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An Audit on the Outcomes of the Assessment of Post-Coital Bleeding at Colposcopy at Wellington Hospital in 2012-2013

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Abstract

Objectives: Post Coital Bleeding (PCB) is a common reason for referral to colposcopy clinic. This study investigated the outcomes of colposcopic assessment including histologic diagnosis from biopsies taken from women referred for post coital bleeding at Capital and Coast District Health Board (CCDHB),Wellington, New Zealand.

Methods: Women referred with PCB were identified fromour colposcopy database (Gynaecology Plus®) from 1 January 2012 to 31 December 2013, the- hospital notes were reviewed, and the demographic details, referral smear and outcome of colposcopy was recorded.

Results: Two hundred and nineteen women referred with PCB were seen during the study period. The median age was 27. Fifty two percent of women seen were nulliparous and 95% were pre menopausal. Twelve percent of women seen during this time were current smokers. At referral, 76% had a normal smear, 17% had LSIL or ASC-US, 5% did not have a smear and <1% had HSIL, ASC-H or inflammatory changes. Of the women referred, 50% had a biopsy taken at colposcopy, resulting in 13% being diagnosed with CIN1, 3% CIN2, 2% CIN3 and there was one case of cervical cancer.

Conclusion: Those patients with symptoms of PCB should be referred for colposcopy even if their smear was normal or low grade as the smear is only a screening test and should not be relied upon in symptomatic women.

Keywords: Post coital bleeding; Cervical intra epithelial neoplasia; Colposcopy; Cervical cytology, Cervical screening

Abbreviations and Acronyms: PCB: Postcoital bleeding; CCDHB: Capital and Coast District Health Board; LSIL: Low grade squamous intraepithelial lesion; ASC-US: Atypical squamous cells of undetermined significance; HSIL: High grade squamous intraepithelial lesion; ASC-H: Atypical squamous cells – cannot exclude high grade intraepithelial lesion; CIN-1: Cervical intraepithelial neoplasia – 1; CIN-2: Cervical intraepithelial neoplasia – 2; CIN-3: Cervical intraepithelial neoplasia – 3; LLETZ: Large loop excision of the transformation zone; PRINCess: Prediction of regression of CIN -2 – prospective multicentre trial of conservative management of CIN-2 in women under 25; HPV: Human papilloma virus.

Background

Post Coital Bleeding (PCB) is bleeding that occurs during or following sexual intercourse, not related to menstruation. It is estimated to have a prevalence of 0.7-9% [1]. Post coital bleeding can be caused by cervical polyps, cervicitis, ectropion, Cervical Intra-Epithelial Lesion (CIN) or cervical cancer [2]. A cervical ectropion is commonly seen in women taking combined oral contraceptive pills or during pregnancy due to remodelling of the cervix where the friable columnar epithelium is exposed to vagina and can bleed with intercourse [3]. It is important that this symptom be adequately investigated as this may be the first symptom of cervical malignancy which is reported by 11% of women diagnosed with cervical cancer [4]. One study found that 30% of women with PCB had significant pathology (CIN or cervical malignancy) and had a normal or inflammatory smear [5]. It is important that all women with symptoms of PCB be assessed colposcopically. The New Zealand Cervical Screening Guidelines, along with the Royal Australian and New Zealand College of Obstetrics and Gynaecology and the Australian National Centre for Gynaecological Cancers recommend that women with ongoing PCB and in whom chlamydial cervicitis has been excluded, should be referred for colposcopy [6-8].

Our retrospective study investigated referral smear in women withPCB and looked at the results of colposcopic assessment and biopsy.

Methods

Approval to perform this study was granted by the Capital and Coast District Health Board Audit Committee. Women referred with PCB were identified from our colposcopy database (Gynaecology Plus®6.Solutions Plus, 2016. Auckland, New Zealand) at Capital and Coast District Health Board from 1 January 2012 to 31 December 2013. Notes were then reviewed to record demographic details, the smear at the time of referral and the colposcopy findings. Colposcopy was performed by gynaecologists or trainee gynaecologists under supervision. The referral smear and the outcome of the colposcopic assessment was noted and linked to biopsies taken, and any treatment performed was documented.

