primary dysmenorrhoea
- a common clinical problem

anton j. bisazza

DEFINITION

In writing an essay on the condition of primary dysmenorrhoea, one must first and foremost ensure that the reader knows exactly what it is he is reading about. This seemingly superfluous statement is deliberate, and provoked by the apparently infinite variety of definitions attached to this condition. *Primary* dysmenorrhoea is a distinct clinical entity, and is best defined as a pain which is of uterine origin and directly due to menstruation. It has variously been referred to as true, spasmodic, intrinsic, essential and functional dysmenorrhoea, but I feel that the adjective "primary" is best suited to define a condition which has to be distinguished from two other conditions, namely:

1. Secondary dysmenorrhoea, or dysmenorrhoea following pathologic conditions in the reproductive organs.
2. Congestive dysmenorrhoea, or dysmenorrhoea in which the pain arises in tissues outside the uterus.

This definition is often ignored in some countries, where primary dysmenorrhoea refers to dymenorrhoea dating from the menarche, as distinct from dysmenorrhoea developing after a phase of painless cycles. However, if one is to adopt this latter classificaton, it is probable that very few cases of primary dysmenorrhoea will be diagnosed; it is my clinical impression that dysmenorrhoea dating from the menarche is very uncommon.

A PROBLEM

Primary dysmenorrhoea is a problem with which the practitioner is often faced, but before rushing to a diagnosis one must realise that there are cases which may present difficulty, and one important condition must be fulfilled, namely that dysmenorrhoea is essentially a first-day pain. Yet, even after obtaining this important piece of clinical evidence, the impression lingers that this is indeed a common condition: so much so that an estimated fifty per cent of all menstruating women experience it and of these the majority are in their late teens or early twenties. The condition is rare after the age of twent-five years, and this probably mainly due to the fact that pregnancy or/and progressive cervical dilatation are nearly always instrumental in bringing about a fair measure of relief. The incidence is no doubt affected by the lowering of the pain threshold premenstrually, as well as during menstruation, especially if one considers the patient's emotional tension before her period is due, with the attendent pain and general inconvenience attached to the latter. It is my clinical impression that the condition under discussion is commoner in the over-anxious type of patient, more so if she happens to be the only daughter of a mother who — on her part — was probably over-anxious and fussy in her own time! One also encounters cases of primary dysmenorrhoea when dealing with the less educated type of patient, particularly where sexual matters and sexual hygiene in general are concerned. Another class of patient affected by the condition is the woman who is unhappy, or who leads a sedentary life and has an unsatisfied sex urge, perhaps when the marriage is a disharmonious one. How all these factors operate exactly is more or less hypothetical, but it is reasonable to suppose that they act — in part at least — by creating a vicious circle, with pelvic-organ congestion as the principal factor involved. Other aetiological factors to be considered in this context would include social status, age, occupation, education, intelligence and personal habits. These all create statistical difficulties; education and intelligence, however, have already been alluded to, and may perhaps increase in importance when one considers that the incidence of primary dysmenorrhoea has decreased of late: but then, standards of sexual education and hygiene have improved considerably within this same period. The inference is obvious.....

THE PAIN — ITS AETIOLOGY

What causes the pain in primary dysmenorrheoa? Well, no one seems to know the right answer to the question, although several

theories have been forwarded — some attractive, some barely plausible, other quasiposterous. Much has been said and written about the subject, but it seems that for the time being the problem has to remain an academic one. It is heartening to note, however, that so far nobody has dismissed the condition as an "autoimmune disease"..... thank heavens!

It used to be held that the principal mechanical reason for primary dysmenorrhoea was cervical obstruction, notably the presence of pinhole and conical os. This was a pretty widespread belief, but it lost its popularity with the realisation that — in contradistinction to the definite entity under discussion — these were rare conditions: moreover, when present, their association with painful menstruation was both minimal and unimpressive.

Another theory claimed that in primary dysmenorrhoea there is no uterine behavioural abnormality, but that afflicted patients merely suffered from a wrong central nervous interpretation, by the brain, of normal stimuli received from the uterus. This is hardly tenable, first because of no supportive evidence, and secondly because of the quasi-spontaneous cure with advancing age and with pregnancy.

