

Frequency of Positive Endometrial Pipelle Biopsies in Patients with Abnormal Uterine Bleeding for Detection of Endometrial Carcinoma

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ABSTRACT

Aim: To determine frequency of positive endometrial biopsies in pre and post menopausal patients with abnormal uterine bleeding for detection of endometrial carcinoma.

Methods: This Cross-sectional study was conducted at Gynecological outpatient department Nishtar Hospital Multan from January 2013 to December 2013. Pre and post-menopausal women between 35-70 years with abnormal uterine bleeding fulfilling inclusion criteria were selected for the study. After detailed history and examination, informed consent, pipelle endometrial biopsy was taken. Biopsy of each patient was labeled and sent to histopathology department of Nishtar Hospital Multan for histopathology.

Results: Among 126 patients, majority (38.09%) were in age group 35-45 years and were multipara. 58.73% patients were post-menopausal and menorrhagia was the most frequent presenting complaint. Amount of tissue obtained on curetting with Pipelle was adequate in 96.82% of cases. The most frequent histopathology finding on pipelle endometrial sampling was secretary endometrium i.e., in 38.88% of cases. Endometrial biopsy for carcinoma was positive in only 5.55% of cases.

Conclusion: Pipelle biopsy is definitely a useful and cost-effective method. It can reduce the number of D &Cs performed in the operating theatre. The accuracy of the Pipelle is higher in postmenopausal women compared with premenopausal women.

Keywords: Abnormal uterine bleeding, pipelle endometrial biopsy, endometrial carcinoma,

INTRODUCTION

Endometrial sampling for histopathology is important in the assessment of abnormal uterine bleeding, which a major problem is accounting for 33% of outpatient gynaecological referrals¹. Its causes include a wide spectrum of diseases² and it accounts for most hysterectomies and nearly all endometrial ablative procedures³. Abnormal perimenopausal or postmenopausal bleeding is associated with endometrial carcinoma in approximately 10% of cases⁴.

Dilatation and curettage (D&C) is the gold stranded for endometrial sampling, but in 60% of cases, less than half of the uterine cavity is curetted, with added risk of general anaesthesia, infection and perforation. This has led to the advent of new and simple methods for endometrial sampling. The pipelle device can be used on an outpatient basis and is cost effective compared D&C¹. The Pipelle technique has shown to have high sensitivity in the detection of both endometrial cancer and atypical hyperplasia⁵.

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MATERIAL AND METHODS

It was a cross sectional study conducted at Gynaecological outpatient department Nishtar Hospital Multan, Pakistan from January 2013 to December 2013. The objective of this study was to determine frequency of positive endometrial biopsies in pre and post menopausal patients with abnormal uterine bleeding for detection of endometrial carcinoma. After approval from the hospital ethical committee, 126 pre and post-menopausal women between 35-70 years with abnormal uterine bleeding were selected for the study.

RESULTS

Among 126 patients, majority (38.09%) were in age group 35-45 years. The age group 46-55 was next in line. Analysis of parity distribution showed that majority of women were multipara (52.37%) i.e., Parity ≥ 2 . Only 4.76% of cases were nullipara. Among 126 patients, majority (58.73%) were post-menopausal (Table 1).

Menorrhagia was the most frequent presenting complaint i.e. in 69.04% of cases i.e. majority was having blood loss more than 80 ml per cycle. Intermenstrual and postcoital bleeding was reported in 21.42% and 9.52% of cases respectively (Table 2). Amount of tissue obtained on curetting with Pipelle

was adequate in 96.82% of cases, while it was inadequate in only 3.17% of cases. The most frequent histopathology finding on pipelle endometrial sampling was secretory endometrium i.e., in 38.88% of cases. Proliferative endometrium was the second most frequent finding among 126 cases. Endometrial biopsy for carcinoma was positive in only 5.55% of cases.

Table 1: Demographic features (n=126)

Age (years)	Cases	Percentage
35-45	48	39.0
46-55	41	32.5
56-60	27	21.4
61-65	07	05.5
66-70	03	02.4
Parity		
P0(Nullipara)	6	04.8
P1	28	22.2
P2	31	24.6
P3 or more	35	27.8
Menopausal status		
Pre-menopausal	52	41.3
Post-menopausal	74	58.7

Table 2: Bleeding Pattern (n=126)

Bleeding pattern	Cases	%age
Intermenstrual	27	21.4
Postcoital	12	09.5
Postcoital	87	69.1

Table 3: Histopathology findings of endometrium (n=126)

Findings	Cases	%age
Secretory	49	38.9
Proliferative	44	34.9
Atrophic	06	04.8
Endometritis	09	07.1
Adenomatous	07	05.6
Atypical hyperplasia	04	03.2
Carcinoma	07	05.6

DISCUSSION

Endometrial tissue sampling is one of the most common diagnostic procedure in gynaecology and the primary indication, by far, are in the assessment of woman with abnormal uterine bleeding⁶. Accurate diagnosis facilitates the implementation of optimal treatment strategies. Currently, out patient endometrial biopsy has replaced D&C as the first line diagnostic test in the evaluation of abnormal uterine bleeding as both have been shown to have similar accuracy⁷. The pipelle is a disposable polypropylene sheath with an inner plunger used for endometrial biopsy. It does not require a general anaesthetic. This device can be used by anyone trained in the use of a uterine sound & is simpler than the insertion of an IUCD⁸.