Results

Two hundred and nineteen women were seen during the study period (January 2012 - December 2013) for post-coital bleeding. The median age was 27 years old. Fifty-two percent were nulliparous and 95% were pre-menopausal. Twelve percent of women were smokers at the time of their colposcopy appointment. Table 1 shows the smear result at the time of colposcopy referral, with 76% of women having a normal smear at the time of their colposcopy referral for post coital bleeding. As shown in figure 1, two percent of those with a normal smear had a high grade cervical lesion. Ten percent of women referred with PCB and a negative smear were found to have CIN 1 at colposcopy. These women would not have had the cervical abnormality picked up by the cervical smear screening test alone. The number of women with high grade CIN increased with increasing severity of the referral smear abnormality.

Smear Result	Number of women	%
Negative for Squamous Lesion	166	76%
Low grade/ Atypical squamous cells of undetermined significance	38	17%
High grade/Atypical squamous cells favouring high grade	2	1%
Reactive	1	<1%
Not done	12	5%

Table 1 – Smear result at referral

Fifty percent of the women referred for colposcopy had a biopsy taken. Table 2 shows the results of colposcopic examination in women referred with a normal smear. Eighty seven percent had a normal colposcopy with no biopsy taken or a normal biopsy result, 10% had CIN 1, 2.4% had high grade abnormalities on biopsy (CIN 2 or 3). There was one woman who was diagnosed with a squamous cell cervical cancer.

Histology result	Number of women	%
No biopsy taken, normal colposcopy	122	74%
Normal	22	13%
CIN 1	17	10%
CIN 2	2	1.2%
CIN 3	2	1.2%
Cervical cancer	1	0.6%

Table 2 – Histology results in women with normal referral smear

Table 3 shows the colposcopic examination findings of all women referred with PCB, with over 50% of women having a normal colposcopic examination or a cervical ectropion.

Examination Finding	n	
Normal	43	20%
Ectropion	80	37%
Polyp	9	4%
HPV/low grade changes	67	31%
High grade	15	7%
Malignancy	1	0.50%
Vaginal tear	1	0.50%
Cervical fibroid	1	0.50%
Inflammation	12	5%
Endocervical button post lletz	6	3%
Declined	1	0.50%

*Some patients had more than one examination finding so percentages do not add to 100.

Table 3 – Colposcopic examination findings - all women referred

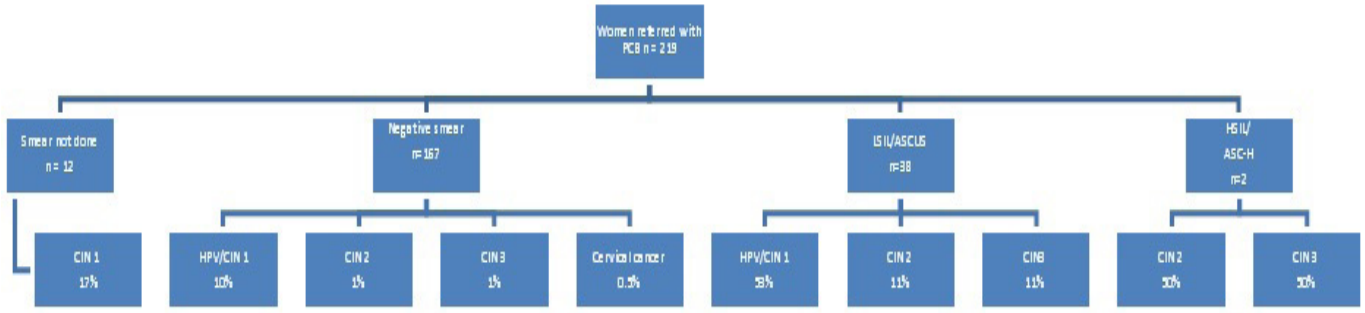

Figure 1 – Flow chart of biopsy results for each type of smear referral
Type of intraepithelial neoplasia found on histology result of those undergoing cervical biopsy seen with PCB (the percentage of women with each histological diagnosis from each referral smear group).

Table 4 shows that of those women who had a cervical biopsy, the most common was a normal result (33%), followed by CIN1 (24%) and inflammation (22%). Overall, the proportion of women with CIN in this group of women referred to our hospital with PCB was 13% for CIN 1, 3% for CIN 2 and 2% for CIN 3.

