

COMPARISON OF PIPELLE DE CORNIER WITH CONVENTIONAL DILATATION AND CURETTAGE IN TERMS OF PATIENTS' ACCEPTABILITY

Ghazala Shams

ABSTRACT

Objective: To compare the patient's acceptability of Pipelle and conventional dilatation and curettage (D&C) for endometrial sampling and to estimate the average cost of both the procedures.

Methodology: This comparative study was conducted at Department of Gynecology and Obstetrics Khyber Teaching Hospital Peshawar from March to June 2003. Patients complaining of abnormal vaginal bleeding and had endometrial sampling were included. The endometrial sample was obtained with Pipelle sampler in Outdoor Patient Department, while in case of inadequate tissue, double sampling technique with the same device was used to get appropriate sample. Patients requiring D&C were hospitalized. Patient acceptability was assessed on follow up visit by questionnaire by grading discomfort with procedure and hassle of admission to hospital. Cost of the procedure was estimated by collecting all the receipts of the expenditures.

Results: Out of 50 patients, there were 39 cases of dysfunctional uterine bleeding, 09 cases of infertility and 02 cases of postmenopausal bleeding. The histo-pathological report of 39 cases of dysfunctional uterine bleeding showed Proliferative phase endometrium, secretory phase endometrium, endometrial hyperplasia, Endometritis, Atrophic endometrium and inadequate tissue in 12, 12, 5, 6, 2 and 2 patients respectively with both procedures. In terms of patients' acceptability, all (100%) were in favor of Pipelle. Cost of one outpatient endometrial Pipelle biopsy was Rs.500/- as compared to Rs.3200/- for D&C needing hospital stay.

Conclusion: As compared to D&C, Pipelle sampling causes less discomfort and is acceptable to the patient. On average, it is more economical than conventional dilatation and curettage.

Key Words: Pipelle, Dilatation and Curettage (D&C), Endometrial sampling.

This article may be cited as: Shams G. Comparison of Pipelle De Cornier with Conventional Dilatation and Curettage In terms of patients' Acceptability. J Postgrad Med Inst 2012; 26(4): 418-21.

INTRODUCTION

Approximately one third of all the gynecological consultations in OPD are related to abnormal vaginal bleeding in this proportion rises up to 70% in peri and post menopausal years¹. Endometrial assessment is indicated after the age of 40 in patient with abnormal and irregular vaginal bleeding or before 40 years of age if patient has history of polycystic ovary to exclude

endometrial hyperplasia or endometrial carcinoma^{2,3}. Endometrial biopsy is important even if hysteroscopy is normal. The dilatation of cervix and curettage of the uterine cavity under general anesthesia has long been the gold standard for the assessment of abnormal vaginal bleeding because convincing evidence supporting this assertion is lacking⁴. This method requires lab investigations and hospitalization and carries the risk of general anesthesia. The frequency with which this procedure is done varies World wide for example the annual rate in 1989 in USA was 10/10,000 women while in UK it was 71.1/10,000 women.

This difference is due to more outpatient procedures being performed in USA Outpatient endometrial sampling procedure are considered to have the advantage of being simple, inexpensive and avoiding the need for general anesthesia. One of these procedures is Pipelle endometrial sampling. Pipelle is a flexible instrument made of soft plastic polypropylene material and works

Department of Gynecology and Obstetrics,
Govt. Maternity Hospital, Peshawar - Pakistan

Address for Correspondence:

Dr. Ghazala Shams,

Department of Gynecology and Obstetrics,
Govt. Maternity Hospital, Peshawar - Pakistan
E-mail: ghazala_shams@live.co.uk

Date Received: January 03, 2012

Date Revised: June 08, 2012

Date Accepted: June 14, 2012

using a suction mechanism. It can be inserted in the cervical canal without dilatation; it is ideal for obtaining endometrial biopsy in out patient. The aim of this study was to compare this method of endometrial sampling with dilatation and curettage in terms of patients' perception histopathological results as well as estimating the average cost of both the procedures.

