due to pregnancy than to a fibroid tumour it ensures a consideration of the case from this point of view and may save some from a disastrous laparotomy. When we teach that in early pregnancy a patient with profuse hæmorrhage and slight pain is almost certainly aborting, while one with slight bleeding and intense pain may have an ectopic gestation we may expect that a careful physical examination of every case presenting these two symptoms will be made with these possibilities in mind. When it is stated that prolonged bleeding in the puerperium is probably due to a retroflexed uterus there is reasonable hope that the student will make a pelvic examination instead of continuing to dose his patient with ergot and pituitary extract. In many instances he will find the retroflexion, correct it, insert a pessary, remove it at the end of six weeks and effect a complete cure. If he interprets the symptom as due to retained membranes, or simple sub-involution, and has not the other probability in mind, no examination may be made; the retroflexion is unrecognized and remains permanent. If he is taught that a fibroid tumour causes menorrhagia and not metrorrhagia he will investigate very carefully every case presenting the latter symptom, having in mind the possibility of there being an accompanying carcinoma of body or cervix, or sarcomatous change in the tumour itself—all conditions which profoundly influence the operative procedure to be adopted.

It has to be emphasized that irregular bleeding from the vagina under all circumstances must suggest the possibility of malignant disease. All of the cases of cancer of the cervix in pregnancy which I have seen have been overlooked for weeks or months because of this failure to realize that, although the patient has a certain evident condition, *viz.*, pregnancy, which may cause bleeding, other conditions may be present as well which may be responsible for the symptom.

We are frequently consulted by women at the menopause who are suffering from excessive and irregular bleeding. The question that has to be settled in such individuals is whether that bleeding is menstrual in origin, or whether it may be a symptom of new growth, and especially of a cancer of the cervix or body of the uterus. Every patient presenting herself with these symptoms should have a most careful and complete pelvic and general physical examination. This is sufficient to exclude gross cancer of the vagina and the portio vaginalis of the cervix. It tells us nothing of the upper reaches of the cervical canal or of the endometrium. Information regarding these can be got only by a dilatation of the cervix and curettage of the uterus followed by histological examination of the tissue removed.

Under what circumstances is it our duty to recommend and urge this? In what instances may it safely be dispensed with? It is necessary to formulate some sort of answer, otherwise we should on the one hand miss some early cases of cancer or, on the other, subject a very large number of women to needless operation. In general terms it may be stated that if the bleeding is periodic, lasts only a certain definite number of days and then stops, is preceded and accompanied by the feelings the patient has learned to associate with menstruation, then, no matter how excessive it may be, it is menstrual in character. Such excessive bleeding is not caused by carcinoma of the endometrium. It may be caused by a fibroid tumour, by a fibrous polyp, by fibrosis uteri, or by a cystic glandular hyperplasia. In these cases the amount of blood loss and its effect upon the patient will be the determining factor

for or against diagnostic curettage and further surgical or radiological treatment.

Again, if a woman has apparently had the menopause established after a period of irregularity, and then, four, six, or eight months later, again has vaginal bleeding a careful pelvic examination must be made. If such examination reveals nothing abnormal in cervix or vagina we are justified in waiting a short time before urging a curettage. If the bleeding stops in a few days and there is no recurrence we can conclude that it is a belated menstruation. On the other hand if it continues for over a week, or stops in a few days and then recurs, no matter how slightly, diagnostic curettage ought to be urged.

If uterine bleeding of any character occurs more than a year after the menopause and nothing can be found on ordinary pelvic examination to account for it we fail in our duty to our patient if we do not advise exploration of the uterus. In this connection let me urge that even when an apparent explanation for the bleeding is found, such as a small cervical mucous polypus, it be not concluded that that is the only cause of the bleeding. I have seen in consultation two patients who had such polypi removed by their doctors in their offices, who continued to bleed, and who both turned out to have carcinoma of the endometrium. I make it a rule to remove such polyps with the patient under a general anæsthetic and at the same time to do a curettage and examine microscopically the tissue removed. If we remember the simple fact that cancer of the uterine endometrium or of the cervix bleeds because it ulcerates and that, therefore, the bleeding is independent of, and unrelated to, menstruation, we shall be in less hesitancy as to the type of case in which exploration of the uterus is obligatory. In a case of advanced fibrosis of the uterus, with actively functioning ovaries, there is practically continuous bleeding, because the blood vessels of the endometrium opened up as the result of one menstrual stimulus have not closed before the next stimulus arrives. In such a case a diagnostic curettage is the only means of distinguishing it from carcinoma or other uterine lesion.

