

Comparison of the Accuracy of Pipelle Biopsy Method with the Method of Dilatation-Curettage in Endometrial Tissue Sampling to Establish a Histopathologic Diagnosis in Patients with Hysterectomy at Dr Soetomo Hospital, Surabaya

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ABSTRAK

Endometrial biopsy adalah prosedur dalam mendiagnosis kelainan rahim, terutama pada pasien dengan perdarahan pasca-menopause. Dilatasi dan kuretase adalah prosedur yang sering digunakan untuk menegakkan diagnosa perdarahan uterus abnormal. Namun, prosedur ini memiliki tingkat komplikasi yang cukup tinggi untuk jangka pendek dan jangka panjang. Teknik lain biopsi endometrium yang banyak digunakan adalah perangkat biopsi Pipelle. Tujuan dari penelitian ini adalah untuk membandingkan akurasi metode biopsi Pipelle dengan metode dilatasi-kuretase dalam pengambilan sampel jaringan endometrium untuk menegakkan diagnosa histopatologi. Penelitian ini dilakukan Rumah Sakit Dr Soetomo untuk seluruh sampel. Penelitian dilakukan pada bulan April 2011-September 2011. Penelitian ini adalah penelitian observasional analitik dengan cross-sectional studi. Dua puluh enam pasien yang diperoleh berdasarkan kriteria inklusi dan eksklusi. Pengambilan sampel jaringan endometrium dilakukan dengan menggunakan Pipelle biopsi diikuti dengan kuretase dan hasil histopatologis dibandingkan dengan operasi. Pipelle biopsi memiliki akurasi 19,2% saat pemotretan dengan jaringan kuretase endometrium memiliki akurasi 34,6% bila dibandingkan dengan hasil histopatologi operasi. Sebagai kesimpulan, Akurasi metode biopsi Pipelle lebih rendah daripada akurasi dengan menggunakan metode dilatasi-kuretase pada sampling jaringan endometrium. (MOG 2011;19:109-112)

Kata kunci: biopsi Pipelle, kuretase, sampling jaringan endometrium

ABSTRACT

Endometrial biopsy is a procedure in diagnosing abnormalities of the uterus, especially in patients with post-menopausal bleeding. Dilatation and curettage is a procedure that is often used to establish a diagnosis of abnormal uterine bleeding. However, this procedure has a fairly high complication rates for both short and long term. Another endometrial biopsy technique that is widely used is the Pipelle biopsy device. The objective of this study was to compare the accuracy of Pipelle biopsy method with the method of dilatation-curettage in endometrial tissue sampling to establish a histopathologic diagnosis. The study was conducted Dr. Soetomo Hospital for the entire sample. The research was conducted between April 2011 and September 2011. This research was observational analytic study with cross-sectional design. Twenty six patients were obtained based on inclusion and exclusion criteria. Endometrial tissue sampling was performed using Pipelle biopsy followed by curettage and histopathologic results were compared with surgery. Pipelle biopsy has an accuracy of 19.2% while shooting with curettage endometrial tissue has an accuracy of 34.6% when compared with histopathology results of operations. In conclusion, The accuracy of Pipelle biopsy method is less than that using the method of dilatation-curettage in endometrial tissue sampling. (MOG 2011;19:109-112)

Keywords: pipelle biopsy, curettage, endometrial tissue sampling

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INTRODUCTION

Abnormal uterine bleeding is a complaint that is common in patients with gynecological problems. In America, one study found abnormal menstrual complaints approximately 19.1% from 20.1 million visits in 2 years, about 25% of cases of gynecologic surgery is abnormal uterine bleeding problems.¹ In the world of 90-30% of women of childbearing age

experience symptoms of menorrhagia. Prevalence of abnormal uterine bleeding increases with age, the highest in the perimenopausal age. Menorrhagia caused by fibroids found up to 75% of all hysterectomy operations in the world. This data can serve as guidelines for physicians in diagnosing and treatment of abnormal uterine bleeding.² In 2007 the data content of poly rounds Dr. Soetomo Hospital showed that 12.48% of 3992 patients and 2008, some 8.8% of 3629 patients

