

biturates," has been a great boon to medicine. I refer, of course, to veronal, medinal, luminal, dial, allonal, and nembital. Not that this exhausts the list: the ingenuity of the chemist and the pharmacist sees to it that the list shall be endless. The British patient, just back from the Black Forest or from Lausanne, proudly takes a carton of the latest isomer of veronal out of her pocket or vanity bag and says: "You will not have seen this new drug, doctor." And she is quite frequently correct. It is claimed for the new preparation that it has all the virtues and none of the drawbacks of the old, and so it may be taken with advantage and with impunity. It seems a pity to dash these hopes in the patient's mind, and, to tell truth, we British are too good doctors to yield to the temptation.

The chief reasons that the barbiturates mark an advance in our available narcotics is that the dosage is more exact and the effects more constant. The number of patients possessing intolerance is very small, and I think the ill effects which have been adduced against their use have been exaggerated.

May I now deal with a few general considerations? In the first place we should remember that there is no ideal hypnotic. To get a constantly reliable effect without passing through a preliminary stage of excitement, to get no gastric irritation or cardiac depression, to get rapid assimilation and equally rapid and complete excretion, and, finally, to get no tolerance established—to get all these things in any drug is impossible. But certain of the barbiturates seem to attain more nearly to this ideal than any other narcotics known to us.

It is not the drug but the drug habit that calls for condemnation. Stimulants and sedatives provide a means of relative or entire escape from the troubles of life, and in this respect narcotics do not differ from alcohol, cocaine, tobacco, and tea. Sleep is one of the safest and pleasantest forms of escaping life. Some folk are able to form this habit of escape without drugs; they are quite as vicious as their less fortunate brothers and sisters who need a drug in order to achieve this blessed oblivion.

I suggest that we pay more attention to the state of the patient's mind and nervous system and less attention to the mere provision of sleep. If we can help him to a state of equanimity during the day, sleep will be more easily won during the night. This leads me to refer to the fact that if half the evening dose of a narcotic be given in the morning and the other half at bedtime the effect is frequently much better. Even such a small dose of medinal as 2 to 2½ grains, say, with 5 grains of bromide, given at (say) eleven in the morning and again on retiring, may be more helpful than if the whole dose be given at bedtime. For one thing the patient is not strung up for the moment of doubt and fear that faces him when the night comes, itself a deterrent against sleep. Again, he does not regard the medicine as a dope of which he is afraid or ashamed, or both—more deterrents.

In other matters it is the day that counts. Patients not infrequently resist a tendency to sleep during the day, lest giving way should prejudice their chances of sleep during the night. I think this is an error. Sleep is a habit—protective no doubt—and I have sometimes found patients sleep better at night if they encourage a doze midday.

Finally, let us remember the efficacy of the sleeping draught (in these days I suppose I should say the sleeping tablet) that is not taken, but stands by the bedside "in case." We must not deny the patient this boon; indeed, we may now insist upon it, for the fear of the dope has with many become greater than the fear of sleeplessness, and we must avail ourselves in the patient's interest of this new fear while it lasts.

OVARIAN CONDITIONS AS CAUSES OF PELVIC PAIN*

BY

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I welcome the opportunity of being one of the openers of a discussion on ovarian conditions as causes of pelvic pain because the subject is of interest to general practitioner and gynaecologist alike, and both will probably agree that so-called ovarian pain is one of the bugbears of medical practice. The word "bugbear" means "something frightful, as a spectre, or anything imaginary which arouses needless fear," and can only be rightly applied to pain that is supposed to, but does not actually, arise in the ovary. The object of our discussion to-day is to decide what conditions of the ovary do produce pain, or, conversely, how much of the so-called "ovarian" pain is really of ovarian origin.

Before attacking the main problem I would like to recall a few facts concerning the anatomy and physiology of the ovary. Although lying within the abdomen the ovary is not covered by peritoneum, but by a layer of cells, often imperfectly preserved, known as the germinal epithelium. This arrangement no doubt facilitates ovulation. T. C. Clare¹ has pointed out that the ovary is also unique in a physiological sense in that it is the only organ in the body normally subject to trauma and consequent reparatory changes. The trauma consists of the surface wound occurring at the time of rupture of the follicle; the reparatory process is the formation of the small scar by which the lesion is repaired. These two factors, together with a third—the periodic increase of tension within the ovary associated with ripening of the follicle and formation of the corpus luteum—have all to be considered in connexion with the subject of ovarian pain. The presence of follicular cysts in an ovary which is not adherent may be regarded as evidence of disordered function due to overactivity of the anterior pituitary, or, as suggested by Clare, increased formation of fibrous tissue (keloid) in the scars of the ruptured follicles, it being well known that there are wide variations in the regenerative capacity of different individuals.

