MEDICAL PRACTICE

Gynaecology in General Practice

Pelvic Pain

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It is a common assumption among women that lower abdominal discomfort, either central or lateral in distribution, is usually referred from the organs of reproduction and may properly be considered to be "pelvic pain." A man, with different anatomy, is unlikely to make this assumption and equates his "pelvic organs" with the region of the perineum. Thus pelvic pain is essentially a gynaecological symptom. It may be acute, chronic, recurrent, or cyclic and is sometimes associated with low sacral backache.

The symptom is distressingly common and so often unrelated to any demonstrable pelvic lesion as to make it comparatively unrewarding in gynaecological diagnosis. This is hardly surprising when one considers how much is still unknown about the innervation of the female pelvic organs and the various factors that modify pain sensitivity for each individual.

Acute Pain

An attack of lower abdominal pain severe enough to warrant admission to hospital is usually associated with a lesion in men but by no means invariably so in women. Both normal and disordered function of the pelvic organs cause pain in some women, and an exceptionally severe bout of dysmenorrhoea may strangely be unrecognized by a patient and lead to hospital admission and even to a negative and embarrassing laparotomy.

BLEEDING FROM THE OVARY

A far more frequent occurrence is the acute pain associated with haemorrhage from an ovary, either at the time of ovulation or later in the menstrual cycle from rupture of a follicular cyst or corpus luteum. These episodes are exceptionally common in young women in the first 10 years after puberty and in many cases lead to the removal of a normal appendix. The diagnosis is seldom difficult if a menstrual history is taken and the patient kept under observation, when the pain will rapidly improve and vomiting will be significantly absent. If it should be considered advisable to operate it is essential that surgical enthusiasm should not lead to removal of the offending ovary. A simple mattress suture will control any residual bleeding and the patient may be warned that further episodes cannot be excluded. Any general hospital will confirm a significantly increased female/male sex ratio in appendicectomy operations between the ages of 15 and 25, but the reason for ovarian haemorrhage in this age group is unknown.

TORSION OR RUPTURE OF OVARIAN CYST

Another cause of acute pain is torsion of any ovarian tumour (or even a normal ovary and tube), in which case the diagnosis is usually easy as there should be a tender palpable mass representing the original cystic tumour enlarged by acute venous congestion. Rupture of a loculus of a cyst may give a similar picture, as may leakage into the pelvis of the "tarry" contents of ovarian endometriosis. The surgical removal of the latter may prove exceptionally arduous for the young operator without gynaecological experience or adequate assistance.

PELVIC INFLAMMATION

Pain from acute pelvic inflammation arising in the genital tract will in Britain today generally be due to gonococcal salpingitis, though a similar picture may be seen after an infected abortion. Pyrexia in the early stages helps to exclude appendicitis, and urgent abdominal surgery is only required in cases of pyosalpinx, where there will be a palpable mass.

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ECTOPIC PREGNANCY

Without doubt the most important cause of acute pelvic pain is an ectopic pregnancy. The pain may be caused by tubal distension, tubal abortion, or tubal rupture, and it may occur before any significant amenorrhoea has led to the suggestion of pregnancy. In a few cases the first serious pain may be associated with collapse from profuse intra-abdominal haemorrhage, but more often the diagnosis remains in doubt for some days. A history of fainting is suggestive, while pelvic tenderness and pain produced by moving the cervix are characteristic; occasionally it will be advisable to view the pelvis by laparoscopy or to needle the Pouch of Douglas rather than to continue observation in the difficult case.

In some of the developing countries in which both pelvic sepsis and ectopic pregnancy are common events there may be considerable difficulty in differential diagnosis. The extrauterine pregnancy that has developed into the fourth month may in the absence of a reliable history prove indistinguishable from the woman with bilateral pyosalpinges leaking into her pelvis. Failure of communication is by far the worst problem for accurate gynaecological diagnosis.

Cyclic Pain

Spasmodic dysmenorrhoea is the obvious example of the imperfection of our knowledge regarding pain referred from the female genital organs. It is still uncertain how far this symptom may be caused by a prolonged contraction of the myometrium, an excessive sensory innervation of the uterus, or by other factors affecting pain sensitivity. Furthermore, though perhaps 90% of cases are cured by vaginal delivery of a viable infant and others by an elective Caesarean birth, there remains an obstinate minority of women in whom dysmenorrhoea is unaffected by pregnancy or in whom the symptom returns after a short interval. Fortunately inhibition of ovulation with conventional oral contraceptives will improve this symptom for most women, though in a few resistant cases it may be necessary to prescribe cyclic oestrogen without any progestational component.

