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.

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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.

peritoneum. They are often congested, and during the premenstrual period they ache and become hypersensitive. A somewhat similar tenderness is produced in cases of varicocele, and here we find a definite referred pain, which is most marked half-way along the line joining the umbilicus to the mid-point between the symphysis pubis and anterior superior spine. This varicocele is an analogous condition to that found in the male which produces a testicular ache. It occurs in the pampiniform plexus, and shows itself as a markedly dilated and varicose condition of the ovarian veins running from the broad ligament through the infundibulo-pelvic ligament. I have noticed it a number of times at operations for chronic retroflexion, and I have seen it relieved by the Gilliam operation, which not only lifts up the uterus but also shortens the broad ligament and so relieves the kink. Pain is also produced in prolapsed ovaries not accompanied by retrodisplacement of the uterus, and this is best relieved by an operation designed to replace the ovary in as nearly normal a position as possible. This can be obtained by stitching a suitable point of the infundibulo-pelvic ligament to the side wall of the pelvis near the interior abdominal ring. One authority reports seventy-six such cases with 88 per cent. of cures.

Endometriomatous growths in the ovaries may cause pain, and ovarian dysmenorrhoea is common in such conditions. These growths tend to come on after the age of 30, and should be suspected in women complaining of dysmenorrhoea and lower abdominal pain starting at this age. Interstitial haemorrhage in the ovary will also produce pain. I have noted these conditions at operation for pelvic pain, but they are not common.

I have little faith in the idea that the small cystic ovary occasions pain, and the so-called cirrhotic ovary is not in my opinion a pathological entity. Adhesions in the region of the infundibulo-pelvic ligament involving or catching up the fibres of the ovarian plexus may result in chronic ovarian pain and dysmenorrhoea. Such a condition has been described by Lupan following removal of appendix; a complete cure was obtained in his case by division of the plexus in the infundibulo-pelvic ligament. Peritoneal bands or adhesions to the ovary can produce pain; I had one such case following an appendicectomy when an omental band had caused internal pain in the rectum for a long period. Division of the band gave complete relief. Large tumours of the ovary, whether malignant or benign, do not as a rule give rise to pain unless the pedicle becomes twisted, causing congestion or formation of adhesions.

It is probable that the ovary itself is fairly insensitive, as otherwise the recurrent follicle ripening, with associated increase of tension, would produce pain. We must recognize, however, that at times the ovaries become more sensitive, for example, just before menstruation, or if there is any marked pelvic congestion; also in cases of repeated unsatisfied sexual stimulation there will develop a hypersensitiveness of the ovary. This is evident by the dyspareunia which sometimes develops in such women.

Apart from organic disease of the ovary we, as gynaecologists, are confronted with three conditions which have been, and will continue to be, dubbed ovarian pain: (a) reflected pain, (b) neurasthenic pain, and (c) hysterical pain. Abnormal conditions of the female genitals affect the lower dorsal and upper lumbar segments of the cord. This causes a hyperaesthesia of the cutaneous areas supplied by these segments, and consequently tenderness and pain on pressure over a fairly wide area situated between the umbilicus and the anterior superior spine. A diagnosis of oöphoritis is often made, although the ovary may be completely free from blame.

In neurasthenia we have a condition in which the resistance of the nervous system is decreased, and consequently the threshold for pain is lowered. This may be produced

by anaemia, chronic disease, long-continued suffering, or mental worry. The patient will complain of pain in the region of the ovary where no ovarian pathology exists. Lastly, in cases of hysteria the patient often fixes her attention on her ovaries, though the ovary is absolutely normal.

The lesson to be learnt from these considerations is that we must be extremely careful when a patient comes to us complaining of pain which she has been told is due to her ovaries. If on examination we find definite physical signs of pathology in her genitalia then we can with confidence recommend operative treatment. If we find the uterus and cervix healthy and normal in position, and we are not sure of the condition of the tubes and ovaries with regard to adhesions, possible endometriomata, displacements, etc., then we should explain the position carefully to the patient and advise an examination under an anaesthetic, and at the same time carry out a Rubin's test. This examination should put us in the position of knowing whether it is necessary to open the abdomen or not. It will also be of value from its suggestion effect on the patient.

Finally, if we are certain in our own minds that there is no pathological condition present we must tell the patient so firmly, and assure her that operative treatment will not improve her condition, and that if she has patience and adopts the measures necessary to improve her general health she will gradually get rid of her pain.

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TOTAL THYROIDECTOMY IN THE TREATMENT OF PATIENTS WITH CONGESTIVE HEART FAILURE AND ANGINA PECTORIS

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Any measure which promises to prolong, in fair comfort, the lives of patients with both the congestive and the anginal forms of heart failure, in whom the efficacy of all other forms of treatment has been exhausted, must command serious attention, as, if the promise is fulfilled, the method will have a wide application. It is for this reason that the papers of Blumgart¹ and Levine,² and their associates, have excited such great interest. They claim that the removal of the whole thyroid gland in patients without thyrotoxicosis, incapacitated by congestive or anginal heart failure, is not only comparatively safe, but that it so greatly improves the patients' condition that many of them again become capable of work. Blumgart³ says that the operation has now been performed with gratifying success in over fifty cases.

Rationale

It is established that ordinarily the heart's output of blood per minute varies directly as the rate of metabolism. The more rapid the metabolism the more oxygen do the