The ovary is attached to the back of the broad ligament by its hilum, and as both uterus and broad ligament have considerable mobility the position of the ovary must be constantly changing.

The ovarian blood supply comes from both ovarian and uterine arteries, and the venous return is through the pampiniform plexus to the uterine and ovarian veins. On the left side the venous return is said to be somewhat hindered by the fact that the ovarian opens into the renal vein and not directly into the vena cava, but it must be remembered that the pampiniform plexus also drains through the uterine into the internal iliac veins.

The nerve supply is from the aortic plexus of the autonomic system, and reaches the ovary by way of the infundibulo-pelvic ligament and hilum. The surface of the ovary appears to be insensitive to mechanical stimuli, but firm pressure produces, as in the case of the testis, a sickening pain. True ovarian pain is splanchnic, and apparently of a low order; reflected superficial pain of ovarian origin only occurs when the parietal peritoneum is irritated by the ovary.

To simplify the discussion I have divided the ovarian conditions which may produce pelvic pain into four groups, under the headings functional, mechanical, inflam-

* Read in opening a discussion in the Section of Obstetrics and Gynaecology at the Annual Meeting of the British Medical Association, Bournemouth, 1934.

matory, and neoplastic, but as they cover such a wide field and the space at my disposal is limited I propose to devote the greater part of this paper to a consideration of the functional group.

Functional Disturbances

In this group we have to consider those cases in which so-called "ovarian" pain is complained of although no definite pathological lesion can be demonstrated in the ovary.

Exactly thirty years ago, at the Annual Meeting of the British Medical Association at Oxford, the problem of so-called "ovarian" pain was discussed, and the discussion was dominated by the wise scepticism of the late Dr. Herman. You may possibly agree that a similar attitude of mind is right and proper to-day when assessing the value of certain new surgical procedures introduced for the relief of this troublesome symptom.

We have first to consider whether pelvic pain can be produced by follicle and corpus luteum formation, or by ovulation. As regards actual ovulation, it is quite possible that a certain amount of peritoneal pain may occur if blood escapes in quantity from the ruptured follicle.

Visceral pain is produced by tension within the organ affected, and it might be expected that the periodic distension which the ovary has to undergo during reproductive life would as regularly produce pain of that type. Nature, however, has saved womanhood from this misfortune by making the ovary practically insensitive to gradually increasing tension, and therefore it can be said that the follicular cycle is painless, or at the most attended with but slight pelvic discomfort in normal individuals. We must remember, however, that although the uterine contractions during menstruation are also practically painless, they are in some women quite otherwise, and produce the well-known "spasmodic" type of dysmenorrhoea. May not the process of follicle ripening behave similarly and produce ovarian dysmenorrhoea? In both uterine and ovarian cases we may (a) deny that the pain exists, as may be the case in certain hysterical subjects, (b) assume that the threshold for pain has been so lowered, as in neurasthenia, that the normal discomfort becomes a severe pain, or (c) attribute the pain to local disease.

In the case of the ovary the two local conditions which are said to produce pain are cirrhosis and sclero-cystic disease, but Herman² would have none of them, and in opening the discussion already referred to said:

"It is stated that cirrhosis is the final stage of sclero-cystic disease, but those who say it have adduced no evidence that this is so. Sclero-cystic disease is often present without pain. I find no criteria by which a sclero-cystic ovary which caused pain can be distinguished from one that did not. I find no criteria by which cirrhosis of the ovary can be distinguished from the natural shrinking due to age which is not painful nor by which a shrunken ovary which caused pain can be distinguished from one that did not."

And he concluded with these words:

"In brief, I know of no morbid change in a freely movable ovary that causes chronic pain. The so-called 'chronic ovarian pain' is either a reflected pain due to neurasthenia or is a manifestation of hysteria. It is not curable either by surgical treatment of the ovaries or by their removal."

Lhermitte and Dupont,³ on the other hand, are convinced that ovarian dysmenorrhoea exists, and give as its criteria premenstrual pain located in one or other side of the abdomen and radiating to the inner side of the corresponding thigh, with distant manifestations such as gastric disturbances and headaches. They have found the ovaries to be sclero-cystic in patients complaining of severe ovarian pain, and have been able to demonstrate

to their satisfaction various changes in the sympathetic nerve fibres similar to those found when a nerve is caught in a cicatrix.

