Standardising Our Management Of Postcoital Bleeding

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Abstract

Postcoital bleeding (PCB) is a type of abnormal vaginal bleeding that occurs during or immediately after sexual intercourse. Although PCB has a variety of causes, most of which are benign, it is considered as a cardinal symptom of cervical cancer. Many women with PCB will seek medical advice to relieve this unpleasant symptom, which might be distressing to the women and their partners. The main aim of investigating these women is to exclude serious cervical pathology, particularly cervical cancer.

Currently there are no national guidelines for the management of PCB to ensure good medical practice, and therefore, there is no general consensus on how to manage these women.

In this article we have assessed the pathologies associated with PCB and reviewed the different aspects of management. We did electronic Midline and PubMed search from the beginning of each of time frames. Inclusion criteria were that the study was published in English and contained enough data about the pathologies associated with PCB and recommended any management plan.
Based on this we outlined a structured management plan for women presenting with PCB and recommended that further research is necessary. Our structured plan aimed to include a timely referral, sensible investigations, and appropriate management.

INTRODUCTION

PCB is defined as bleeding occurring during or immediately after sexual intercourse at a time distinct from menstruation. It can be a symptom in women experiencing any type of abnormal vaginal bleeding. PCB has many causes, the most serious of which is cervical cancer. Gynaecological referral of every case of PCB for immediate investigations will be impractical, expensive, invasive, and worrying for women [1]. Currently, PCB alone is not an absolute indication for colposcopy [2].

The main aim of investigating women with PCB is to exclude serious cervical pathology, particularly cervical cancer. There is considerable debate regarding the best way to do this and consequently practice varies throughout the UK, largely dependent on the preferences of individual clinicians and the resources available to them. The absence of a uniform strategy may be due to a lack of standardised NHS guidelines [3].

The Royal Australian College of Obstetrician and Gynaecologist, the Royal Australian College of General Practitioners and the Australian Society for Colposcopy and Cervical Pathology have guidelines for referral for investigations of intemenstrual and postcoital bleeding first published in 1995 and revised in July 2004 [4]. The guidelines for referral for suspected Cancer published by Department of Health in the United Kingdom defined criteria for referral only; urgent referral (within 2 weeks) for PCB more than 4 weeks in women >35 years of age, and early referral (within 4-6 weeks) in all other cases of repeated unexplained PCB [5].

In this article we described the pathologies associated with PCB and reviewed the management as presented in the published literature. Based on this we proposed a structured management plan for women presenting with PCB and recommended that further research is necessary to revise this management. Our structured plan aimed to include a timely referral, sensible investigations, and appropriate management.

METHODS

Medline and PubMed were searched from the start of each of their time frames. We used post coital bleeding, sexual

intercourse, bleeding, and cervix-uteri as search terms. Studies of any design were included in the review if they had been published in English in peer-review journals. The article had to contain enough data on the pathologies associated with PCB and to recommend a management.

The results of the electronic searches were reviewed by reading the titles and abstracts. Papers were retrieved if they contained the required information. Reference lists of all articles retrieved were searched for additional articles. No studies were excluded on the basis of methodological quality. Relevant data were extracted from retrieved hard copies of eligible studies. Details were recorded about the pathologies associated with PCB and summery of their suggested management. The methodology used in most studies on women with PCB was retrospective review of hospital records. Only one systematic review was included in our article.

PATHOLOGY ASSOCIATED WITH POSTCOITAL BLEEDING

In two case series from United States [6, 7], postcoital bleeding occurred as a presenting symptom in 6% and 10% of 81 and 231 women with cervical cancer respectively. In another case series, 6 out of 20 cases of invasive cervical cancer (30%) presented with PCB [8].