Table 1 is showing demographic features of the patients with abnormal uterine bleeding. Among 126 patients, majority (38.09%) were in age group 35-45 years and were multipara. 58.73% patients were

post-menopausal. These results are in agreement with a previous study conducted in Pakistan, in which Majority of patients were of age group 35-45 year⁹. In another study, a total of 100 pre-menopausal women with menorrhagia were evaluated. Out of total 33 cases were in age group 35–39, 27 in age group 40–44 and 40 in age group 45–49 years¹⁰. Another study shows that affected individual accounts for 72.99% in the age group 40-50 years¹¹. These age distributions of AUB explain the fact that they are likely to have menstrual irregularities in later reproductive years. The results of present study are also in line with another study where majority of patients with abnormal uterine bleeding were multipara or grand multipara and nullipara were least in number¹². Our observation disagrees with results of an International study where out of ninety-nine women, 45% were postmenopausal¹³.

Menorrhagia was the most frequent presenting complaint i.e., in 69.04% of cases i.e., majority was having blood loss more than 80 ml per cycle (Table 2). Dysfunctional uterine bleeding is responsible for 80% cases of Menorrhagia¹⁰. In the study performed by AZ Akhtar menorrhagia was present in 26(56%) of pts and 18(36%) patients were having irregular uterine bleeding¹⁴. The results of present study are comparable with a local study conducted in Pakistan, where menorrhagia was presenting complaint in 38% of cases and irregular periods were observed in 48% of cases¹⁵.

Amount of endometrial tissue obtained by any sampling technique is very important. In our study, the amount of tissue obtained was adequate in 96.82% of the cases. A study performed in 1998 in United States showed that Pipelle obtained adequate sample in 78 of 79 (98.7%) patients¹⁶. Same effect was highlighted by study of Guido et al in Pipelle biopsy sample was adequate in 63 of 65(97%). These studies show that Pipelle endometrial suction curette is an effective office device in evaluating patients with abnormal uterine bleeding¹⁷.

Histopathology findings on pipelle endometrial sampling is shown in Table 3. In a previous study conducted in Pakistan, proliferative endometrium was reported in 33%, cystic hyperplasia in 25% of cases. Cystic hyperplasia and proliferative endometrium were found in menorrhagic women over 40 years of age¹⁰. The results of present study also corresponds with another study from Pakistan, where on analyzing the histopathology results of the samples 34% were showing proliferative endometrium⁹.

A local study was conducted to determine endometrial histopathology in women presenting with postmenopausal bleeding. The most common histopathological diagnosis was senile endometrial atrophy (27%), followed by simple cystic hyperplasia

in (17%). Three cases of simple cystic hyperplasia had coexistent ovarian tumors. Glandular hyperplasia without atypia was seen in 6% and with atypia in 4%. Other causes were endometritis (13%), endometrial polyps (8%), proliferative phase endometrium (6%) and secretory phase endometrium (5%). Endometrial carcinoma was seen in (6%) cases. (8%) biopsy specimens were non-representative¹⁸. These findings disagree with the results of present study. In the present study, endometrial biopsy for carcinoma was positive in only 5.55% of cases. This finding is in agreement with a local study from Pakistan, where endometrial carcinoma was seen in 6% cases¹⁸ but disagrees with other where carcinoma endometrium was reported in 11.1%¹⁹. Ninety-nine women, of whom 45% were postmenopausal, endometrial cancer was diagnosed in four patients and endometrial hyperplasia in eight patients¹³. Endometrial carcinoma was reported in 0.4% of cases in another local study²⁰. It is same as that reported by Moghal²¹ and Valle²². Although others report somewhat higher as 1.3%²³, 2%¹ and 3.3%²⁴ but it does not seem to be substantially higher. In a study conducted by Sultana N, Median age was 55 years. Bleeding per vaginum was the commonest feature and endometrioid adenocarcinoma was the commonest histological type²⁵. In the present study one case of carcinoma endometrium was reported in the pre-menopausal group and six cases were reported in the post-menopausal group. Almost similar results were observed in the other study conducted in Pakistan where Adenoicarcinoma was found in single premenopausal women of 48 years¹⁰. The detection rate for endometrial carcinoma was higher in postmenopausal women compared with premenopausal women in other study. In both postmenopausal and premenopausal women, the Pipelle was the best device, with detection rates of 99.6% and 91%, respectively²⁶. One can easily speculate that by looking at various aspects of this study that Pipelle is attractive, convenient, quite reliable instrument for endometrial sampling. With the results in this study one can easily rely upon this endometrial sampling technique.

