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(Accepted 19 January 1987)

Clinical Algorithms

Irregular vaginal bleeding

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Abnormal bleeding from the vagina is generally classified as regular or irregular. Regular bleeding occurs in the same rhythmical pattern as menstrual bleeding, but the loss is prolonged or heavier; irregular bleeding comes at any time and bears no relation to the usual pattern. Regular vaginal bleeding is usually related to functional hormonal changes, whereas irregular vaginal bleeding is often associated with surface lesions of the genital tract. Bleeding from the lower genital tract (below and including the external cervical os) is often the result of mild contact at vaginal examination or intercourse. Treatment depends on correct diagnosis, which in turn is based on the classic approach of history, appropriate examination, and investigations.

History

The pattern of blood loss should be established. The volume of blood may vary from a thin smear to a quite heavy loss of up to 200 ml. An irregular brown discharge represents old blood which has had time to collect in the genital tract after it has left the capillary circulation so that the haemoglobin is denatured.

CONTRACEPTION

Methods of contraception should be noted. Progesterone only pills, low dose combination oral contraceptives, intrauterine contraceptive devices, and depot progestogens may all cause small irregular withdrawal bleeds. Management of these patients

is covered in the algorithm on contraception by Kubba and Guillebaud.¹

Examination

All women should have a general examination including a pelvic examination. This allows bimanual assessment of the uterus, adnexae, and the posterior part of the pelvis. A visual inspection of the cervix, the fornices, the vagina, and the vulva must also be made with a speculum, and a cervical smear should be obtained. Management of patients with abnormal smears is discussed in the algorithm on the abnormal smear by Singer.²

LESIONS OF THE VULVA AND VAGINA

A surface lesion on the vulva or vagina may be caused by an infection. Monilial infection can result in raw areas of the lower genital tract to which matted webs of fungus stick. When these are separated irregular bleeding may follow. The diagnosis can often be made with the naked eye but should be confirmed by microscopical examination. The patient should be treated with appropriate antifungal agents. Rawness of the vulva or vagina may be the result of a trichomonal infection or from scratching the associated itch. This again may be suspected clinically from the appearance of the greenish, frothy discharge or the pungent smell. The diagnosis should be confirmed by microscopical examination and the patient and her partner treated with appropriate antitrichomonal agents.

Varicose veins may be seen on the vulva or, less commonly, on the lower part of the vagina. They are obvious and bleeding may occasionally occur. Blood loss may be extensive but is more often slight and occurs after intercourse, especially during pregnancy. If the veins are accessible compression can be obtained using two external tampons held firmly in place on the vulva by a strap of elastic 2.5 cm wide along the front of the body, over the shoulder, and down the back. This is really first aid treatment, however, and injection of a sclerosing agent may be required. Occasionally,

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Irregular vaginal bleeding

See algorithm on the abnormal cervical smear by Singer²

ligation of the deep veins is necessary: this can result in considerable blood loss but may be needed between pregnancies.

In older women the vulva may be the seat of premalignant dysplasia or skin malignancy. Both these lesions bleed irregularly, although the quantity of blood is not great. The lesion is usually obvious to the naked eye.

LESIONS OF THE CERVIX

The cervix is easily seen by the passage of a speculum. Infections found on the cervix are the same as those found in the vagina and vulva; the most common are moniliasis and trichomoniasis. These should be diagnosed and treated.

A small polyp may be seen protruding through the external os of the cervix. It is nearly always benign and may be either from the ectocervix covered by stratified squamous epithelium or from the cervical canal covered by glandular epithelium. Even if the polyp can be avulsed in the outpatient clinic dilatation and curettage is necessary to exclude associated polyps higher in the genital tract.

Malignancy of the cervix may be seen either as a papilliferous growth or an irregular ulceration with raised edges. A cervical smear may not help because it often scrapes off only dead cells. Biopsy under general anaesthesia is required, and at the same time a careful examination should be made to stage the growth. If the biopsy confirms the presence of stratified squamous cell carcinoma (or, rarely, adenocarcinoma from the canal) the treatment is usually a combination of radical surgery, local irradiation, and deep irradiation.

Erosions of the cervix are often seen. Erosion is a misnomer because it is actually heaping up tissue rather than wearing away. When stratified squamous epithelium is destroyed after childbirth or infection the more rapidly growing columnar epithelium creeps down from the canal and grows over the area. Columnar epithelium cannot tolerate the more vigorous environment of the vagina with its acidity and changed bacteriological pattern, and it is therefore destroyed. More columnar epithelium comes down to replace it, which produces the appearance of the roseate erosion seen on either one corner of the cervical os or circumferentially. Erosions are slightly more common among women taking oral contraceptives and are often found after delivery. Treatment depends on the inconvenience of the erosion. The cervical smear will have excluded any serious premalignant changes, but if the erosion is bleeding it should be treated. Cryosurgery, which can be performed in the outpatient clinic, is usually satisfactory. If that does not work heat cautery, which requires general anaesthesia, should be performed.