In a study by Rosenthal[9] of 314 women with PCB between January 1988 and 31st December 1994 seen in Department of Gynaecology, Imperial College School of Medicine, Hammersmith Hospital London UK, 12 women (3.8%) had invasive cancer: 10 were cervical or vaginal cancer and 2 endometrial cancers. Eight out of the 10 cervical /vaginal cancers were clinically apparent. Four women of these 10 had had normal smears before being referred for further investigation of PCB. Two of these were visible only with the aid of the colposcope. Thus 0.6% of women attending the gynaecology service with PCB, and a normal looking cervix and normal smear had invasive cancer of the cervix. Cervical intraepithelial neoplasia was found in 54 women (17.2%). Nineteen of the 66 women (28.8%) with cancer/CIN had a normal or inflammatory cervical smear. 15 women (5%) had cervical polyps, 18 has had HPV, 49 inflammatory changes or metaplasia, and no explanation was found in 155 women.

In a retrospective study[3] of 284 non pregnant, non hysterectomised women with PCB referred to the gynaecological department at The James Cook University Hospital Middlesbrough UK, between January 1996 and December 2003, twelve cases (4.2%) of cervical cancer and ninety three cases (32.7%) of CIN were diagnosed. Infection was the underlying factor in 25 cases (8.8%), 16 women (5.6%) had a cervical polyp and 44 women (15%) had an ectropion. No pathology was found in 101 women (35.5%) in this study.

Another case series[10], a study of 248 women referred with PCB over a 5-year period to the gynaecology department at Southend Hospital Prittlewell Chase, Westcliff-on-sea, Essex, UK; reported no cases of lower genital tract cancer following PCB. Twelve women (4.8%) had CIN, 24 women (9.6%) had polyps (endometrial and cervical), and 61 (24.6%) had cervical ectopy.

In a recent study[11] of 142 cases of women presented with PCB over a period of 12 months at the gynaecology department, University Hospital of Leicester, Leicester Royal Infirmary, Leicester, UK; no case of lower genital tract invasive neoplasia was identified. Out of 142 cases, 56 women (39.4%) had normal findings at colposcopy and 44 (31%) were secondary to cervical ectopy. A total of 27(19%) had CIN, out of which were 15 (10.6%) cases of high-grade disease; and 20 (74%) out of the 27 women with CIN had a recently negative cervical smear (within the last three years). Seven women had benign cervical polyps.

A study by Shalini[12] of 110 women presented with PCB, 6 women (5.4%) had invasive cancer, 7 (6.4%) had CIN, 23 (21%) had Infection, and no pathology was found in 74 women (67.2%). Jha[2] found that out of 45 women investigated for PCB (12 with negative smears and 33 with no referral smear), 8.33% of women with a negative smear had a histological abnormality. In women with no referral smear the rate was 24.24%. The overall incidence of histological abnormality was 20% and of cytological abnormality 11.11%. The study concluded that women referred with negative cytology have a lower incidence of histological abnormality. The frequency of pathology associated with postcoital bleeding from five studies is summarised in Table 1.

Figure 1

Table 1: Frequency of pathology associated with postcoital bleeding.

Pathology	Rosenthal[9] 314 cases	Khattab[3] 284 cases	Selo-Ojeme[10] 248 cases	Abu[11] 142 cases	Shalini[12] 110 cases
Cancer	12 (3.8%)	12 (4.2%)	0	0	6 (5.4%)
CIN	54 (17.2%)	93 (32.7%)	12 (4.8%)	27 (19%)	7 (6.4%)
Infection	18 (5.7%)	25 (8.8%)	10 (4%)	2 (1.4%)	23 (21%)
Other pathology	75 (23.9%)	53 (18.7%)	85 (34.2%)	57 (40.2%)	0
No Pathology	155 (49.4%)	101 (35.6%)	141 (57%)	56 (39.4%)	74 (67.2%)

In summary, invasive cancer in women with PCB varies in literature from 0% to 5.4%. In most of the studies it was more frequent than general population. PCB was associated with CIN in 5%-32.7% of cases in different studies. This wide range is likely to be due to the denominator, in other words, where women were referred to colposcopy, referrals are based on the fact that there are likely to be other factors such as smear results which have triggered referral resulting in a higher incidence of CIN than if we looked purely at all PCB referrals without smear abnormalities. In conclusion, post coital bleeding should continue to be regarded as a potential indicator for cervical cancer and for cervical intraepithelial neoplasia.