I have given you two extreme views, and as usually happens the truth will probably be found to lie somewhere between them. There can be no doubt that a certain number of cystic ovaries do produce pain, but it is equally certain that a much larger number do not.

My own view with regard to these functional cases is that a woman with a lowered threshold for pain may genuinely complain of ovarian pain, and that this is produced by pressure upon the sympathetic nerve endings as a result of congestion, increased formation of scar tissue, or cyst formation.

Treatment of Functional Disturbances

Treatment in the first instance should aim at raising the tone of the patient's nervous system by ensuring physical, mental, and emotional rest. If there is no improvement after a thorough trial of these measures the pros and cons of surgical treatment may have to be considered. Conservative measures, such as puncture of the cysts or resection of portions of the ovaries, have been uniformly unsuccessful, and need not be further discussed. Removal of the ovaries is much too drastic a procedure, at any rate in younger women, and, in any case, the resulting menopausal disturbances will place a further strain on the already weakened nervous system.

During the last ten years operations upon the sympathetic nervous system have come into prominence in surgical literature, and, as was to be expected, have been employed in the treatment of various functional disturbances of the female genital organs. Excision of the so-called "presacral" nerve has been extensively employed in cases of uterine dysmenorrhoea, as well as for a variety of other conditions, but is not applicable to cases in which the pain is definitely ovarian. Cotte, whose work on presacral sympathectomy is so well known, has tried to cure some of these cases by periarterial sympathectomy of the ovarian artery in the infundibulo-pelvic ligament, but with indifferent success.

More recently Lhermitte and Dupont³ have published two series of cases in which they excised the ovarian nerves in the hilum of the ovary, and they claim good results, not only in the relief of ovarian pain, but also of those remote manifestations of disturbed ovarian function. Their results, however, are somewhat vitiated by the fact that in most cases other surgical procedures, such as removal of the appendix and hysteropexy, were carried out at the same time.

The operation, however, appears to be fairly easy, reasonably safe, and not harmful to ovulation, so it may be worth trying in those cases in which surgical intervention is considered necessary.

I have already referred to the possibility that the uncomplicated cystic ovary may be the result of endocrine disturbance, and if this be so it is quite likely that organotherapy, when it becomes a more exact science, will prove to be the best method of treatment for cases belonging to this group.

Mechanical Disturbances

The commonest mechanical disturbance of the ovary is prolapse, generally beneath a retroverted uterus, and as a result the ovary becomes more sensitive from congestion or pressure. In the normal individual discomfort or slight pain may be experienced on coitus or on defaecation, but in one who is neurasthenic the pain may be constant, severe, and debilitating.

Varicocele of the broad ligament is said to be frequently associated with ovarian prolapse, but its presence is

difficult to diagnose and its clinical importance somewhat doubtful.

A more serious occurrence is torsion of the ovarian pedicle, but this rarely occurs unless a cyst is present in the ovary. Sudden pain is the principal symptom, and this is partly due to increased tension within the ovary and partly to irritation of the parietal peritoneum by the damaged cyst wall.

Inflammatory Disturbances

Inflammation of the ovary is of frequent occurrence, and usually follows a salpingitis, the infection reaching the surface of the ovary and causing it to become adherent to neighbouring structures. The disturbance of function resulting from these adhesions may lead to cyst formation in the ovary. Infection may occasionally come by the blood stream, as in severe streptococcal infections or some of the acute fevers.

The inflamed ovary is an undoubted cause of pelvic pain, but as it is always associated with pelvic peritonitis, and in chronic cases with adhesions, it is the irritation of, or dragging on, the sensitive parietal peritoneum which is mainly responsible.

So-called "chronic ovarian pain" is frequently diagnosed as "ovaritis," but needless to say there is no pathological foundation for this diagnosis unless the ovary is adherent. The same criterion should apply in the case of the small cystic ovary, the significance of which has already been discussed.

Neoplasms

As a general rule ovarian tumours are practically painless unless torsion, degeneration, or infection occurs, which shows that the ovary is not sensitive to gradual distension.

Endometrioma, however, is an exception, and does, in the majority of cases, produce severe pelvic pain. These tumours are almost invariably adherent, and the pain is partly due to stretching of the ovary by effused menstrual blood and partly to dragging on the sensitive parietal peritoneum and nerves in the broad ligaments.