NO LESIONS SEEN OR FELT

In cases where no lesion of the cervix is seen and the cervical smear is normal management depends on the age of the woman. In younger women treatment may be deferred once lesions of the lower genital tract have been excluded as in many cases the bleeding may well settle down in a couple of months. In women over the age of 35 it is probably wise to perform a curettage. This can be done in the outpatient clinic with Vabra equipment or the woman can be admitted as a day case for dilatation and curettage under anaesthesia.

Polyps of the endometrium may be found. These represent the extreme end of macroscopic hyperplasia of the endometrium when tissue grows so fast that it is no longer an even layer but parts of it protrude at the cavity of the uterus. The polyps should be removed at dilatation and curettage and the tissue sent for histopathological examination.

The endometrium might be reported as pathologically normal. Proliferative changes of the endometrium in the first half of the cycle in a woman with irregular vaginal bleeding is normal, and the woman may be seen again in the outpatient clinic in about six months' time. Such changes in the second half of the cycle, however, may indicate a lack of progesterone, which suggests a diagnosis of anovulatory dysfunctional uterine bleeding. This should be treated with cyclical progestogens for six months, after

which there may be spontaneous resolution. If the bleeding does not resolve further medical treatment with progestogens or danazol should be considered before resorting to hysterectomy.

Hyperplastic endometrium occurs in two forms. In some cases the gland spaces are greatly enlarged, with little change of nuclear pattern in the cells. This is cystic glandular hyperplasia (metropathia haemorrhagica), which is treated with cyclical progestogens; the curettage should be repeated after six months. Sometimes, however, the endometrium shows atypical hyperplasia. The nuclei are irregular, mitoses are common, and the glands push the stroma aside and so appear packed in like terraced houses. In women under the age of 35 treatment with cyclical progestogens for six months may be tried, but if the endometrium has not reverted to normal after curettage at the end of this time a hysterectomy should be recommended. Treatment in women over 35 depends on the severity of atypia. If it is moderate or severely atypical it would be wise to perform a hysterectomy since between 30% and 45% of such cases become malignant. The ovaries may be conserved in this operation. If the endometrium shows mild atypia, management is the same as for younger women.

The endometrium may show the frankly malignant changes of adenocarcinoma. This is a slow growing tumour and the best treatment is removal of the uterus and both ovaries and tubes. Irradiation to the vaginal vault and pelvic side walls is usually also necessary but may be avoided if the tumour is well differentiated and confined to the inner half of the myometrium.

Conclusion

Irregular vaginal bleeding is a common symptom. The algorithm provides a logical sequence of events to attempt a diagnosis and so provide rational treatment.

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Is it safe to give All Bran to children from 8-9 months old onwards?

Breakfast cereals are often part of the diet by 8-9 months of age but All Bran is not a wise choice for infants under 1 year. A small helping (20 g) of All Bran would contain about 5 g of dietary fibre and 140 mg of phytic acid phosphorous. Though dietary fibre should not be harmful to an infant the phytate may well be through its well documented capacity to impair the absorption of calcium, zinc, and iron. The problem of calcium binding with this amount of phytate is unlikely to be important since this mineral is in plentiful supply at this age due to the relatively large amount of milk consumed. The position, however, is different for iron and zinc. All Bran contains about three times as much iron and zinc as whole wheat breakfast cereals but their absorption from the gut is low because of the phytate. Furthermore, these minerals are not well absorbed from cows' milk or foods of vegetable origin, and meat, which is the best dietary source of available iron and zinc, is not usually a large component of the diet at 9 months. Breast milk is also a good source of iron and zinc, containing lower quantities than cows' milk because availability is considerably higher. The weaning period is a vulnerable time for iron and zinc needs because body stores present at birth will have been used up yet requirements for growth are high. Mild iron deficiency anaemia in infants over the age of 6 months is relatively common, although it is less often encountered in Western countries today because of changes in infant feeding practices and appropriate fortification of infant foods.¹ Suboptimal consumption of zinc during the weaning period has been considered to be a possible limiting factor for growth even in full term, Western babies.² Breakfast cereals are valuable additions to an infant's diet during the weaning period but concentrated forms of bran are contraindicated. Should the child be constipated other treatments are preferable.—ALISON A PAUL and JOHN H CUMMINGS, nutritionists, Cambridge.

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