CONCLUSION

It is concluded that Pipelle biopsy is definitely a useful and cost effective method. It is convenient to the patients and physicians.

REFERENCES

1. Fakhar S, Saeed G, Khan AH, Alam AY. Validity of pipelle endometrial sampling in patients with abnormal uterine bleeding. *Ann Saudi Med* 2008; 28:188-91.

2. Sarwar A, Haque A. Types and frequencies of pathologies in endometrial curetting of abnormal uterine bleeding. *Int J Pathol* 2005; 3: 65-70
3. Menstrual problems: Menorrhagia and primary dysmenorrhagia. In: Edmonds D. *Dewhurst's text book of obs and gynae*. UK: Blackwell publishing 2007.p.399.
4. Creasman WT. Endometrial cancer. *Semin Oncol* 1997; 24: S1-140.
5. Heavy and irregular menstruation. In: Luesley D, Bakar P, editors. *An evidence-based text for MRCOG*. London: Edward Arnold 2010.p.569.
6. Behmanfar F, Khanchchian T, Mazoochi MS, Fahiminejad T. Diagnostic value of endometrial tissue sampling. *J Res Med Sci* 2004; 3: 123-5.
7. Kavak Z, Cayhan N. Combination of Vaginal ultrasonography and Pipelle sampling in the diagnosis of endometrial disease. *Aust NZ J Obstet Gynecol* 1996;36(1): 63 -6.
8. Clare J Seamark. Endometrial sampling in general practice. *Br J Gen Pract* 1998; 48: 1597-8.
9. Chaudry A, Javaid M. Clinical usefulness of pipelle endometrial sampling. *Pak Armed Forces. Med J* 2005;55: 122 -5.
10. Riaz S, Ibrar F, Dawood NS, Jabeen A. Endometrial pathology by endometrial curettage in menorrhagia in premenopausal age group. *J Ayub Med Coll Abbottabad* 2010; 22(3): 161-5
11. Misra JS, Das K. Cervical and endometrial cytology associated with over ten years CuT200 contraception. *J Obstet Gynecol India* 1998; 48: 78-83.
12. Yasmin F, Farrukh R, Kamal F. Efficacy of pipelle as a tool for endometrial biopsy. *Biomedica* 2007; 23: 116-9.
13. Vanden BT, Vandendael A, Van Schoubroeck D, Wranz PA, Lombard CJ. Combining vaginal ultrasonography and office endometrial sampling. *Obstet Gynecol* 1995; 85: 349-52.
14. Akhtar AZ. Pipelle. An acceptable outpatient technique for endometrial biopsy. *J Coll Phys Surg Pak* 1999; 9: 14-6.
15. Elsandabesee D, Greenwood P. The performance of Pipelle endometrial sampling in a dedicated postmenopausal bleeding clinic. *J Obstet Gynaecol*. 2005; 25: 32.
16. Manganiello PD, Burrows LJ, Dain BJ, Gonzalez J. Vabra aspirator and Pipelle endometrial suction curette. *J Reprod Med* 1998; 43(10): 889-92.
17. Guido RS, Kanbour SA, Rulin MC, Chirstopherson WA. Pipelle endometrial sampling. Sensitivity in the detection of endometrial cancer. *J Reprod Med* 1995; 40(8): 553-5.
18. Sarfraz T, Tariq H. Endometrial biopsy findings in postmenopausal bleeding. *Pak J Pathol* 2007; 18(1): 4-6.
19. Ghazi A, Jabbar S, Siddiqi N. Frequency of Endometrial carcinoma in patients with Postmenopausal bleeding. *Pak J Surg* 2005; 21(1): 41-4.
20. Khan S, Hameed S, Umber A. Histopathological Pattern of Endometrium on Diagnostic D & C in Patients with Abnormal Uterine Bleeding. *Annals* 2011; 17(2):166-70
21. Moghal N. Diagnostic value of endometrial curettage in abnormal uterine bleeding. *J Pak Med Assoc* 1997; 47: 295-9.
22. Valle RF. Hysteroscopic evaluation of patients with abnormal uterine bleeding. *Surg Gynecol Obst* 1981; 153: 521-6.
23. Sheth S, Hamper VM, Kurman R. A study between hysteroscopy with directed biopsies and curettage. *Am J Obstet Gynecol*. 1989; 158: 489.
24. Mencalgia L. Hysteroscopy and adenocarcinoma. *Obstet Gynecol Clin North Am* 1995; 22: 573-9.
25. Sultana N, Kiyani N. Histopathological features of endometrial carcinoma. *J Coll Phys Surg Pak* 2005; 15(9): 539-42.
26. Dijkhuizen FP, Mol BW, Brölmann HA, Heintz AP. The accuracy of endometrial sampling in the diagnosis of patients with endometrial carcinoma and hyperplasia: a meta-analysis. *Cancer* 2000; 15; 89(8): 1765-72.