REFERENCES

- ¹ Clare, T. C.: "The Keloid Ovary," *British Medical Journal*, 1931, i, 527.
- ² Herman, G. Ernest: "Discussion on the So-called 'Ovarian' Pain: Its Causes and Treatment," *ibid.*, 1904, ii, 1055.
- ³ Lhermitte, J., and Dupont, R.: "De l'Énervation de l'Ovaire," *Gynéc. et Obstét.*, 1927, xv, 161, and 1929, xx, 582.

The annual dinner of the British Serbian Units Branch of the British Legion was held in London at the Lysbeth Hall on September 27th. Lieut.-Colonel A. E. Kidd took the chair, and those present numbered 156, including a large party of Yugoslav ex-service men who were in London for the Federation Interalliée des Anciens Combattants. After dinner the healths of King George and the King of Yugoslavia were drunk, and were followed respectively by the National Anthem and the Yugoslav National Hymn. Colonel P. H. Mitchiner then proposed the toast of "The Guests," and Lieut.-Colonel Lioubomir Stephanovitch and Major Fetherston-Godley, chairman of the British Legion, replied. The Mitchiner silver bell and spoon for marksmanship was presented to Mr. Surtees Shill. The toast of "The Branch and its President" was proposed by His Excellency the Yugoslav Minister, and Colonel Kidd replied. All the speakers stressed the point that of the many branches of the British Legion this Serbian Branch was of particular importance owing to its international significance for Europe. The dinner was followed by dancing, during which the kolo, the Serbian national dance, was performed with much spirit by British and Yugoslavs. Among the principal guests besides those mentioned were Sir James Berry, Madame Agathonovitch, Lady Ralph Paget, Sir James and Lady Purves-Stewart, General Mihailovitch, and Colonel Blackham.

OVARIAN CONDITIONS AS CAUSES OF PELVIC PAIN*

BY

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This subject is one which bristles with difficulties and gives rise to much difference of opinion among gynaecologists. It is very controversial, and one's attitude towards its many problems is bound to evoke criticism. In perusing the literature of an older generation one is struck by the ready tendency to blame the ovaries for various vague pelvic pains, and to practise their removal as a means of cure. The frequent failure to relieve and the awful aftermath of the surgical menopause in young women caused a swing of the pendulum to present-day conservatism.

I propose to approach the subject from a purely clinical standpoint, and to consider the ovarian conditions which in my opinion do give rise to pain, mentioning in passing a few interesting cases, and then to discuss the best means of treatment.

It is essential, in the first instance, to accept the fact that it is necessary to find physical signs in the ovary or its neighbourhood before blaming it as a cause of pain, and that in the absence of physical signs it is extremely foolish to adopt any but the most conservative treatment. I, for my part, have experienced the post-operative annoyance of the patient whom I have opened only to find a normal pelvis. Neurasthenic women with ovarian pain are many, and it is much better to place them in the safe hands of a physician.

Ovaries which are the seat of chronic infection, cases of chronic salpingo-oöphoritis, and pelvic adhesions are constantly accompanied by pelvic pain. The burial of the ovary and the consequent difficulty of ovulation may help to produce this, but the drag of peritoneal adhesions also plays a part. The treatment lies in clearing up the pelvis, returning the organs to their normal position as well as possible, and removing what is beyond repair. Adhesions are liable to re-form, but one may count on some amelioration of symptoms.

Intermenstrual pain or "Mittelschmerz" may be considered here. I have seen two undoubted examples of this condition. I opened the abdomen and found enlarged, hard, white ovaries with thickened cortex and very few scars. My treatment consisted in shaving off portions of cortex and making criss-cross incisions. It was all I could think of doing at the time. The result, needless to say, was completely disappointing. When presacral nerve avulsion came into fashion I considered its possibilities in such cases, but fortunately realized in time that the presacral nerve has very little to do with innervation of the ovaries. The ovarian nerve supply derived from the aortic plexus comes down in the ovarian plexus and is delivered through the infundibulo-pelvic ligament and hilum. It is possible that division of the ovarian plexus in the infundibulo-pelvic ligament might relieve this condition, and if I met another case I should be inclined to try it; anterior pituitary hormone might also be a help.

Prolapsed and Cystic Ovaries in the Causation of Pelvic Pain

Prolapsed ovaries lying underneath a retroflexed uterus definitely give rise to pain and sometimes cause very severe dyspareunia. Such ovaries are sometimes cystic, and may have formed light adhesions to surrounding

* Read in opening a discussion in the Section of Obstetrics and Gynaecology at the Annual Meeting of the British Medical Association, Bournemouth, 1934.