A fibrous polypus projecting from the cervix and ulcerating, causes intermittent or continuous bleeding and such polypi are most often found in women at or after the menopause. The atrophy of the uterus in the post-menopausal period is a factor in extruding such tumours from the uterine wall and out through the cervical canal. It is interesting to note that very often such tumours are found in women who have had several children—the type of patient in whom one least expects to find the ordinary fibroid during active sexual life.

The only other bleeding condition to be mentioned now is senile endometritis, a condition occurring some years after the menopause in a uterus which has undergone extreme atrophy and in which, as a rule, the cervical canal is occluded by plastic adhesions. This occlusion of the cervix is not permanent or complete, for it apparently allows access to the uterine cavity of organisms of decomposition which acting on the necrosing lining of the uterus produce an extremely fetid discharge. This may escape into the vagina from time to time. In nearly all cases it is blood-stained as result of deep ulceration into the uterine wall. The occurrence of such fetid blood-stained discharge in a woman past the menopause of course at once conjures up the picture of cancer. It is only on diagnostic curettage that that diagnosis can be excluded.

BLADDER SYMPTOMS

I am going to touch on just one more set of symptoms, *viz.*, those referable to the bladder. Frequency and pain on urination are far commoner in the female than in the male because of the higher incidence of cystitis due to *B. coli* infection. But what I want to refer to more particularly are mechanical disturbances taking the form of incontinence of urine and retention.

Urinary incontinence is a very frequent condition in parous women. It is present in at least 80 per cent of cases of cystocele, and may be quite marked in women without gross prolapse of the bladder. The least strain, such as lifting a weight, making a sudden movement, stepping up or getting down from a street car, coughing or laughing, may result in the uncontrolled escape of a few drops or of quite a stream of urine. The same lack of control is occasionally found in nulliparous women, but it

is much rarer in them than in those who have borne children. In my experience this lack of control is due to a defect not in the sphincter itself but in its fascial attachment to the back of the pubes. As the result of labour this fascial support has given way and the neck of the bladder sags away from its proper attachment. The rest of the bladder may or may not be prolapsed in the form of a cystocele. The sphincter has lost its "point d'appui" and so fails to act efficiently. According to this interpretation the treatment of these cases should be by restoring this fascial support and most gratifying results are obtained by the repair of the pubo-cervical layer of fascia, paying particular attention to that part which supports the neck of the bladder.

Retention of urine may be hysterical, but is usually due to a mechanical cause. As a rule there must be more than direct pressure on the urethra or neck of the bladder. There must be a lifting up of the bladder and an elongation and kinking of the urethra in addition. The most common cause is undoubtedly a retroflexed gravid uterus and in such the symptoms are usually so definite and clear cut as to be diagnostic: a period of three or three and a half months' amenorrhœa, a history of gradually increasing bladder irritability, followed by a complete inability to void and, perhaps, later on an overflow incontinence. The next most common cause is a cervical fibroid. Here again there is a history of bladder irritability and frequency of urination, usually most marked at or before the menstrual periods, one or two minor attacks of temporary inability to void at the periods, followed by complete retention which has to be relieved by catheter. The patient is usually in the late thirties, and she is often nulliparous; there is usually no history of menorrhagia or other menstrual symptom.

In contrast to the relative frequency with which a mechanical obstruction of the bladder may occur is the infrequency of rectal obstruction. It has somehow come to be generally believed that a retroflexed uterus mechanically causes constipation. I have never yet seen an ordinary retroflexion which could possibly do so. Even in those cases of impacted retroflexion in gravidæ just referred to, with absolute retention of urine, I have never seen rectal obstruction. Nor have I seen it in cases of fibroid tumours filling the pelvis. True, a great many of these women are constipated, but not more so than an equal number of women with none of these conditions present. When the pelvis becomes choked bladder obstruction and not rectal obstruction is the rule. Rectal obstruction nearly always implies an infiltrating growth, such as cancer.