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Comparison of Endometrial sampling with pipelle versus conventional dilatation and curettage in abnormal uterine bleeding.

1. MBBS
Postgraduate Resident Obstetrics & Gynecology
Madina Teaching Hospital, Faisalabad.
2. MBBS, FCPS
Associate Professor Obstetrics & Gynecology
University Medical and Dental College Faisalabad.
3. MBBS, FCPS, MCPS
Professor Obstetrics and Gynecology
University Medical and Dental College Faisalabad.
4. MBBS, FCPS, MCPS
Assistant Professor Obstetrics and Gynecology
University Medical and Dental College Faisalabad.
5. MBBS, FCPS
Assistant Professor Obstetrics and Gynecology
University Medical and Dental College Faisalabad.

Correspondence Address:
Dr. Humaira Zafar
Department of Obstetrics & Gynecology
University Medical and Dental College Faisalabad.
humairazafar75@gmail.com

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Farah Ashraf[1], Humaira Zafar[2], Mubashra Naz[3], Umber Fatima[4], Anees Fatima[5]

ABSTRACT… Objective: To compare the adequacy of endometrial sampling with pipelle versus conventional dilatation and curettage in patients with abnormal uterine bleeding. **Study Design:** Randomized Control Trial. **Settings:** Department of Obstetrics and Gynecology Madina Teaching Hospital affiliated with University Medical and Dental College Faisalabad. **Period:** July 2019 to June 2020. **Material & Methods:** A total of 90 patients with abnormal uterine bleeding were included in the study. Patients in Group A underwent endometrial sampling in OPD without anesthesia using pipelle. Patients in Group B were admitted, dilatation and curettage was done in operation theatre under anesthesia, endometrial tissue sent for histopathology. Patients were called in OPD on follow up visit with histopathology report. **Results:** Comparison of adequacy of endometrial sampling with pipelle versus conventional dilatation and curettage in abnormal uterine bleeding shows that 84.44% (n=38) in Group A and 91.11% (n=41) in Group B have adequate sample. P value was 0.33, showing insignificant difference. **Conclusion:** Pipelle has acceptable adequacy for endometrial sampling as compare to dilatation and curettage. It is an outpatient procedure, no need of anesthesia and cervical dilatation. Pipelle can be safely used as an alternative to conventional dilatation and curettage.

Key words: Abnormal Uterine Bleeding, Dilatation and Curettage, Endometrial Sampling, Pipelle.

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INTRODUCTION

Abnormal uterine bleeding is a common and serious issue in women.[1] Abnormal uterine bleeding has a immense effect on the quality of life causing morbidity, absence from work and restriction of daily activities.[2]

Assessment of abnormal uterine bleeding is recommended in women with AUB older than 45 years and in young women with history of unopposed estrogen exposure and persistent AUB to exclude endometrial pathology like malignancy.[3] There are different techniques for endometrial assessment in patients with abnormal uterine bleeding which includes ultrasonography, dilatation and curettage, outpatient endometrial biopsy by hysteroscopy or pipelle. It help to exclude endometrial pathology like hyperplasia and malignancy.[4]

Fractional curettage has been widely considered to be gold standard for endometrial sampling. On the other hand, the need of admission, general anesthesia, the risks of perforation and hemorrhage and cost effectiveness have made this choice less favorable.[5]

In the outpatient setting, endometrial sampling is an effectual and tolerable procedure for getting endometrial samples for histopathological evaluation. However around 10% of outpatient endometrial samples do not allow sufficient tissue.[6]

Even dilatation and curettage has failure rate although is more invasive as compare to pipelle.[7]

The pipelle aspirator is consist of a flexible polypropylene sheath and an inner plunger. It is single use, easy to handle and patients tolerate it

very well. It is a quick method and takes about 10 minutes.[8]

Previous studies have raised concern in regard to adequacy of endometrial sample and accuracy rate in diagnosing endometrial hyperplasia by pipelle method. The purpose of this study was to scrutinize the efficacy of pipelle biopsy in terms of adequacy of sample in diagnosing endometrial pathologies in comparison with gold standard dilatation and curettage.

MATERIAL & METHODS

This was a randomized controlled trial carried out in department of Obstetrics and Gynecology, Madina Teaching Hospital affiliated with University Medical and Dental College Faisalabad from July 2019 to June 2020.

Inclusion Criteria

- Women above 35 years of age with AUB
- Both peri and postmenopausal bleeding
- Endometrial thickness more than 12 mm in peri menopausal women
- Endometrial thickness above 4 mm in postmenopausal women

Exclusion Criteria

- Pelvic inflammatory disease
- Thyroid disorders
- Cervical malignancy
- AUB due to coagulopathy
- Uterine fibroids

Informed written consent from all patients and ethical committee approval (TUF/Dean/2019/39) from our institution were obtained. A total of 90 patients with abnormal uterine bleeding were incorporated in the study. Clinical assessment of each patient was settled by thourgh history and examination, ultrasound for pelvic pathology was done. Patients were divided into two groups randomly, each containing 45 patients by lottery method.

Patients in Group A underwent endometrial sampling in OPD without anesthesia using pipelle. The gadget is placed in the uterus through an undilated cervix under aseptic state. The piston is fully withdrawn to generate suction and rotated 360 degree, the distal part is brought from the fundus to the internal os to withdraw the sample. The device was taken out and sample collected into a container in formalin and sent for histopathology.