Chronic Pain

Most women whose chief complaint is of chronic pelvic pain, with or without associated low sacral backache, will have no demonstrable organic pathology in the reproductive organs. This does not mean that their pain is imaginary nor does it absolve the clinician from the need for careful investigations. On the other hand, it does appear to indicate that pelvic pain may be a dysfunction induced in some women by environmental stress.

STRESS

Because of a lack of clear knowledge about the exact role of sympathetic and parasympathetic nerves in the control of blood flow through the human uterus it is difficult to postulate the mechanism whereby stress induces pain, but it is common experience that uterine bleeding may be produced emotionally. The extraordinary mottled purple colour of the uterus seen at laparotomy in some of these cases adds further evidence that there is local venous congestion. It is still obscure why one individual under stress should develop duodenal ulceration, another colon spasm, and another pelvic pain; nor is it at all certain whether pelvic congestion (if indeed this is the true explanation) ever reaches a degree that is reversible only by the menopause. The extent of the vascular disorder within the pelvis is also variable, for whereas some patients will be dramatically and permanently cured by hysterectomy others will subsequently develop pain referred from cystic ovaries.

Associated Factors

Various comparatively minor conditions serve to exacerbate or localize the symptoms of pelvic pain. It has often been remarked that bimanual palpation of the uterus causes more discomfort when it is retroverted, presumably owing to its congested state. Operations to shorten the round ligaments in such cases are performed far less frequently today than formerly, and a preliminary trial of an adequate pessary will give some indication as to how much relief might be anticipated.

The woman with chronic pelvic pain will often be overworked, of low social class, somewhat overweight, and with an early prolapse. The temporary support of her weakening pelvic floor with a pessary combined with encouragement to lose weight voluntarily and improve her posture will often improve matters, though it is sometimes difficult to dissociate the effects of the "tender loving care" from those of the pessary. The need for contraceptive advice may also be apparent, and a former generation of gynaecologists used to equate pelvic pain with congestion resulting from perpetual coitus interruptus.

Finally, pelvic pain may be associated with some demonstrable tender contraction of the parametrium on one or both sides, perhaps with a suggestion of chronic infection of the cervix. In such cases symptoms will often include dyspareunia and may well date from a difficult confinement. If traction with a vulsellum forceps on the cervix produces the pain it suggests that the condition is largely organic; but these women will in most cases complain of symptoms only when under environmental stress. Hysterectomy may produce a dramatic cure but is seldom indicated. A typical case is perhaps worthy of record.

Mrs. A. B., aged 38, social class I, complained of discomfort in the right iliac fossa dating back to the birth of her second son aged 7. There was tenderness and contraction of the right parametrium but no definite endometriosis and treatment with short-wave diathermy brought no relief. There was some marital disharmony but she embarked upon another pregnancy and derived great satisfaction from the birth of her daughter. Thereafter she complained of her old pain only occasionally and at times of stress. When the child was 6 she developed pain of sufficient severity to be admitted to hospital as an emergency, when a little blood-stained fluid was aspirated from the Pouch of Douglas but no laparotomy was performed. It then became apparent that her marriage was disrupting but from the time when she left her husband there was no further trouble. Finally, at the age of 48, she returned with a mild exacerbation of her old pain following a tempestuous affair with a married man. Reassurance with the facile explanation that "your right ovary gets upset with any emotional strain" seemed all that was necessary in the way of treatment.

Organic Causes

The uterus and cervix, though possessing sufficient sensory innervation to cause pain in labour when the former contracts and the latter dilates, are rarely the cause of pelvic pain in the presence of gross disease. An exception is perhaps adenomyosis, in which the endometrium appears to penetrate the muscular wall of the uterus. This condition is variable in its extent, and it is not uncommon for foci of adenomyosis to be reported by the pathologist when a uterus has been removed for unexplained menorrhagia. The pelvic pain and secondary dysmenorrhoea in these cases is typical of the congestive syndrome.