Histology result	n	Proportion of women that had biopsy taken	Proportion of all women referred with PCB
No biopsy taken	109		50%
Normal	36	33%	15%
Inflammation	24	22%	11%
HPV/CIN1	29	26%	13%
CIN2	6	5%	3%
CIN3	5	5%	2%
Cancer - SCC	1	<1%	<1%
Fibroid	1	<1%	<1%
Insuffficient	3	3%	1.4%
Benign polyp	5	5%	2%

Table 4 – Histology results for women that had colposcopically guided biopsies

The management options offered to women following colposcopy with or without biopsy are outlined in Table 5. Most women were not offered treatment and were reassured, but in those women with an ectropion, 19% were offered electrocautery under local anaesthetic. If high grade CIN was detected, patients were offered a large loop excision of the transformation zone (LLETZ). Some younger women with CIN 2 agreed to take part in the PRINCess study (Prediction of regression of CIN 2 – a prospective multicentre trial of conservative management of CIN2 in women under the age of 25).

Treatment	n	
Diathermy	21	19%
LLETZ	14	13%
Cone biopsy	0	0
Follow up colposcopy	18	16%
Ultrasound gynae	3	3%
Silver nitrate	11	10%
Radical hysterectomy	1	<1%
Antibiotics	1	<1%
Hysteroscopy + D&C	1	<1%
PRINCESS† study	1	<1%
No treatment after biopsy	38	35%

Table 5 – Treatments offered after biopsy

†PRINCess: The Prediction of Regression in CIN2 – a multicentre trial.

Discussion

This study confirmed that even in the setting of a normal cervical smear result, it is important that women presenting with PCB be referred for colposcopy due to the risk of CIN and cancer, as a cervical smear is only a screening test. As shown by our results, 57% of women referred had a normal colposcopic examination or the finding of an ectropion (table 3), however, pre-malignant abnormalities were found following examination and biopsy in a large proportion of women, with 24% of those undergoing a cervical biopsy having CIN1/HPV changes, 5% CIN 2 and 5% CIN3 (table 4). In this study 12% of the women diagnosed with CIN had a referral smear negative for intra epithelial neoplasia. Thirteen percent of women were offered a LLETZ following their initial assessment.The one woman diagnosed with cervical cancer was a recent immigrant whohad not been part of the New Zealand-National Cervical Screening Programme. However, her referral smear performed by her general practitioner was normal. This highlights the importance of symptomatic women being referred for colposcopic examination.

A retrospective study in the UK looking at outcomes of colposcopy in women referred for PCB with a normal smear result at referral found higher numbers with low grade changes and similar numbers of women with high grade changes on biopsy [9]. This study found that 22% of women had HPV or CIN 1 on biopsy, 1.9% had CIN 2 and 0.37% CIN 3. Another UK study [10] found that 10% of women referred with PCB had high grade CIN, three quarters of these women had a recent negative smear result. These results may differ slightly from our group as we included women in the normal smear group who had not had a cervical smear done at the time of referral as their last cervical smear was normal, within the last three years and were not due for another cervical smear, in keeping with the New Zealand Cervical Smear Screening Programme guidelines [8]. A prospective study in the UK found that 20% of women referred with PCB had significant pathology including cervical cancer, CIN (low and high grade), chlamydia or bacterial vaginosis. In those women who went on to have colposcopy, 28% had CIN, while 78% of those who had CIN or cancer had a negative smear history [11].

There is some controversy in the literature regarding whether women with a normal cervical smear result and normal appearing cervix presenting with PCB should be referred for colposcopy [10,12]. A survey of consultant gynaecologists in the UK [13] in 2009 found that there was a high number that felt that national guidelines for management was required. It varied if patients were seen in general gynaecology clinics or colposcopy clinics. Over three quarters would test for chlamydia and just under half would repeat the cervical smear if it was not due as per the screening programme. Most agree that PCB can be the only symptom of malignancy or high grade CIN and that these women should be referred for colposcopic assessment as a cervical smear is not 100% sensitive in diagnosing these abnormalities [8].

This study confirmed that those patients with symptoms of PCB be referred for colposcopy even if their smear was normal or had a low grade abnormality.

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