Intermenstrual and postcoital bleeding

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Abstract

Unexpected vaginal bleeding, whilst responsible for much anxiety amongst women, is rarely associated with any serious underlying pathology. Nevertheless, bleeding which occurs spontaneously in between menses or after intercourse is recognised as a ‘red flag’ symptom for gynaecological cancer. Infection, hormonal fluctuations, benign cervical and endometrial conditions are, however, more common causes of abnormal bleeding. The role of the generalist clinician is to diagnose and treat uncomplicated conditions, whilst also determining the likelihood of malignancy and referring for further investigations appropriately.

Keywords: intermenstrual bleeding; postcoital bleeding

Intermenstrual bleeding, defined as any vaginal bleeding occurring outwith normally timed menstrual periods, may affect between 13 and 21% of naturally menstruating women. The prevalence varies significantly with age: intermenstrual bleeding is more frequently seen in perimenopausal women. Estimates of the prevalence of postcoital bleeding, which is vaginal bleeding provoked by intercourse, vary between 5 and 10% of naturally menstruating women. Postcoital bleeding does not appear to be related to age.

The positive predictive value of these ‘red flag’ symptoms is low. Of those who present to their GP with postcoital bleeding, only 1 in 44,000 women aged 20–24 and 1 in 2400 women aged 45–54 will have cervical cancer. Rates of endometrial cancer in women with intermenstrual bleeding, given the higher prevalence of this symptom, is even lower.

The majority of women with intermenstrual or postcoital bleeding will have a benign cause for their symptoms. These can be categorised broadly by the anatomical source of their bleeding (i.e. uterine, cervical, vaginal) and/or by cause (i.e. structural, infection, ovulatory dysfunction, iatrogenic, coagulopathy). This review aims to provide an outline of how to approach the management of a woman presenting with intermenstrual or postcoital bleeding and illustrate this using four clinical scenarios.

Who should be referred?

Given the rarity of malignancy in women with intermenstrual or postcoital bleeding, it is impractical to refer all women for investigations. A thorough history and examination should be performed to elicit risk factors and signs which may indicate pathology. The history should cover the patient’s age, the duration, nature and frequency of symptoms, any associated features (including pain, bloating, changes in vaginal discharge, bleeding from other sites) menstrual history, contraceptive and other hormonal therapy use, smear history, past medical history, current medications (especially anticoagulants), family history and sexual history. Examination must include abdominal and pelvic examination to assess for uterine and pelvic masses and tenderness. Speculum examination will allow inspection of the ectocervix for evidence of cervicitis, ectropion, polyps or suspicious lesions. The assessment of such lesions will include assessing their propensity to bleed on contact and allow the clinician to take microbiological swabs.

Case 1

A 20 year old woman presents to her GP with intermenstrual spotting and postcoital bleeding. She started a new relationship 6 months ago. She has not been using hormonal contraception and admits to having unprotected intercourse with her partner. Her mother was diagnosed with cervical cancer in her 30’s after presenting with similar symptoms.

1 in 600 women between 20 and 24 will present with postcoital bleeding every year. Less than 1% will present per year with intermenstrual bleeding. It is firstly important to exclude pregnancy in any woman of reproductive age presenting with unscheduled bleeding. Approximately 1 in 6 pregnancies are unplanned, which equates to 1 in 60 women having an unplanned pregnancy each year. A woman is much more likely to bleed during early pregnancy than outside of pregnancy. Up to a quarter of pregnant women will report bleeding during the first trimester. Threatened miscarriage is common but there should also be a low index of suspicion for ectopic pregnancy.

This patient can be reassured that the likelihood of her bleeding being associated with cervical cancer is extremely low given her age. In 99.7% of cases cervical cancer is preceded by infection with human papillomavirus (HPV). Infection with HPV is the most common sexually transmitted infection, affecting approximately 70% of all women in their lifetime. The term HPV describes a group of approximately 150 small, non-enveloped DNA viruses. Over 40 subtypes have been associated with transmission through skin-to-skin contact during oral, anal and vaginal intercourse. These subtypes are classified as low risk and high risk depending on their oncogenic potential. Low risk HPV, such as HPV 6 and 11, are associated with the development of genital warts. High risk HPVs, such as HPV 16 and 18 account for over 70% of all cervical cancers. Acute infection with high risk HPV is asymptomatic for the majority of women. Most women will clear the infection. Persistence of HPV DNA may lead to the development of cancer. Transformation of the cervical epithelium requires the integration of the viral genome into host DNA.
The latent period between initial infection and the development of cervical cancer is variable. The median latency period is estimated to be between 7 and 12 years with HPV 16. There are two peaks in age specific incidence of cervical cancer. The early peak, between 30 and 34, is associated with women becoming sexually active in their late teens and early twenties. The second is between 80 and 84.

