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■ Original Research Article

Post Coital Bleeding: A Five-Year Review of Outcome of Colposcopy Evaluation at a Tertiary Health Center in North-western Nigeria

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Abstract

Background: Bleeding following sexual intercourse is a source of worry and concern for both the patients and the physician. All cases need careful evaluation to rule out underlying malignancy especially in areas where prevalence of cervical cancer is high. **Objective:** The objective of this study is to evaluate the outcome of colposcopy among patients presenting with post coital bleeding in our hospital and to determine the incidence of abnormal cervical pathology among the referred women. **Methods**: This was a retrospective study of all women referred to the colposcopy clinic on account of postcoital bleeding from January 2016 to December 2020. Data were extracted from the colposcopy clinic record and patients' folders and analyzed using EPI INFO™ 7. **Results**: A total of 110 patients were referred to the colposcopy clinic on account of post coital bleeding. The mean age of the patients was 37.1 ±5.2 years. Only 48(47%) patients had cervical cytology before referral to the colposcopy clinic. Twelve patients (11.9%) out of the total study population had normal colposcopic findings. Half of the patients (50%) had cervical ectropion. Grade I and II lesions were detected in 8(7.8%) and 9(8.8%) patients respectively. Four patients (3.9%) were diagnosed with invasive cancer of the cervix and confirmed by histology. **Conclusion:** Cervical ectropion was the commonest cause of postcoital bleeding in our study population. Around 17% of the patients had premalignant and invasive cancer of the cervix. Patients with postcoital bleeding should be referred for colposcopy.

Keywords: Post Coital Bleeding, Colposcopy, Ectropion

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INTRODUCTION

Bleeding following sexual intercourse that is not related to menstruation is a source of worry for both the patient and the physician. The major fear, when it occurs, is the fear of underlying malignancy such as cervical cancer. Post coital bleeding can also occur in other non-malignant gynecological conditions such as polyps, ectropion, cervicitis or cervical lesions.

The prevalence of post coital bleeding among menstruating women varies from 0.7-9.0%.[1] The prevalence of cervical cancer in women with post coital bleeding ranges from 3-5.5% while the prevalence of cervical intraepithelial neoplasia (CIN)

ranges from 6.8-17.5%.[2,3] The risk of cervical cancer among women with post coital bleeding depend on their age at presentation with the highest risk of 1:2400 reported among women aged 45-54 years.[2]

There is no clear recommendation on the evaluation of post coital bleeding by recognized professional bodies such as the American College of Obstetrics and Gynaecology (ACOG) and the Royal college of Obstetrics and Gynaecology (RCOG).[4,5] Urgent referral for colposcopy is however recommended for women presenting with unexplained post coital bleeding.[6] Also, according to guidelines from the National Institute for Clinical Excellence (NICE), women with post coital bleeding should have full pelvic examination, including speculum examination, by the primary health care professional and those patients with clinical features suspicious of cervical cancer should be referred urgently.[7]

In developing countries where prevalence of cervical cancer is high, physicians are expected to use all available modalities of evaluation to exclude cervical cancer in patients presenting with post coital bleeding. This includes detailed history and pelvic examination. Pap smears and colposcopic examination of the cervix and vagina should be conducted where available. Although, there is no consensus agreement on which patients with PCB should be referred for colposcopy, our center adopted the strategy of conducting coloposcopic assessment of the cervix on all patients presenting with PCB. This may not be unconnected to the fact that the prevalence of cervical cancer is high in our community, where 11% of patients with cervical cancer present with postcoital bleeding.[8]

Anorlu et al reported a series of 885 women where dyskaryosis was significantly higher in symptomatic compare with asymptomatic cases (6.1% vs 3.4% P<0.01) with 9.3% of patients with PCB demonstrating dyskaryosis.[8]

Colposcopy involves systematic evaluation of the lower genital tract under magnification with special emphasis on the superficial epithelium and blood vessels of the underlying stroma. Beside locating abnormal epithelium, colposcopy allows for directed biopsy of suspected areas. The sensitivity and specificity of colposcopy compares favorably with other diagnostic testing methods.

Currently, there is no guidelines or evidence from randomized control trials to based recommendation on the management of PCB. We adopted direct referral of all patients with postcoital bleeding hence the justification to review the outcome of such referrals.

The objective of this study is to evaluate the outcome of colposcopy among patients presenting with post coital bleeding in our hospital.