METHODOLOGY

This study was conducted at Khyber Teaching Hospital to determine the clinical usefulness of this procedure with regard to sample adequacy, patients' perception, and histopathological results.

The histopathological results of Pipelle endometrial samples were compared with the results of samples taken by D & C. The study group comprises of women between 35 – 70 years of age, reporting to gynae OPD at Khyber teaching hospital Peshawar complaining of vaginal bleeding during the period Jan 2003 to March 2003. We divided these fifty patients in to four age groups. Group A (35-45), Group B (45-55), Group C (55-65) and Group D (65 & above). A detailed history was taken and menstrual abnormality was noted down, history of hormonal intake was also mentioned. Once the patient was counseled and procedure explained to her, she was called on any day of the last week of regular cycle. In case of irregular cycle it was done on any day of the cycle. The endometrial sample was obtained with

Pipelle sampler and in case of getting inadequate sample we used double sampling technique with the same device thus obtained excellent samples. In only a few difficult cases where insertion of the sampler was not possible, anterior lip of the cervix was steadied with volsellum forceps. If it didn't work the device was held in straight forceps to enable the insertion. As a last resort uterine sound was passed to allow some passage. If this was not possible the procedures was abandoned. The results of the Pipelle endometrial samples were analyzed with regard to adequacy of the samples by Pipelle and were compared with the samples taken by D&C the average cost of both the procedures and patients' perception was also analysed.

RESULTS

Out of fifty patients, 28(56%) were in the 35-45 years age group; 8 patients (16%) were in the 46-55 years age group; 6 patients (12%) in 56-60 years age group; and 8 patients (16%) were in 61-70 years age group. The mean age of the sample was 47.94 years. In these fifty patients, there were 39 patients of dysfunctional uterine bleeding, 09 infertility cases and 02 cases of postmenopausal bleeding.

The most interesting outcome of the study was that out of these fifty patients there were only two cases of endometrial carcinoma and they were picked up in endometrial biopsy both by Pipelle and D&C.

Table 1: Comparison of Histopathological reports in women with Dysfunctional Uterine Bleeding.

Histopathological Reports	Pipelle (N%)	Dilatation & Curettage (N%)
Proliferative phase	12 (%)	12 (%)
Secretory phase	12 (%)	12 (%)
Hyperplasia	05 (%)	05 (%)
Endometritis	06 (%)	06 (%)
Atrophic Endometrium	02 (%)	02 (%)
Inadequate Tissue	02 (%)	00 (%)

Table 2: Comparison of Histopathological reports in women with postmenopausal bleeding.

Histopathological Reports	Pipelle (N%)	Dilatation & Curettage (N%)
Papillary carcinoma	01 %	01 %
Clear cell carcinoma	01 %	01 %

Table 3: Comparison of histopathological reports in women with infertility.

Histopathological Reports	Pipelle (N%)	Dilatation & Curettage (N%)
Proliferative phase	06 %	06 %
Last Secretory phase	03 %	03 %

DISCUSSION

The study was conducted to assess the patient's perception of the Pipelle as a tool for endometrial biopsy in outpatient and the average cost of both the procedures. As the Pipelle doesn't require cervical dilatation due to its diameter and flexibility the procedure was very well tolerated and was acceptable to the patients.

In this study 95 % of the patients had the ultrasound and Pipelle done on the same day no one needed any lab investigations and no hospital stay. 41 % of the patient in our study had one or more associated conditions like anemia, diabetes mellitus, hypertension and obesity. They were all benefited, as their endometrial sampling required no anesthesia and thus possible risks cardiovascular or respiratory were avoided. Adequate samples were obtained in 94.88 % of the cases.