REVIEW OF MANAGEMENT

Genital tract malignancy is an uncommon cause of bleeding at any age and is less common in younger women[4]. The management of PCB varies according to the policies followed by different clinicians. The following are recommended strategies for the management of women presenting with PCB:

HISTORY & EXAMINATION

Authors recommended that the history should include woman's age[12], past history of PCB[1, 4], previous abnormal cervical smear[1], smoking[13], and past history of sexually transmitted disease "STD"[13, 14].

Speculum examination under good light and clear exposure of ectocervix and external os is crucial which may be quite difficult in 10 -20 % of cases[1]. This should be done to look for the normality of the ectocervix[4], contact bleeding[15], ectropion[15, 16], cervical ulceration[1], and polyps[9].

INFECTION SCREEN

Genital swabs, urine, and/or blood are used to detect sexually transmitted disease in a woman who present with PCB[17,18,19,20,21], but it is unclear if assessment is necessary in all women with PCB or only those whose medical history or physical examination suggests a risk[22]. Many authors suggest that triple swabs "High vaginal swab, Endocervical swab and Chlamydial swab" are important investigations in women referred with PCB[13, 23, 24]. In a study of Chlamydia Trachomatis infection, PCB was observed in 38.3% of Chlamydia positive patients[12].

CERVICAL SMEAR

As a result of the national cervical screening programme there has been a reduction in the incidence of cervical carcinoma[25]. The programme recommends that if the last smear reported to be abnormal over a period of three months or more then the smear should be repeated[26]. Good quality smear in accordance with the NHS screening program standard should be followed.

A questionnaire survey of all general practices and family planning doctors in Manchester Health Authority was undertaken to determine why more smears are taken in primary care than are scheduled by the screening programme showed that the indication for additional smear tests most frequently cited by responders was PCB[27].

The study in Scunthorpe General Hospital suggested that cytology would detect only 55% of histological abnormalities[2]. It has been suggested that the overall accuracy of cytology in predicting a cervical lesion was 87% with the sensitivity of 56%, specificity of 90%, positive predictive value of 56% and negative predictive value of 90% [12]. There is no evidence for a role for cervical cytology in the assessment of women with PCB if a cervical smear is not due[22].

COLPOSCOPY

Although many studies reported a high incidence of cervical

neoplasia in women with PCB[4], Currently PCB alone is not an absolute indication for colposcopy[2]. As in women under the age of 40, chlamydial infection and problems with family planning are more likely causes for PCB, the National Health Service cervical screening programme recommends that women over the age of 40 presenting with PCB should be referred for gynaecological examination and onward referral for colposcopy if cancer is suspected[26]. Women who have a clinically suspicious cervical lesion should be referred directly to colposcopy[4].

According to a study by Shalini et al, colposcopy has a positive predictive value of 45.7% and positive histopathology rate of 54% [12]. Any minor lesion, such as ectropion should be carefully scrutinized and taken into account when referring for colposcopy. Women with friable ectropion that is causing persistent symptoms should be referred to gynaecologist for assessment and possible treatment. Ideally they should have colposcopy as there investigation of choice if neoplasia is suspected[1].

Shapley et al[22], recommended that women with PCB should be referred to colposcopy if the woman requests it after proper consultation, if the cervix is clinically suspicious of cancer, if the smear shows cervical dyskaryosis, or if symptoms persist and interfere with the woman's life in the broadest sense including psychological distress.

ENDOMETRIAL INVESTIGATIONS

Transvaginal scanning, pipelle endometrial sampling, and/or hysteroscopy should be considered in women with persistent PCB and normal cervical check up and negative swabs[3], and in women with PCB & IMB[1].

DOCUMENTATION

Brief documentation[1, 4, 28] must be maintained on: type of abnormal bleeding, hormonal therapy, past history of bleeding and previous investigations, date and report of last cervical smear, examination findings, action taken for investigation and treatment, and follow-up recommendation.