METHODOLOGY

This was a five-year retrospective review of all patients referred to our unit for colposcopy on account of PCB from January 2016 to December 2020. Data were extracted from the colposcopy clinic record and patients' folders. All colposcopies were performed by consultant Gynaecologist train in colposcopy. The colposcopy was performed using vedio colposcope SLC 200B series (Goldway Industrial Inc. 2008). Strict adherence to the essential steps involved in colposcopy was ensured. An appropriate size speculum was inserted into the vagina to expose the cervix. Cotton wool soaked in Normal saline was used to remove excess mucous. The transformation zone (TZ) was then identified. The green filter was then used to observe the vascular patterns on the TZ. A 5% acetic acid solution was applied liberally on the cervix and appearance of acetowhite lesion is noted and graded using the Reid's colposcopic index. Application of Lugol's iodine causes a homogeneous dark brown staining of normal squamous epithelium.

Complete colposcopic examination requires observation of the original squamous epithelium, the entire transformation zone, the squamocolumnar junction and as much of the columnar epithelium of the cervix as possible. Biopsies were performed under colposcopic guidance after precisely localizing the abnormal areas using acetic acid and iodine tests. Specimens were obtained from the most abnormal areas. All observations were entered on a structured colposcopy chart and report sheet.

RESULTS

During our study period, 331 women were referred to the colposcopy clinic on account of abnormal smears, PCB and other clinical indications. We were able to retrieve 102 (out of 110) folders of patients with PCB and analyzed, given a retrieval rate of 93%.

The ages of the patients, as shown in table 1, ranged from 20 to 64 years and the mean age was 37.1 ± 5.2 years. Majority of the patients (82.3%) were between the ages of 30-49 years. Only 48 patients had cervical cytology before referral to the colposcopy clinic, out of which 38 reports were abnormal. Details were shown in table 2. The findings at colposcopy were shown in table 3. Twelve patients (11.9%) had normal colposcopic findings. Half of the patients

(50%) had cervical ectropion. Grade I and II lesions were detected in 8 (7.8%) and 9 (8.8%) patients respectively. Four patients (3.9%) were diagnosed with invasive cancer of the cervix.

Table 1. Age Distribution

Age distribution	Number	Percentage
20-29	12	11.8
30-39	49	48.0
40-49	35	34.3
50-59	5	49.1
≥60	1	1.0
Total	102	100

Table 2. Cytology Report

Cytology report	Number	Percentage
Normal cytology	10	9.8
Abnormal cytology	38	37.3
Cytology not done	54	52.9
Total	102	100

Table 3. Colposcopic Findings

Impression	Frequency	Percentage
Grade I lesion (LSIL)	8	3.8
Grade II lesion (HSIL)	9	8.8
Ectropion	51	50.0
Invasive cancer	4	3.9
Cervical polyp	9	8.8
Inflammation/cervicitis	6	5.9
Glandular lesion	3	2.9
Normal cervix	12	11.9
Total	102	100

Table 4. Outcome of Histology

Histological diagnosis	Number	Percentage
CIN 1	6	5.9
CIN 2	8	7.8
Invasive cancer	4	3.9
Cervical polyp	9	8.8
Chronic inflammation	10	9.8
Biopsy not done	65	63.7
Total	102	100

The outcome of histology of biopsies taken in patients with cervical lesion or suspicious cervix are shown in table 4. Cervical Intraepithelial Neoplasia (CIN) 1 and 2 were diagnosed in 6 and 8 patients respectively. Invasive squamous cell carcinoma was confirmed in 4 patients. Ten patients had features of chronic inflammation.

Table 5. Treatment

Type of treatment	Number	Percentage
Cryotherapy	12	11.8
Diathermy/thermal ablation	35	34.3
LLETZ (LEEP)	14	13.7
Polypectomy	9	8.8
Chemo-Radiation	4	3.9
Observation	28	27.5
Total	102	100

Treatment options provided to the patients were shown on table 5. Diathermy ablation was done on 35(34.3%) patients while Large Loop Excision of the Transformation Zone (LLETZ) was done on 14 patients with cervical lesion. The four patients with invasive cervical cancer were referred for Chemoradiation. Conservative care was offered to 28 patients who had no detected abnormality on colposcopy.