The risk of cervical cancer in a woman whose mother or sister has had cervical cancer is twice that of a woman who has no family history of cervical cancer. Specific gene mutations only confer a slightly increased risk of cervical cancer. Much of the increased risk may, instead, be attributed to shared environmental factors between mother and daughter.

The number of women between 20 and 24 who develop cervical cancer is less than 50 per year in the UK. The recent introduction of HPV vaccination of girls aged 12–13 in the UK will reduce this further. In 2008, the immunisation programme comprised three doses of the bivalent HPV vaccine, Cervarix, which protects against HPV 16 and 18. A catch-up programme, offering immunisation to girls up to age 18 (i.e. those born on or after 1st September 1990), ran for 3 years until 2011. From September 2012, Cervarix was replaced by Gardasil, a quadrivalent vaccine, which protects against HPV 6 and 11, as well as HPV 16 and 18. A phase III clinical trial showed that Gardasil prevented 98% of persistent infections and cervical intraepithelial neoplasia (CIN) caused by HPV 16 and 18. Gardasil also prevents genital warts and may provide protection against neoplasia caused by other subtypes of HPV and from neoplasia at sites other than the cervix. Nonetheless, if examination reveals suspicious findings, the patient should be referred to colposcopy and not offered a smear test.

Bleeding in this case is much more likely to follow acute infection with other sexually transmitted organisms, particularly those causing cervicitis. Examination and collection of microbiological specimens for diagnosis are essential in this patient’s management. Chlamydia is the commonest bacterial sexually transmitted cause of cervicitis. It is estimated to affect 3–7% of women under the age of 24. Risk factors for infection include: age under 25, a new sexual partner, more than one sexual partner in the preceding year and inconsistent use of barrier contraception. However, 70% of women with chlamydia are asymptomatic. Where symptoms occur, post coital and intermenstrual bleeding, abnormal vaginal discharge, abdominal pain, dysuria and dyspareunia may be reported. Untreated infections persist for more than a year in over 50% of people, but 95% of infections will be cleared spontaneously over 4 years. Between 10 and 40% of untreated individuals will develop pelvic inflammatory disease.

Chlamydia can be detected using nucleic acid amplification techniques (NAATs) either from swabs or urine. Self-taken lower vaginal swabs are as sensitive as cervical swabs for detecting chlamydia. Both techniques are more reliable than a first-void urine sample. First line treatment for women with suspected or confirmed chlamydial infection is a 7-day course of doxycycline or a single 1 g dose of azithromycin. The latter is preferred where compliance is of concern. During this 7-day window, women should be advised to abstain from intercourse. Patients should be referred to Genitourinary medicine (GUM) for screening for other STIs and for partner notification. Test of cure is not usually required if first line treatment is used.

Gonorrhoea remains an important, but slightly less common cause of postcoital and intermenstrual bleeding. Gonorrhoeal infection co-exists with chlamydial infection in 41% of cases. It is asymptomatic in up to 50% of cases. The most common symptom when present is a change in vaginal discharge. Frequently on examination no abnormal findings are seen. Mucopurulent endocervical discharge is seen in less than 50% of women with gonorrhoea, but when present predicts an infection in 40% of cases. Detection is using NAATs in either vaginal or endocervical swab specimens. In contrast to the diagnosis of gonorrhoea in men, microscopy is not recommended due to low sensitivity. Urine specimens for NAATs are also not recommended for the diagnosis of gonorrhoea for similar reasons. First line treatment for women with gonorrhoea is with a single intramuscular dose of ceftriaxone 500 mg and a 1 g oral dose of azithromycin. Treatment with a high dose extended spectrum cephalosporin combined with azithromycin irrespective of the results of chlamydia testing has been proposed to try to limit the growing resistance and decreasing sensitivity to antibiotics of gonorrhoea in the UK. Test of cure is also now recommended to identify emerging resistance. A swab should be sent for NAATs two weeks following the completion of antibiotic therapy. If the specimen is positive, a further sample should be sent for culture. Untreated women are at risk of spread of the infection to the pelvis leading to pelvic inflammatory disease, tubo-ovarian abscesses, infertility and chronic pelvic pain or systemically leading to perihepatitis (Fitz-Hugh Curtis Syndrome) or disseminated gonococcal infection, which may present as skin lesions or a reactive arthritis (Reiter’s syndrome). Given growing resistance, treatment and follow up should be within a GUM setting.

