Aspects of Student Health

Adolescent gynaecology

J A JORDAN

British Medical Journal, 1977, **1**, 98-99

Adolescence is an important time for a girl, being the stage in her life when the child becomes a woman. She undergoes great physical and mental changes, for which she is usually unprepared and hence may experience great difficulty in coping with them, particularly since the mental adjustment tends to lag some time behind the physical changes. For this reason, most gynaecological problems of adolescence are related to the development or failure of hypothalamic-pituitary-ovarian-uterine activity and to sexual activity.

Disorders of menstruation

Normal menstruation begins at about the age of 13, although ovarian activity and oestrogen production start several years before this, so that the secondary sex characteristics begin to appear from the age of 10 or 11. For the first year or two the normal adolescent menstrual cycle is usually anovulatory, owing to a failure of the active ovarian follicles to mature to ovulation; there is therefore no corpus luteum and no progesterone. The immature follicles produce oestrogen, the amount of which varies according to how many ovarian follicles are active at any one time. In an anovulatory cycle, the oestrogen produces continual endometrial proliferation that may continue for weeks or even months, but inevitably there will be bleeding, owing either to a temporary withdrawal of oestrogen after the degeneration of one or more follicles or to excessive endometrial proliferation causing a relative oestrogen inadequacy. This phenomenon explains why the menstrual pattern at this time of life tends to be characterised by variable periods of amenorrhoea and a loss that is usually painless and often heavy. In the average youngster such a pattern corrects itself in time and needs no treatment other than reassurance.

Occasionally, however, the menstrual loss is so profuse as to be serious, in which case careful examination and investigation are necessary to exclude endocrine, metabolic, and haemorrhagic disorders as the cause; only when these have been eliminated can it be assumed that the excessive bleeding is due to dysfunction. Since the cause of the bleeding is endometrial hyperplasia due to excessive oestrogen stimulation, which in turn is caused by inadequate progesterone production, the treatment is simple. Progesterone should be given either by intramuscular injection or by mouth. If given by injection—for example, medroxyprogesterone acetate (Depo-Provera) or hydroxyprogesterone hexanoate (Primolut-Depot)—the bleeding will cease within a few days when the progesterone effect has occurred in the endometrium. There will then be amenorrhoea lasting 7-14 days followed by uterine bleeding for six to seven days; the first two days of this bleed will usually be excessive, depending on the degree of endometrial proliferation that preceded the injection of progesterone. Progesterone cannot be given by mouth but the synthetic progesterones may and are equally effective. These compounds, such as norethisterone 5-10 mg, medroxyprogesterone acetate (Provera) 5-10 mg, or dydrogesterone (Duphaston) 10-20 mg, may each be given for 10-12 days with the same result as intramuscular progesterone. Since this type of progesterone or progestogen treatment is usually necessary on more than one occasion, it is more convenient to use the oral treatment in a cyclical fashion for 10 days, treatment beginning 15 days after the first day of the previous menstrual loss. This will give a cycle that is about 28 days long. An alternative and convenient way to give a progestational compound is to prescribe the combined oral contraceptive pill, particularly if the youngster is at risk of pregnancy.

If the bleeding is so profuse that there is a reduction in blood volume admission to hospital is necessary and a thorough curettage will usually be the quickest and most effective way of dealing with the problem. This may then be followed by cyclical oral treatment as described above.

AMENORRHOEA

Failure to start menstruating at the expected age may be distressing, although it is not unusual to find menstrual activity delayed until the age of 16-18. Primary amenorrhoea, as distinct from secondary amenorrhoea, in which spontaneous menstruation has occurred at least once, needs careful assessment. A clinical history and thorough examination (including vaginal or rectal examination) are needed to exclude endocrine and metabolic disturbances, systemic disease, and developmental anomalies such as an imperforate hymen or absent uterus. Simple assessment will usually allow the doctor to reassure mother and daughter but occasionally more detailed examination will be necessary before a final diagnosis can be made.

Secondary amenorrhoea is much more common, the usual cause being a temporary disturbance of the hypothalamic-pituitary-ovarian axis due to an emotional disturbance such as a school examination or living away from home for the first time. These disturbances may be associated with weight loss, a severe example being anorexia nervosa, or weight gain due to the girl overeating as a way to ease the tensions created by her emotional problems. Clinical examination, with special attention to the possibility of pregnancy, is usually enough to offer reassurance that all will be well in due course.

DYSMENORRHOEA

Painful menstruation is usually associated with ovulatory menstruation and is therefore not a problem while menstruation

Birmingham Maternity Hospital, Queen Elizabeth Medical Centre, Birmingham B15 2TG
J A JORDAN, MD, MRCOG, consultant gynaecologist

is anovular. It occurs to a greater or less degree in most young women, and for the average patient reassurance coupled with mild analgesia is sufficient to allow minimal interference with normal activities. Occasionally, however, it is severe, being accompanied by fainting and nausea and necessitating time away from school or work. Since it is almost always associated with ovulatory cycles and rarely with an organic disorder, ovulation should be inhibited by giving oestrogen, as in one of the combined contraceptive pills.