Patients in Group B were admitted, dilatation and curettage was carried out in operation theatre under anesthesia, endometrial tissue sent for histopathology. Patient were observed for any complication and then discharged. Patients were called were called in OPD for follow up visit with histopathology report. Data was scrutinize with SPSS version -22. Chi- square test was applied to compare the adequacy of sample. P value ≤ 0.05 was considered statistically significant.

RESULTS

A total number of 90 patients fulfilling the selection criteria were enrolled to compare frequency of adequate endometrial sampling with pipelle versus conventional dilatation and curettage in abnormal uterine bleeding.

Age distribution shows that 71.11 %(n=32) in Group A and 60%(n=27) in Group B were between 18-40 years of age whereas 28.89 %(n=13) in Group A and 40% (n=18) in Group B were between 41-60 years, mean ± sd was calculated as 36.2±9.25 years in Group A and 37.78± 10.14 years in Group B. (Table-I)

Frequency of menopausal status shows that 77. 78 % (n=35) in Group A and 68.89 %(n=31) in Group B are premenopausal and 22.22 % (n=10) in Group A and 31.11 %(n=14) in Group B were menopausal. (Table-II)

Comparison of adequacy of endometrial sampling with pipelle versus conventional dilatation and curettage in abnormal uterine bleeding shows that 84.44% (n=38) in Group A and 91.11% (n=41) in Group B have adequate sample. P value was 0.33, showing insignificant difference. (Table-III)

Age (in Years)	Group-A (n=45) No. of Patients %	Group-B (n=45) No. of Patients %
18-40	32 (71.11)	27 (60
41-60	13 (28.89)	18 (40
Total	45 (100)	45 (100
Mean+SD	36.2+9.25	37.78+10.14

Table-I. Age Distribution (n=90).

Menopausal Status	Group-A/B (n=45) No. of patients %	Group-B (n=45) No. of patients %
Premenopausal	35 (77.78)	31 (68.89)
Postmenopausal	10 (22.22)	14 (31.11)
Total	45 (100)	45 (100)

Table-II. Frequency of menopausal status (n=90).

Adequacy	Group-A (n=45) No. of Patients %	Group-B (n=45) No. of Patients %
Yes	38 (84.44)	41 (91.11)
No	7 (15.56)	4 (8.89)
Total	45 (100)	45 (100)

Table-III. Comparison of adequacy of endometrial sampling with pipelle versus conventional endometrial in abnormal uterine bleeding (n=90). P value=0.33

DISCUSSION

Abnormal uterine bleeding is a common gynecological symptom and effects 14-25 % women of reproductive age.[9] Evaluation of abnormal uterine bleeding is very important to exclude endometrial carcinoma, so that appropriate treatment is given to the patients according to nature of the disease and unnecessary surgical interventions should be avoided.[10,11]

Traditionally, dilatation and curettage is used to obtain endometrial sampling. Pipelle suction aspirator is a prototype of devices used to obtain endometrial sampling. These outpatient procedures of endometrial sampling had high accuracy rate to detect endometrial carcinoma.[2]

In our study we observed that there was no difference in both techniques which encourage the use of pipelle for endometrial sampling. Adequacy rate was 84% with pipelle and 91% with conventional dilatation and curettage in this study. A study conducted in Nawaz Sharif Social Security Hospital, Lahore demonstrated 97% adequacy rate in sample collection with pipelle.[13]

Another study conducted in Fauji Foundation Hospital, Rawalpindi where 98% patients had an adequate sample with pipelle biopsy as compared to conventional dilatation and curettage.[14]

Our results are also comparable to a study conducted at Rahim Yar Khan found that specimens were adequate in 94% patients with pipelle and 95% patients with D &C, adequacy of specimen was comparable in both groups.[15]

A study conducted by Razk et al. reported adequate sampling in 95.1% patients in pipelle group and 96.1% in D & C group.[16]

The results of our study are in contrast to a study conducted in Iran which reported that in pipelle group, 34% cases have insufficient samples as compare to 4% with dilatation and curettage.[17]

A study conducted by Mathew SM demonstrate that sample accuracy for dilatation and curettage is 93% and for pipelle biopsy it was 92%.[18]

Another study conducted in Kerala India on 210 patients reported that endometrial sample was adequate in 95 % patients with pipelle and in 100 % patients with dilatation and curettage [19].

The results also goes in consonance with a recent study by Tumrongkunagon S et al who describe accuracy rate of 91% for dilatation and curettage and 89% for pipelle endometrial sampling.[20]

Pipelle biopsy is a convenient technique, acceptable for the patients, noninvasive as compare to D & C and can be carried out in OPD.

CONCLUSION

Pipelle has acceptable adequacy for endometrial sampling as compare to dilatation and curettage. It is an outpatient procedure, no need of anaesthesia and cervical dilatation. Pipelle can be safely used as an alternative to conventional dilatation and curettage.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Farah Ashraf	Research conception, Data collection.	
2	Humaira Zafar	Author	
3	Mubashra Naz	Review and proof reading.	
4	Umber Fatima	Statistical modeling.	
5	Anees Fatima	Discussion.