N. gonorrhoeae also commonly co-exists with other pathogens, such as Trichomonas vaginalis and Candida albicans. Infection with these organisms are rarer causes of postcoital bleeding. Bleeding is as a result of vulvovaginitis. Trichomonas is a protozoan which can infect the vagina, urethra, and paraurethral glands in women. It presents with a range of non-specific symptoms including vaginal discharge, vulval itch, dysuria and abdominal pain. Up to 70% will have increased vaginal discharge. Classical signs of a frothy yellow discharge and a strawberry cervix are seen in 10–30% and 2% of patients respectively. Vulvovaginitis may also be apparent. NAATs are becoming rapidly adopted in place of culture as the gold standard for diagnosis. NAATs offer the highest level of sensitivity and can often be done on the same platform as NAATs for chlamydia and gonorrhoea. As trichomonas infects multiple sites in women, systemic rather than vaginal antibiotics are recommended. First line treatment is either with a single 2 g oral dose of metronidazole or 400 mg twice daily for 5–7 days. Test of cure is not required unless symptoms persist.

Severe vulvovaginitis secondary to Candida can lead to bleeding as a result of excoriation, fissuring and oedema. These signs are usually accompanied by vulval itch, discharge, soreness and superficial dyspareunia. Severe vulvovaginitis is uncommon. Up to 10–20% of women in the reproductive age group will be colonised with Candida species. These asymptomatic women do not require treatment. Severe and recurrent symptoms are more common in women with diabetes or those who are immuno-compromised. Severe vulvovaginitis can be treated with either extended topical therapy (10–14 days) or oral fluconazole 150
mg with a second dose after 3 days irrespective of history of recurrence. Low potency corticosteroids such as 1% hydrocortisone can also be considered in conjunction with antifungal treatment to relieve itch in the short term.

With this case, it is essential in the first instance to exclude pregnancy as a possible cause of her unscheduled bleeding and then to check for signs and symptoms of an infective cause. Empirical treatment of a suspected infection can be instigated whilst awaiting microbiology results, if history and examination suggest cervicitis or vulvovaginitis. Should swabs confirm a causative agent such as chlamydia, gonorrhoea or trichomonas, referral to GUM for specific treatment, test of cure and partner notification may be necessary. Women with normal examination findings, who do not meet the age criteria for cervical cancer screening (20 in Scotland and 25 in England, Wales and Northern Ireland) should not be offered smear tests and instead receive reassurance.

Case 2
A 20-year old woman presents to her GP with unscheduled bleeding for the last 3 months. She has been taking the combined oral contraceptive pill (COCP) for 3 years and previously had regular bleeds. Her bleeding is now light and irregular but occurs often after intercourse. She continues to have withdrawal bleeds during her pill free week. Her STI screen is negative.

Up to 20% of women using the combined oral contraceptive pill will have irregular bleeding in the first 3 months of use. This usually settles as ovarian activity is suppressed. New onset and persistent bleeding after this initial period requires further consideration. Whilst taking the history, it is important to enquire about correct pill usage to ascertain whether any pill have been missed and whether there are any drug interactions or illnesses which may have affected the absorption of orally administered hormones. In the absence of such factors, there is no evidence to suggest that the unscheduled bleeding is associated with an increased risk of pregnancy. Nonetheless, a pregnancy test should be considered in all women with unscheduled bleeding. Sexually transmitted infections should also be excluded. In addition, in women who are eligible for cervical screening, enquiry should be made about their smear history. A smear can be taken if due or overdue, but as it is a screening test rather than a diagnostic test, it should not replace referral to colposcopy if there are concerns regarding a suspicious lesion seen on examination. Visual inspection of the cervix may also identify a number of conditions, such as cervical ectopy and polyps, which may cause unscheduled bleeding (Table 1).

A cervical ectropion is a normal physiological finding. The columnar epithelium of the endocervix can become exposed due to remodelling of the cervix in response to oestrogens. The exposed glandular epithelium is gradually replaced by squamous epithelium in a process called squamous metaplasia. It is estimated that between 14 and 37% of women presenting to outpatient clinics have an ectropion. The prevalence is increased in women using the COCP and in women of higher parity. In addition to postcoital bleeding, women with symptomatic ectropion also often complain of increased watery vaginal discharge.

