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A Comparitave Study Of Histopathology Results Of Endometrial Pippelling And Conventional Fractional Currettage In Women Above 40 Years With Abnormal Uterine Bleeding

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Abstract

Background :This observational diagnostic test study was designed to compare accuracy of Pippelle endometrial sampling and fractional curettage in obtaining an adequate endometrial tissue sample.

Methods: A detailed clinical assessment of patient was performed in the outpatient department.Transvaginal ultrasonography was performed before the procedure. In group A, endometrial sampling was done in 50 patients using pipelle and in group B, another 50 patients' endometrial sampling was done by FC. In group C the diagnostic intervention of endometrial sampling was by Pipelle device before anesthesia with diagnostic reference standard and also endometrial sampling by FC under anesthesia. **Results**:Confidence interval of Pipelle in obtaining an accurate diagnosis was found to be 86.7 %.

Conclusion: Endometrial tissue sampling by using Pipelle comparing with dilatation and curettage in assessment of endometrium by histopathological examination in patients of peri-menopausal and postmenopausal age was found to be as reliable .

Keywords: Pippelle. Fractional curettage ,Postmenopausal bleeding

Introduction

Endometrial tissue sampling for histopathological examination is important in the assessment of endometrial pathology in perimenopausal and postmenopausal age.

Of the several office endometrial tissue sampling methods, the Pipelle is a safe, accurate, cost effective outpatient procedure, which avoids general anesthesia and has high sensitivity and specificity for detection of endometrial hyperplasia and endometrial malignancy.

Objectives

The objective of the study is

1. To determine reliability& accuracy of pipelle device in acquiring an adequate endometrial sample
2. To know the adequacy of tissue for histopathology.

Review Of Literature

The international federation of gynecology and obstetrics (FIGO) has approved a new classification system (polyps, adenomyosis, leiomyoma, malignancy and hyperplasia-coagulopathy, ovulatory disorders, endometrial causes, iatrogenic, not classified [PALM-COEIN]) for causes of AUB in non-gravid women of reproductive age[1].

Endometrial assessment in women with AUB or PMB[2] (EMAS)

The recent ACOG recommendation state that endometrial tissue sampling is a first-line option in women >45 years.

Review of clinical studies

Studies in women with known endometrial cancer have shown the Pipelle to be sensitive, although small localized lesions may be missed[3,4]. When compared with conventional D&C the Pipelle has

proved good[5] . It is less painful than the Novak, preserves the stromal architecture better, and is much cheaper[6]. Of the Vabra, which has been seen as good alternative to D&C, both methods were acceptable to women, although the Pipelle was less painful and cheaper.[7,8]

Materials And Methods

Study Design:

An Observational diagnostic test study of 150 patients, 40 years of age & older who presented in the OPD of Department of Obstetrics and Gynaecology,at a Tertiary care centre in Kerala, according to the defined criteria was undertaken to study the accuracy of Pipelle Endometrial sampling with Dilatation & Curettage and correlate with histopathology report, after obtaining informed consent for participation & obtaining fitness for the procedure.

Duration Of The Study

June 2016 – August 2018

Inclusion Criteria

Women of age > 40yrs who have enrolled in the study after obtaining informed consent and fitness for the procedure

Exclusion Criteria

- Active pelvic inflammatory disease
- Endometrial thickness of <4 mm
- Pregnancy
- History of known cervical stenosis
- Congenital anomalies of the uterus

Results

Out of 150 patients who underwent endometrial study, around 74.7% were between 40-50yrs, 20% were between 51-60yrs. Only 5.3%, i.e., 8 of 150 women were between 61-70 yrs. Out of 150 women who were included in the study, 76%, ie 94 women were perimenopausal and the remaining 24 % women (ie, 66 women) were postmenopausal.

Histopatholgical Examination

HPE	Group A	Group B	Group C
Proliferative endometrium	13(26%)	12(24%)	11(22%)
Secretory endometrium	12(24%)	14(28%)	12(24%)
Simple hyperplasia without atypia	7(14%)	4(8%)	10(20%)
Complex hyperplasia without atypia	3(6%)	6(12%)	7(14%)
Complex hyperplasia with atypia	1(2%)	5(10%)	2(4%)
Atrophic endometrium	3(6%)	6(12%)	2(4%)
Adenocarcinoma endometrium	2(4%)	1(2%)	1(2%)

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Necrotic material	4(8%)	0(0%)	2(4%)
Inadequate sample	5(10%)	2(4%)	3(6%)
Total	50(100%)	50(100%)	50(100%)

Among 39 perimenopausal patients 29 cases adequate specimen could be obtained and only inadequate specimen could be obtained in 10 cases by Pipelle procedure. Among 11 postmenopausal patients, 9 cases adequate specimen could be obtained and only inadequate specimen was obtained in 2 postmenopausal patients. By applying the Chi-square test value as found to be 0.008 and the difference between 2 groups were found to be statistically significant.

Among 36 perimenopausal patients adequate specimen by D&C could be obtained in 67 patients and only scanty specimen could be obtained in 19 patients. Among 64 postmenopausal patients, 47 patients yielded adequate specimen by D&C and 17 patients yielded only inadequate specimen. By applying Chi-square test value as found to be 0.526 and difference between 2 groups were not statistically significant.

Discussion

Our study is an observational diagnostic test study conducted over a period of 2 years in 150 patients of perimenopausal and postmenopausal age who were included according to the defined criteria. Pipelle samples and FC samples were taken separately in 100 patients to check the adequacy of the specimen.

Histopathological examination of Pipelle and D&C specimen

CI for HPE by Pipelle endometrial sampling was calculated in comparison with FC (HPE) and was found to be 86.2% since 38 patients of 50 patients by HPE of Pipelle endometrial sampling was found to have same HPE according to FC specimen. This implies that confidence interval of 86.2 %; 95% of study population lies within the C.I range of 85.54%-96.53 % while accounting for the whole population ,which shows that Pipelle endometrial sampling can be considered to be almost accurate as HPE by D&C specimen.

Difficulty of Pipelle procedure and mode of delivery-

Williams *et al* reported that nulliparity was significantly associated with insertion failure for Pipelle [9].Bakour *et al*[10] reported that there was no association between adequate sample and parity using multivariate regression analysis model.However mode of delivery did not seem to affect the ease of Pipelle endometrial sampling as per our observations.

Correlating menopausal status with adequacy of specimen in Pipelle endometrial sampling, difference between 2 groups were statistically significant with a value of 0.008.We observed in our study an association between Pipelle endometrial sampling and perimenopausal patients with regards to adequacy of specimen which means that Pipelle endometrial sampling could be more easily done in perimenopausal patients. Correlating menopausal status with adequacy of specimen obtained through FC, the difference between 2 groups were not statistically significant with a value of 0.526.

In a study comparing Pipelle with D&C, Shazia fakhar *et al* reports that an adequate sample was obtained in 98% of cases by Pipelle and in 100% of cases by D&C [11]. Pipelle had a sensitivity, specificity, positive predictive value and negative predictive value of 100% for diagnosing endometrial carcinoma, hyperplasia and secretory endometrium.

Conclusion

Endometrial tissue sampling by using Pipelle comparing with dilatation and curettage in assessment of endometrium by histopathological examination in patients of peri-menopausal and postmenopausal age was found to be as reliable.

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