Very occasionally, the dysmenorrhoea will be inadequately relieved by this measure, in which case the pill may be given continuously, stopping only for five days at a convenient time or when breakthrough bleeding occurs; in this way, menstruation will occur only three to five times a year. Dilatation of the cervix, common practice in the past, is *never* indicated as treatment for dysmenorrhoea, for if the cervix is dilated until the sphincter-like internal os is torn the end result will be an incompetent cervix and recurrent midtrimester abortion later in life.

VAGINAL DISCHARGE

One of the effects of oestrogen is to stimulate cervical columnar epithelium to produce mucous, and vaginal discharge at this time is physiological, being most profuse at midcycle when ovulation is coincident with a high level of oestrogen. If the youngster has an excessive amount of columnar epithelium, a condition that is usually but incorrectly termed a cervical erosion, she will produce an excessive amount of discharge, but unless the volume of discharge is distressing or the erosion is responsible for postcoital bleeding such an erosion does not need cauterisation.

A complaint of vaginal discharge with or without pruritis vulvae needs a speculum examination, and infections such as trichomonas vaginitis, monilia, and gonorrhoea should be recognised and treated. Since the adolescent may have started only recently to use tampons to control menstrual flow, the presence of a forgotten tampon is a more common cause of discharge than in the older woman.

CONTRACEPTION

Increasingly, adolescent girls seek advice on contraception and, regardless of age, each request should be taken seriously. The doctor is, of course, faced with the moral problem of such a request, but experience has shown that most youngsters seeking contraceptive advice are already sexually active and the possible side effects of contraceptive methods have to be weighed against the likely consequence if reliable contraception is not given. Each case must be assessed on its merits but, since it is important to provide the best possible protection from pregnancy, the combined contraceptive pill is usually the method of choice. There is often a reluctance to prescribe the pill for youngsters who have infrequent menstruation because they have a higher incidence of post-pill amenorrhoea, but in practice this is rarely a problem for it may be easily dealt with if it occurs.

The progesterone-only pill, although it has none of the side effects attributable to oestrogen, has a predictable failure rate and should be considered as an alternative method only if the combined pill is thought to be unsuitable. The intrauterine device is also a useful method; if the patient is parous then any of the standard devices may be considered, but in the nulliparous patient the device of choice is unquestionably the Gravigard or copper 7. The other contraceptives such as the chemical and mechanical methods are also useful, but the motivation needed to use these techniques successfully is often lacking in the younger patient, and the failure rate attributable to them will often be higher than in the older woman. It is worth remembering that the adolescent seeking advice on contraception is usually ignorant about sexual matters, and careful questioning will often disclose psychosexual problems of the type that can easily be dealt with by the interested general practitioner or family planning doctor.

PELVIC SEPSIS

Pelvic inflammatory disease should not be forgotten as a cause of lower abdominal pain. If recognised and treated early it can prevent untold physical and mental torment over the years, for although the treatment of infertility has made great advances in recent years, there is still no reliable way of treating tubal occlusion after salpingitis.

CERVICAL CYTOLOGY

Recent evidence relating to the causes of cervical carcinoma shows that women who become sexually active in the adolescent period have an appreciably higher incidence of invasive squamous cervical carcinoma in later life. This is because the cervical epithelium at this time is particularly susceptible to the carcinogens that initiate the malignant change, the affected epithelium remaining in a preinvasive state (dysplasia and carcinoma in situ) for many years before invasion actually occurs.

It is therefore important to perform routine cervical cytology on anyone who is sexually active, regardless of age. This, of course, raises the gynaecological problem of how such lesions should be treated in the young woman; cone biopsy may be performed but usually the lesion, which is often only a few millimetres in diameter, may be localised by colposcopy and adequately destroyed by diathermy or cryocautery, so fully preserving cervical function.

Conclusion

Adolescent gynaecological problems are often compounded by virtue of the girl being slow to seek help through either ignorance or embarrassment, or both. It is therefore imperative to treat her with particular patience and skill and to be prepared to spend time discussing the problem and its treatment. In this way a relationship will be built up between the girl and her doctor which will be of benefit to her, not only in the short term but also in the long term.

ONE HUNDRED YEARS AGO On Tuesday, Mr Donaldson held an inquiry relative to the death of Ada Harris, aged 19, a needlewoman. John Sturges said that, on Thursday morning, December 28th, he was employed to convey the deceased from Wellclose Square to the Small-pox Hospital at Homerton. On arriving there, he found she was dead. Dr Blackburn, assistant medical officer to the hospital, said that death was due to malignant small-pox; but he added that the conveyance in which the deceased had been brought to the hospital was unfit for the purpose. An assistant relieving officer of St George's East, named John Barnes, stated that the order for the removal of the deceased was signed on the evening of the 27th; but, it being very wet, and the deceased having had some medicine prescribed for her, he thought it better to defer removing her until the following morning. With regard to the conveyance, the ambulance generally used broke down a short time ago, and the deceased was accordingly taken to the hospital in a brougham which is now in temporary use. Dr Blackburn repeated that the brougham was unfit, as the deceased was obliged to remain in a sitting position. The jury expressed an opinion that a proper ambulance should be brought into requisition in future, and returned a verdict in accordance with the medical evidence. (*British Medical Journal*, 1877.)