Women with cervical ectropion may be more susceptible to a number of infections. Chlamydia, which preferentially infects glandular epithelium is more common in women with ectropion. This association is not seen with gonorrhoea, trichomonas or candida infection. Having an ectropion also increases the risk of acquiring human immunodeficiency virus (HIV) in women with a HIV positive partner. HPV infection and CIN are more common in women with ectropion. 17% of women with ectropion also have concurrent CIN. Although ectopy does not affect the sensitivity of liquid based cytology, colposcopy should be considered in symptomatic women given the high prevalence of CIN. There have been various treatments described for cervical ectopy including electrocauterity, cryocautery, microwave tissue coagulation and interferon-alpha suppositories. Very few comparative studies have been performed to determine the efficacy of treatments. Cautery techniques have reported cure rates of between 80 and 90%.

Cervical polyps are a common cause of unscheduled bleeding with a prevalence of between 1.5 and 10%. Most cervical polyps are not associated with symptoms and are found incidentally on speculum examination. Cervical polyps appear as fleshy growths that are often pendunculated, arising commonly from the endocervical canal, but less commonly the ectocervix. They are often friable and thus present with vaginal bleeding. Polyps are most frequently seen in multiparous women in their 50’s and 60’s.

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**Differentiating benign cervical lesions on pelvic examination**

<table>
<thead>
<tr>
<th><strong>Cervical ectropion</strong></th>
<th><strong>Cervicitis</strong></th>
<th><strong>Cervical polyps</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flat reddened area around the cervical os</td>
<td>Congested oedematous appearance of the whole cervix</td>
<td>Pedunculated flesh-coloured lesion arising from the cervix</td>
</tr>
<tr>
<td>No associated pus</td>
<td>Bleeds easily on contact</td>
<td>Little or no associated redness</td>
</tr>
<tr>
<td></td>
<td>Mucopurulent discharge sometimes seen</td>
<td>Hormonal influences and inflammatory causes</td>
</tr>
<tr>
<td><strong>Cause</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eversion of the columnar epithelium of the endocervix on to the ectocervix</td>
<td>Infections — most often chlamydia</td>
<td></td>
</tr>
<tr>
<td>Hormonal influences e.g. puberty, pregnancy, COCP</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sequelae</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased susceptibility to infections</td>
<td>Untreated infections may lead to pelvic inflammatory disease</td>
<td>Dysplasia and malignancy rare</td>
</tr>
</tbody>
</table>

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**Table 1**
Polyps can vary in size between a few millimetres to a few centimetres. Histologically, polyps are composed of either columnar or squamous epithelium surrounding a fibrous core, and are thought to arise as a result of chronic inflammation or after an abnormal response to hormonal influences. Symptomatic cervical polyps are often associated with endometrial polyps and hyperplasia. This association is strongest in perimenopausal and postmenopausal women. Up to 55% of postmenopausal women with cervical polyps also have endometrial abnormalities. These associations have led to the suggestion that postmenopausal women with cervical polyps should be offered hysteroscopy and endometrial sampling in addition to removal of the polyp. Malignancy within polyps is extremely rare (0.1%) and where present has usually spread from other sites. Dysplasia is seen in 0.5% of cervical polyps. As malignancy and dysplasia are rare, conservative management in asymptomatic women may be appropriate. However, it is unknown what proportion of polyps may become dysplastic or malignant if left. Removal, either prophylactically or to relieve symptomatic bleeding, may thus be prudent. Recurrence of cervical polyps is estimated to occur in 6% of cases.

Medical management should be considered in women under 45 with persistent or new bleeding whilst on hormonal contraception where there is no history of poor compliance, when pelvic examination is normal and a pregnancy test is negative. Unscheduled bleeding is less common in women using a combined hormonal contraceptive (oestrogen and progesterone) than in those using progesterone only contraceptives. As a general rule, the lowest possible dose of oestrogen (20 µg) should be used. This limits the potential for oestrogenic side effects but increases the risk of unscheduled bleeding. The standard dose of oestrogen in the most popular preparations (e.g. Microgynon, Ovranette) is 30 µg. Switching to these higher doses oestrogen preparations may help patients on low dose preparations. There is little evidence that increasing the dose of oestrogen to 35 µg in women already taking standard dose preparations will help. Similarly, changing women to formulations containing different progestins has not been found to help with cycle control. There is also insufficient evidence to support the use of biphasic and triphasic preparations to improve unscheduled bleeding. Unscheduled bleeding in women using progesterone only methods of contraceptives is more difficult to manage. Women should be fully counselled about the patterns of bleeding which are commonly seen with these methods. Whilst amenorrhoea may be seen in between 10 and 70% of women using progesterone only contraception, depending on type, similar proportions will have infrequent or irregular bleeding. In women using either progesterone only injectables or implants, mefenamic acid or concurrent use of a combined oral contraceptive can be used for up to 3 months to settle unscheduled bleeding (unlicensed use). (Figure 1).