Inevitably, hormones came into the picture, chiefly the realisation that anovular cycles are painless affairs. Thus, it was postulated that exposure of the uterus to progesterone action presupposes the occurrence of dysmenorrhoea, and vice-versa. It is certainly a fact that progesterone induces hypertonicity in the isthmus and upper cervix. (If this physiological phenomenon were somehow exaggerated, then one would understand the cure obtained by permanent cervical dilatation in these patients, as well as the close relationship between a progesterone influence and primary dysmenorrhoea.) This fact forms the basis of a successful, albeit empirical, remedy for the condition, as will be described, and there is probably a lot of truth in the theory. As yet, however, conclusive proof and evidence of its validity are unavailable.

It is generally agreed, particularly in North America and in Britain, that the underlying mechanism is primary dysmenorrhoea is some sort of imbalance in the autonomic nervous control of muscle fibres in the uterus: this autonomic imbalance is followed by sympathetic overactivity, and consequent on the latter there is hypertonus of the circular muscles in the internal os and the isthmus. Which of these three phenomena is a cause and which an effect, is difficult to decide, but there seems to be no doubt that sympathetic overactivity is at the back of the whole complex. It also fits in with the assumption that psychological considerations in these patients are of primary importance, and so far it has not been seriously challenged by any other theory. It is certainly consistent with the type of patient usually presenting with the condition, as well as with the accompanying bowel and bladder tenesmus. We must admit, however, that it still fails to explain the spontaneous cure with child-bearing and old age. Perhaps the patient's mental state is better after a successful pregnancy, or it may be that patients can become "conditioned" psychologically to menstruation with the passage of time. But this remains to be seen.

Other high-flown and far-fetched theories have been forwarded to explain the mechanism of primary dysmenorrhoea, but these are beyond the scope of this essay. One must refer, however, to the recent supposition by British workers that the muscle spasm is due to a lipoid menstrual "toxin", or else to so-called "prostoglandins". This hypothesis appears to have opened up promising fields of research, and this fact may perhaps provide us with fresh information before long.

NOT A DIAGNOSTIC PROBLEM

Most of the clinical features have already been hinted at by now: in point of fact this is a very straight-forward entity, and should not give rise to diagnostic headaches, particularly if the history is taken carefully and symptoms duly appraised. Pain is a dominant feature, and occurs before and/or after the onset of the period to a varying extent; in most cases it rarely last for more than twelve hours. Careful, inquiry will reveal that what the patient describes as "a constant hurt" is in fact a colicky pain, and this mainly hypogastric in its distribution. Not uncommonly, the pain is referred to the anteromedial aspect of the thighs in the distribution of the iliohypogastric and ilioinguinal nerves. It is important to appreciate that in the condition under discussion the pain is never felt below the knee or over the back of the legs — although, naturally, primary dysmenorrhoea and orthopaedic conditions giving rise to such pain are not mutually exclusive. In this context it is also worth mentioning that low back-ache is an uncertain symptom, and too much importance need not be attached to it, especially if the patient herself is not terrible convinced of its occurrence.

Depending on the severity of the condition, there may be associated features such as pallor, sweating, nausea, vomiting, diarrhoea

and rectovesical tenesmus. Pain, however, is the characteristic feature of this condition, as the term used to describe it in fact implies.

There are three special varieties of primary dysmenorrhoea which are worthy of special mention: their importance lies in the fact that the practitioner may be misled into making a mistaken diagnosis if unware of their existence. They are rare, but one may expect to see them at some time or other in a large practice.

The first of these is "membranous dysmenorrhoea", a rare, familial form characterised by the presence of severe colic preceding and accompanying the passage of endometrial tissue which is either stripped off as endometrial cast or passed in large, ill-defined pieces. The condition, which is due to an over-mature corpus luteum inducing an excessive decidual reaction, is not cured by child-bearing, and is very refractory to treatment.

The second special variety is that of dysmenorrhoea associated with the passage of clots. It is rare, unless it forms part of the picture of menorrhagia, in which case it is this latter cause which has to be treated, and not the dysmenorrhoea, which is merely an effect.

The third is that of dysmenorrhoea occurring in association with gross uterine malformation. Thus, the dysmenorrhoea is marked with a septate uterus, and usually moderate in degree with a uterus unicornis or didelphys. The history may provide the clue in some of these cases: for example the pain is often unilateral when it originates in one uterine horn.