In this study, where dilatation and curettage was done in comparison with Pipelle not even a single case of endometrial hyperplasia or cancer was missed on Pipelle biopsy⁵. The detection rate of endometrial carcinoma with other sampling devices has been reported in similar figures for Novak curette (85%), and for Z-sampler (83%). So no other sampling devices have so far been proven to be better than Pipelle⁶. Direct visualization of the intrauterine cavity by hysteroscopy detects more pathology than these blind procedures, but has a low sensitivity for detecting endometrial hyperplasia without an associated biopsy. So hysteroscopy alone is not reliable tool to rule out endometrial pathology.

Another study has revealed 100 % sensitivity and a 100 % specificity of the Pipelle sampler for the diagnosis of endometrial carcinoma⁹. All the cases diagnosed as endometrial cancer has an endometrial thickness of more than 5mm on pelvic sonography¹⁰. On analyzing the histopathological results of the samples, 24 % were showing Proliferative endometrium. This indicated an ovulation to be the leading cause of abnormal vaginal bleeding.

The second commonest pattern was mild cystic hyperplasia 10 %. As far as the average cost of both the procedures is concerned, Pipelle is much cheaper as it cost only Rs 500 while the cost

of formal D&C procedure about Rs 3200. In Pipelle procedure patient has to stay for two to three hours as compared to dilatation and curettage where patient has to stay for 2-3 days including one day prior to procedure¹¹.

CONCLUSION

As compared to D&C, Pipelle sampling causes less discomfort and is acceptable to the patient. On average, it is more economical than conventional dilatation and curettage.

REFERENCES

1. Spencer CP, Whitehead MI. Endometrial assessment re-visited (a review). *Br J Obstet Gynecol* 1999;106:623-32.
2. Machado F, Moreno J, Carazo M, Leon J, Fiol G, Serna R. Accuracy of endometrial biopsy with the cornier Pipelle for diagnosis of endometrial cancer and atypical hyperplasia. *Eur J Gynaecol Oncol* 2003;24:279-81.
3. Leitao MM Jr, Kehoe S, Barakat RR, Alektiar K, Gattoc LP, Rabbit C, et al. Comparison of D&C and office endometrial biopsy accuracy in patients with FIGO grades 1 endometrial adenocarcinoma. *Gynaecol Oncol* 2009;113:105-8.
4. Mackenzie IZ, Bibby JG. Critical assessment of dilatation and curettage on 1029 women. *Lancet* 1978;2:566-9.
5. Stovall TG, Photopoulos GJ, Poston WN. Pipelle endometrial sampling in patient with known endometrial carcinoma. *Obstet Gynaecol* 1991;77:954-6.
6. Kauntiz AM, Masciello A, Ostorowski M, Rovira EZ. Comparison of endometrial biopsy with the endometrial Pipelle and Vabra aspirator. *J Reprod Med* 1988;33:427.
7. Larson D, Krawz B, Johnson K, Brostes S. Comparison of the Z-sampler and Novak endometrial biopsy instrument for in office diagnosis of endometrial cancer. *Gynaecol Oncol* 1994;54:64-7.
8. Naim NM, Mahdy ZA, Ahmad S, Razi ZR. The Vabra aspirator versus the Pipelle device for outpatient endometrial sampling. *Aust N Z*

- J Obstet Gynaecol 2007;47:132-6.
9. Huang GS, Gebb JS, Einstein MH, Shahabi S, Novetsky AP, Goldberg GL. Accuracy of preoperative endometrial sampling for the detection of high-grade endometrial tumors. *Am J Obstet Gynaecol* 2007;196:243.e1-5.
 10. Van den Bosch T, Van Schoubroeck D, Domali E, Vergote I, Moerman P, Amant F, et al. A thin and regular endometrium on ultrasound is very unlikely in patients with endometrial malignancy. *Ultrasound Obstet Gynaecol* 2007;29:674-9.
 11. Eddowes H. Pipelle a more acceptable technique for outpatient endometrial biopsy. *Br J Obstet Gynaecol* 1990;97:961-2.