Case 3
A 35-year old woman presents to her GP with postcoital bleeding. She last attended for cervical screening 7 years ago, prior to the birth of her first child. That smear was reported as borderline but she was lost to follow up. The opportunistic smear test performed by her GP when she presents with postcoital bleeding is reported as showing high grade dyskaryosis. She is in a new relationship and keen to get pregnant.

The prevalence of CIN and cancer amongst women with postcoital bleeding has been estimated to be between 3 and 18%. It is therefore important to exclude cancer as a cause of unscheduled bleeding. Only 30% of cervical cancer is detected by screening with the remainder presenting symptomatically. Postcoital bleeding is the predominant presenting complaint. Cancers detected by screening are more likely to be of lower stage, in younger women and have a better prognosis. Since the introduction of the NHS Cervical Screening Programme in 1988, the incidence of symptomatic cancers has more than halved in the UK. Women who present with fully invasive cervical cancers are less likely to have had regular cervical screening than other women. However, 30% of all cervical cancers will occur despite adherence to the programme.

Currently all women aged 25–64 are invited for cervical screening. Routine recalls are 3 yearly in women aged 25–49 and 5 yearly from 50 to 64. Women with moderate and severe (high grade) dyskaryosis, as in this case, as well as women with borderline changes or mild (low grade) dyskaryosis who are positive for high risk HPV are referred for colposcopy. Women diagnosed with lesions consistent with high grade disease (CIN 2 or above) either at colposcopic examination (i.e. ‘see and treat’) or by biopsy are offered treatment. Treatment for CIN 2/3 involves either an excision, most commonly by large loop excision of the transformation zone (LLETZ), or ablation, for example with cold coagulation. All methods of treatment for CIN have similar short term morbidity and success rates in terms of residual disease and reduction in risk of subsequent cancer. Excisional treatment is associated with a two-fold relative increase in risk of preterm birth but the absolute risk remains low. Ablative techniques may be associated with a slightly lower increase in risk. It is unclear whether the volume of the cervix removed/destroyed accounts for this difference in risk. Women with invasive disease should be referred to tertiary centres for further treatment and assessment. Cone biopsy or trachelectomy may be suitable fertility sparing options in women with early stage disease (<Stage Ib1). Both techniques are associated with an increased risk of subsequent miscarriage.

3% of cervical smears are classified as borderline. This is almost as many as the total number of women found to have mild, moderate and severe dyskaryosis. The term ‘borderline’ describes ‘morphological changes that fall short of dyskaryosis but cannot be recognised with any certainty as inflammatory, reactive, metaplastic or hormonal’. Long term follow up of women with borderline cytology found that after 5 years, 68% had returned to normal, 19% continued to have low grade changes (borderline changes/mild dyskaryosis on cytology, CIN 1 on histology) and 13% had high grade changes (moderate/severe dyskaryosis/invasive disease on cytology, CIN 2/3, CIN 1 on histology) or invasive disease on histology). HPV triage for women with borderline changes and mild dyskaryosis was rolled out nationally in 2012–2013. Prior to this, women with either borderline changes or mild dyskaryosis were offered repeat cytology after 6 months. If this was normal, two further smears were performed at 6 monthly intervals. If all 3 were normal, the woman would be returned to routine recall. If further abnormalities were found, she would be referred to colposcopy. HPV triage was introduced to better predict both those women who were likely to need
treatment and those women who could safely return to routine recall. The positive predictive value for CIN 2/3 with HPV testing in women with borderline cytology ranges from 11.4 to 35.7%. Multiparous women, smokers and women with immunodeficiencies are at higher risk of developing cervical cancer. Had this woman presented for follow up of her borderline smear result, she may have received treatment before becoming symptomatic (Figure 2).