The parametrium on the other hand appears to be sensitive under certain conditions when infiltrated with inflammatory, fibrous, or malignant processes. Thus in cases of endometriosis or chronic pelvic sepsis in which the parametrium is involved there is likely to be both dyspareunia and discomfort on any exertion that puts a strain on the pelvic floor. The diagnosis may often be suspected by the pain produced on digital movement of the cervix, and the two conditions may be difficult to differentiate. Malignant infiltration of the parametrium from cervical cancer is often painless, and those patients who present with pelvic discomfort may well have a

secondary cellulitis. Involvement of nerve roots later in the disease produces an entirely different type of referred pain.

Conclusions

Pain referred from the female pelvic organs will often bear little relation to any causal lesion. Acute pain, though essential for the accurate diagnosis of ectopic pregnancy, may sometimes be due to a minor disorder of function, and cyclic menstrual pain may vary within extreme limits for little apparent reason.

Chronic and recurrent pelvic pain is extremely common and, though there is evidence to suggest this may be referred from some congestive state, its exact mechanism remains unproved. Probably the pain is caused by environmental stress, and the resulting anxiety may often be treated by nothing more than sympathetic reassurance. A hysterectomy in these patients should be delayed until the various social and emotional factors have been considered and associated conditions such as colon spasm have been excluded. Surgery should eventually be advised only when it is clear that the pain comes from the uterus, especially when there is associated menorrhagia. Many pathological reports will show unsuspected adenomyosis, and most patients, if carefully selected, will be permanently cured and extremely grateful.

Growing Points in Medicine

Success and Failure in Human Virus Diseases* III—Chemotherapy

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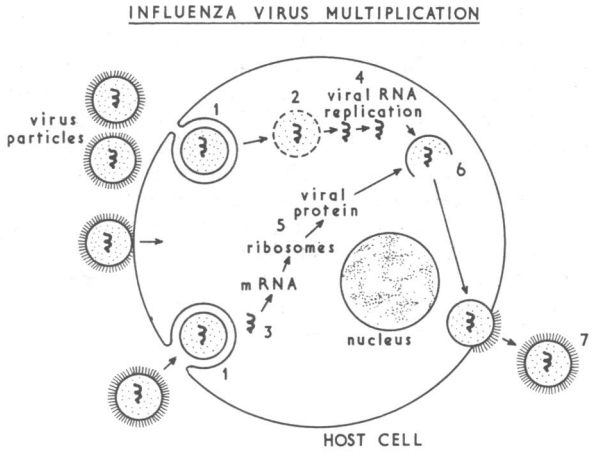
The ability to recover viruses from specimens stands in striking contrast to present-day inability to treat the patients therapeutically. There are many reasons for this failure. Viruses are intracellular parasites capable of taking over the metabolism of their host cells and are protected during their multiplication by the cell walls which surround them. They must therefore be attacked by inactivation before entry or during transport from infected to non-infected cells or prevented from penetrating the cell wall. Other modes of action are by interference at one or more of the various phases of virus multiplication, including uncoating of intracellular virus, transcription of virus nucleic acid, coding for virus protein, and release from the host cell (see Fig.). Many thought that such intracellular action would never be attained without harming the host cell, yet certain substances are now known which can bring this about safely.

That which seemed most promising of all because of its natural origin and broad antiviral spectrum—interferon—is still of great interest in the laboratory. But it has yet to be shown that it can have a practical role in therapy. The induction of interferon within the cells of the virus-infected host, though experimentally possible in animals, remains only a theoretical possibility in man, for it awaits the discovery of a safe non-toxic inducer.[1]

The list of antiviral chemical substances active in tissue cultures is now formidable. Unfortunately, most of these fail to exert a similar action in the intact animal, presumably because of failure to reach the virus-infected site before becoming metabolized. There is also the problem that virus infecting man may have passed its peak of multiplication before the patient has developed symptoms and reported to his doctor. Antiviral substances have their best chance, therefore, when used prophylactically during the incubation period. Though this is practicable in conditions such as the exanthemas which have a long period of incubation after infection, it is clearly difficult in the case of respiratory infections which have quite short periods between infection and symptoms.



Phases of influenza virus multiplication

*Paper based on a lecture delivered to the Cardiff Medical Society on 10 November 1970.

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