INFORMATION FOR WOMEN

Women should be informed about the following points: most likely cause or causes, whether further investigations required, instructions about investigations if indicated, when to return for review if symptoms persist, that cervical smear is a screening test, and is only 80-90% sensitive and it may therefore not detect underlying pathology in10-20% of affected women[12].

PROPOSED MANAGEMENT

Reviewing the evidence available from the literature we suggest the following plan of management for women with PCB. This could initially be instigated in the primary care sector. Women with abnormal findings and/or repeated PCB should then be referred.

HISTORY

Initial history taking is almost the most important part of the consultation since risk factors can be identified and the need for any particular careful follow up determined.

The history should include the woman's age, nature, frequency and clinical association of the bleeding, past history of bleeding, hormonal therapy and contraceptive history. It is important to ask about cigarette smoking, previous abnormal smears, sexual history and relevant symptoms in a partner, as well as history of infection.

EXAMINATION

Speculum examination under good light and clear exposure of the ectocervix and external os is crucial to look for complete normality of the ectocervix, contact bleeding and any ulceration, foreign body, polyp or IUCD, leukoplakia, warty changes or any discharge. Ectropion is an important finding which should be looked for during vaginal examination. Practitioners must always bear in mind the need to re-examine a patient if symptoms recur at a future stage.

INVESTIGATIONS

SWABS

Triple swabs “High vaginal swab, Endocervical swab, and Chlamydial swab” are useful investigations in women with PCB to exclude Chlamydia and other STDs. They can be taken by the general practitioner.

CERVICAL SMEAR

This should be done only if a cervical smear is due or if the last smear was reported to be abnormal over a period of three months or more. Good quality smear in accordance with the NHS screening program standard should be followed.

COLPOSCOPY REFERRAL

This is indicated if the woman requests it after proper consultation, if the cervix is clinically suspicious of cancer, if the smear shows cervical dyskaryosis, or if symptoms persist and interfere with the woman's life in the broadest

sense including psychological distress. Women over the age of 40 presenting with PCB should be referred for gynaecological examination and onward referral for colposcopy if cancer is suspected. Contact bleeding or ectropion alone should not prompt referral unless other suspicious features are present or PCB has been persistent.

HYSTEROSCOPY

This should be considered in women with repeated episode of PCB especially when associated with spontaneous bleeding or intermenstural bleeding (IMB) and when the smear and colposcopy results reported to be normal. Outpatient hysteroscopy plus directed biopsy would be the preferred investigation.

DOCUMENTATION

Brief documentation must be maintained on type of abnormal bleeding, hormonal therapy, past history of bleeding and previous investigations, date and report of last cervical smear, examination findings, investigation and treatment carried out, and the plan for follow-up.

INFORMATION FOR WOMEN

Consideration should be given to the following points when informing women who present with symptoms of PCB:

- The most likely cause or causes.
- Whether serious causes like cancer are unlikely or other causes are more likely and further investigation is not indicated OR that the cause needs to be investigated.
- Information about investigations, if indicated.
- When to return for review if symptoms persist.
- That cervical smear is a screening test, and is only 80-90% sensitive and may therefore not detect underlying pathology in 10-20% of affected women.

RECOMMENDATION

There is need for robust studies on the epidemiology of PCB. The effectiveness of community-based education programmes aimed at the detection of cervical cancer, informing women to consult a doctor if they have ‘bleeding after sex' should be reviewed. The role of cytology and microbiology in the assessment of women with PCB in primary care should be evaluated.

It is recommended that every effort should be made to improve communication between the general practitioners and hospitals. More attention must be given to improve data collection to decrease the amount of missing data. The number of cases of some types of gynaecological cancers such as cervical is decreasing, and when combined with the current expansion of consultant's numbers, the end result must be an erosion of skills of individual clinicians when managing cancer cases. Simple measures, such as clearly defined referral pathways should help.

CONCLUSION

The management of post coital bleeding is inconsistent. The lack of evidence based approach and of a sensitive test has contributed to the poor management of women with PCB. Future research is necessary to revise the structured management we suggested for PCB and to determine the optimal investigation strategy in terms of clinical-effectiveness and cost-effectiveness.

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