Case 4
A 46-year old nulliparous woman presents to her GP with intermenstrual bleeding. Her BMI is 40 and she was diagnosed

Management of women with unscheduled bleeding whilst on hormonal contraceptives

Figure 1
with type II diabetes 5 years ago. She has always had normal smears. She has never used hormonal contraception.

In women between 40 and 54, intermenstrual bleeding is a common symptom. Up to 20% of naturally menstruating women in this age group have experienced intermenstrual bleeding and 7% describe this as persistent. In over half of women with these symptoms, their abnormal bleeding resolves spontaneously, but two thirds of those whose symptoms resolve initially will have recurrent symptoms over the next two years. The majority of these symptoms will arise as a result of the hormonal fluctuations associated with the perimenopause. That said, hormonally caused intermenstrual bleeding is a diagnosis of exclusion. Women under 45 make up 7% of women diagnosed with endometrial cancer each year in the UK. The National Institute for Health and Care Excellence (NICE) guidelines on referral for suspected cancer recommend that women with persistent intermenstrual bleeding with a normal pelvic examination should be considered for urgent referral for investigation to exclude malignancy, irrespective of age. In contrast, NICE guidelines on heavy menstrual bleeding suggest the referral and endometrial biopsy of women over the age of 45. Endometrial cancer in women under the age of 45 is extremely rare. The presence of additional risk factors for endometrial cancer, including obesity, diabetes and polycystic ovary syndrome may suggest the need for further investigation, even in younger women.

Although pelvic examination is essential to exclude cervical, vaginal and vulval causes of abnormal bleeding, pelvic ultrasonography is useful to identify uterine and ovarian pathologies. In contrast to endometrial thickness measurements in postmenopausal women, endometrial thickness has no place in triaging premenopausal woman with unscheduled bleeding. The thickness of the endometrium varies with the menstrual cycle. Endometrial polyps are common findings at ultrasound. In premenopausal women, endometrial polyps may regress spontaneously. Expectant management may therefore be considered. However, hysteroscopic resection of polyps is associated with significant symptomatic improvement of intermenstrual bleeding but may be less effective at reducing heavy menstrual bleeding. In postmenopausal and perimenopausal women, the prevalence of malignant change and premalignant change in symptomatic endometrial polyps is 3.1% and 1.6% respectively. Therefore, endometrial biopsy and resection of polyps is advised in this group.

Endometrial hyperplasia is an important diagnosis to exclude during investigations. The typical appearance of endometrial hyperplasia at ultrasound is a diffusely thickened hyperechoic and sometimes cystic endometrium with a polypoid surface. Definitive diagnosis is made histologically. Women with endometrial hyperplasia have an increased risk of developing endometrial cancer. Histological classification of endometrial hyperplasia is based on two factors: the glandular/stromal architecture (described as either simple or complex) and the presence or absence of nuclear atypia. Nuclear atypia is the best predictor of the likelihood of progression to endometrial cancer. Only 5% of women with hyperplasia without atypia will progress to cancer, whilst 30% of women with hyperplasia and associated atypia will develop cancer within 20 years. Endometrial biopsy may miss concurrent cancer in 50% of patients with atypical hyperplasia. Hysterectomy should, therefore, be considered in these women. As risk of progression and concurrent cancer is much lower in women with hyperplasia without atypia, medical management with progestogens may be preferred.
Submucosal uterine fibroids are also a common cause of intermenstrual bleeding. Up to 50% are asymptomatic but 30% will be associated with abnormal bleeding. Typically, this manifests as heavy, prolonged and irregular bleeding. Up to 65% of perimenopausal women presenting with abnormal bleeding have fibroids. This, however, may not be the cause for their bleeding. 20% of women in the general population have fibroids. Endometrial abnormalities should, therefore, be excluded. Treatment options include medical, radiological or surgical treatment. Malignant transformation of fibroids is extremely rare; therefore ultrasonographic surveillance following resolution of symptoms is not necessary.

FURTHER READING

Practice points
- Take a thorough history and examination and perform swabs to exclude chlamydial, gonorrhoeal and trichomonal infection as the cause of intermenstrual or postcoital bleeding.
- Rule out pregnancy as a cause of abnormal bleeding in premenopausal women.
- Only perform a cervical smear as part of routine investigations if this is overdue. Otherwise refer all symptomatic women with suspicious cervical lesions directly for colposcopy.
- In perimenopausal women, consider the need to exclude endometrial pathology using ultrasound or hysteroscopy.