TREATMENT

How can we, as doctors, help these unhappy women? Well, if treatment is to be successful the patient's intelligent co-operation is essential, and this fact cannot be over-emphasised. Thus, proper teaching on menstruation, sexual matters and general health must be patiently and assiduously imparted to the woman seeking advice. She will leave the office in a much happier frame of mind if told that her period is not a monthly curse but an outward proof that her "organs" are functioning well; she will also feel more encouraged to learn that instead of giving rise to a "maimed" infant a pregnancy would most probably go a long way towards relieving her symptoms. Patients have different attitudes towards menstruation, depending on their social, educational and behavioural up-bringing, and there is no cut-and-dried form of psychotherapy: the doctor must deal with each case on its own merits.

Patients very often have a bad time of it during period because of prolonged rest in bed at the slightest hint of pain; this is bad, and the doctor should explain the benefits of judicious exercise as well as of the philosophy of "carrying on regardless". If the condition is very bad curtailment of activities, and even rest in bed, are naturally advised, and these measures may be supplemented by the appication of local heat and the administration of aspirin or paracatemol. In some instances, and depending on the type of patient one is dealing with, amphetamine, chlorpromazine and barbiturates may prove beneficial, but antispasmodics and preparations containing ergot have very little place, if any, in the treatment of this condition.

Hormones are a very useful weapon in the treatment of incapacitating primary dysmenorrhoea. They are used with three aims in mind, namely:

1. Improving the vascularity and development of the myometrium.
2. Quieting abnormal uterine contractions.
3. To suppress ovulation, in view of the fact that anovulatory cycles are always painless.

This last consideration is the most important of all three, and the desired goal is attained in full 70 to 90% of patients. This in itself surely warrants a serious therapeutic trial with hormones. One may give 3 mg. of stilboestrol daily from the first to the twenty-first day of the cycle; better still, the oestrogen-progesterone pill is given from the fifth to the twentyfifth day. The latter regime is virtually free of side-effects, and can be adopted with impunity when it is anticipated that an important engagement is liable to be spoilt by a painful period. One can also give the 'pill' when the diagnosis is in doubt, and in this case a daily basal temperature chart is also compiled.

Surgery also has a place in treatment: however, it should never be suggested before the age of eighteen, and even after this age the doctor will consider surgery very carefully if there is a possibility of marriage and child-bearing, since surgery is not without its own hazards. The, of course, it rarely produces brilliant results, although it is justifiable in cases of truly spasmodic, incapacitating pain, as well as in cases where vigorous and appropriate medical treatment has failed.

The commonest from of surgical treatment is that of cervical dilatation; it effects a cure in 60% of cases, but may later be followed by recurrent abortions because of the hypotonicity it induces in the internal os. The

procedure can be coupled with injection of the Lee-Frankenhauser plexus, or else this can be done as the sole therapeutic measure. In either case, results are uncertain. It is maintained by some, however, that when injection of the cervical plexus has given temporary relief after all other measures have failed, sympathectomy may be indicated. Results are difficult to assess because of the few cases in any one man's experience and the variability of the criteria of true primary dysmenorrhoea in published reports.

Presacral neurectomy, another suggested form of treatment, aims at eliminating motor impulses, increasing the uterine vascularity and interrupting sensory pathways; whether it does all this is doubtful. The operation is reserved for the badly neurotic patient, and this may perhaps account for the poor success-rate attending the procedure, which is certainly not to be undertaken lightly.

One last word must be said about hysterectomy; this is often mentioned as an extreme form of treatment in very severe and refactory cases. It can be categorically stated, however, that there is no real unjustifiable indication for removing something which is giving rise to pain not because of any organic lesion, but because pain is simply one of the manifestations of its normal physiological function. Indeed, pain is part of a woman's existence is so far as we can explain it away on a physiological and not a pathological basis. We can modify this physiological process by the scientific administration of hormones, and we can educate the patient into being better able to cope with an admittedly troublesome condition. Perhaps the treatment of primary dysmenorrhoea can be made easier for both doctor and patient if both of them could recognise the significance and inevitability of moderate to severe pain as a natural accompaniment of menstruation. If this can be achieved, it is likely that our patients will come to adopt a healthier, braver attitude towards their ailment — if this is the right word to use in this context. We, as doctors, may not consider it the right word to use, but the severely incapacitated woman most certainly does, and it is for this reason that she seeks her doctor's advice. It is therefore up to us to try and make the "dreaded day" better for our patients, and primary dysmenorrhoea is a supreme instance in the practice of medicine which calls for a careful and intelligent combination of some drugs, plenty of patience, and an infinite capacity for genuine sympathy.

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