DISCUSSION

The proportion of patients referred to our colposcopy clinic on account of PCB is about 30.8%. It remains debatable on whether all women with PCB should be referred for colposcopy.[5,16] Referral rates varies depending on regions and recommendations of professional bodies. The NHS cervical screening programme guidance advises that women with unexplained cervical symptoms, such as post-coital bleeding, should be referred for further evaluation of the cervix by an experienced gynaecologist; who may refer these women for a further colposcopy examination.[17] The referral rate in our center is high probably because the clinic policy allows direct

referral for all patients with PCB irrespective of the outcome of cytology.

The mean age of 37.1 years in our study population correspond to the peak incidence of women with premalignant lesions especially CIN 2. Majority of our study population falls within this age group of 30-49 years. The mean age of invasive cervical cancer as reported by Shalini et al was 41.3 years while that of benign lesion was 32.9 years.[10] Also, in a systematic review, Shapley et al concluded that the risk that a woman developing postcoital bleeding has cervical cancer ranges from 1 in 44 000 at age 20–24 years to 1 in 2 400 aged 45–54 years.[18]

Among the 48 patients that had pap smear before referral, 38 had abnormal cytology. A retrospective one year audit conducted by Jha et al found that 8·33% of patients with a negative referral smear had a histological abnormality.[19] In patients with no referral smear they reported a rate of 24·24%.[19] Our clinic policy allows direct referral of patients with PCB for colposcopy. Also, the low utilization of cytological services is common in most developing countries like Nigeria. This could be due to non-availability, poor awareness or lack of National cervical cancer prevention programs.

Ectropion was the commonest finding on colposcopy in our study. It accounts for 50%of the colposcopic diagnosis. This is significantly higher than the findings in other studies were rates of 25-34% were reported.[11,12] A study conducted by Abu J el al[20] on determining the risk of finding significant cervical pathological abnormality in women referred to the colposcopy clinic primarily because of postcoital bleeding also reported 31% were secondary to cervical ectopy. However, a study conducted at Santosh University also reported incidence of 42.7% of patients with PCB had cervical ectropion.[21] This high incidence of cervical ectropy in our study population may not be unconnected to the fact that our study population were mainly referred in order to exclude cervical lesion or premalignacy. Cervical ectropion may be physiological and is sometimes seen in women taken oral contraceptive pills and in the pregnancy. The exposed columnar epithelium may bleed during sexual intercourse. Beside PCB, other symptoms of ectropion may be recurrent vaginal discharge. Ectropion does not require treatment if asymptomatic. Our patients with symptomatic cervical ectropion were treated with either cryotherapy or thermal ablation. An alternative therapy is to use acidifying agent such as boric acid suppositories 600mg at bedtime.[13] However, this is not readily available in our centre.

Premalignant lesions were colposcopically detected in 17(16.6%) patients. Reported incidences of CIN varies in previous studies from 6.8-11%.[10,11] CIN results from HPV infection. Compared to other regions of the world, the highest prevalence of 22.1% is reported in Africa. In Nigeria, HPV prevalence has been reported to vary in different parts of the country. It ranges from 10-36%.[22] The higher incidence in our center maybe due to increased prevalence of HPV in Nigeria. Anorlu et al reported 9.3% of patients with dyskaryosis had PCB.[8]

Diathermy ablation (Thermal ablation) and cryotherapy were offered to patients with symptomatic ectropion and those with LSIL. Cryotherapy was found to have similar efficacy compared to excision of lesion.[14] Its major disadvantage is the need for refrigerant gas; nitrous oxide or carbon dioxide. Loop Electrosurgical Excision Procedure (LEEP) also known as LLETZ (Large Loop Excision of the Transformation Zone) was done in 14patients with premalignant lesion. This is the standard practice in our center in patients diagnosed with CIN.[15]

The 4 patients with colposcopic features of invasive cancer were also confirmed on histology. They were all referred to Radiotherapy Center for chemo-radiation.

Conservative management was offered to 28 women (27.5%) in anticipation of spontaneous resolution. Shapley et al reported 51% spontaneous resolution at 2 years with no further signs of recurrence.[17]

CONCLUSION

The commonest cause of postcoital bleeding among our study population is cervical ectropion. The incidence of cervical premalignant lesion and invasive cancer is also relatively high at 17.6% justifying the need to evaluate patients with postcoital bleeding at the colposcopy clinic.

Recommendation. All patients with PCB should be fully evaluated in the clinic to exclude common benign causes before subsequent referral referred to the colposcopy clinic for further evaluation. Limitation: This was a hospital-based retrospective study with limited cohort. As such may not be generalizable.

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