with abnormal uterine bleeding problems than the sum of all visits in poly womb. It shows a fairly high rate. Dilatation and curettage is a procedure that is often used to establish a diagnosis of abnormal uterine bleeding, with the aim of distinguishing whether the type of lesion in the uterus is a malignancy or a benign abnormality. However, this procedure has a fairly high complication rates for both short and long term. Dilatation-curettage is generally also require general anesthesia and hospitalization (hospitalization), so lately a lot of debate about the security aspect, the accuracy results of the examination and inspection fees.

Endometrial biopsy is a procedure in diagnosing the action out patient clinic abnormalities of the uterus, especially in patients with post-menopausal bleeding and can be used for screening the presence of malignancy. Endometrial biopsy technique is very easy and can be done without the help of an assistant. By using an endometrial suction catheter is inserted into the cavity of the uterus through the cervix uteri. With the movement in and out while rotating the catheter will cause the tissue in the uterine cavity are sucked into the catheter.⁴

One of the endometrial biopsy technique that is widely used starting with de Cornier Pipelle biopsy device. These devices are put into use in 1984. When compared with the tools before Pipelle endometrial biopsy has a soft plastic catheter tip and the piston which serves to provide negative pressure. Based on a meta-analysis on the use of disposable Pipelle for biopsies in the diagnosis of atypical hyperplasia or endometrial cancer had a sensitivity of 81-99% and specificity 98%.³ Pipelle polyclinic widely used in patients who have complications due to lower than dilatation and curettage procedures. As well as in terms of convenience, Pipelle more acceptable to patients and more economical.⁵

MATERIALS AND METHODS

This research is obsevasional analytic cross- sectional design. Criteria for inclusion: never take action before endometrial sampling, Do elective surgery in hospitals Dr. Soetomo The exclusion criteria: operations are carried out emergency, diagnose must be upright. prior to hysterectomy, with lithotomy position after anesthesia performed by the method of sampling and further biopsy performed pipelle curette and conducted comparison of histerectomy and histopathological results.

RESULTS AND DISCUSSION

The research was conducted over five months, from April 2011 until September 2011. This study was conducted in patients undergoing surgery in hospital operating rooms dr. Soetomo Surabaya. The entire anatomic pathology examinations performed at the Laboratory of Anatomical Pathology hospital dr. Soetomo Surabaya. During that period we do a pathology result in 26 patients who meet inclusion and exclusion criteria. The average age of subjects in this study was 48 ± 6.6 years with the youngest age was 33 years old and the oldest is 68 years of age. A total of 26 subjects who participated in this study performed the operation with a diagnosis: 14 (53.9%) subjects with myoma uteri, 9 (34.6%) subjects with ovarian cysts, two (7.7%) subjects with solid ovarian tumor, and 1 (3.8%) subjects with uterine prolapse. Surgery is done on the subject of this study was 24 (92.3%) subjects performed TAH- BSO and 2 (7.7%) performed SVH-BSO. A total of 15 (57.7%) patients with postoperative diagnosis of intramural uterine leiomyoma, 5 (19.2%) patients with postoperative diagnosis of adenomyosis uteri, 4 (15.4%) patients with postoperative diagnosis of benign cyst, one (3.8%) patients with postoperative diagnosis of adenocarcinoma and 1 (3.8%) patients with post-operative diagnosis of ovarian ca. Statistical calculat-ions in this study using a significance level of 0.05 (5%) thus obtained apabla in statistical tests $p < 0.05$ defined significance, and if $p > 0.05$ not statistically significant mean

Taking Pipelle endometrial tissue by biopsy in this study obtained 2 (7.7%) subjects with histopathologic results of endometrial proliferative phase, four (15.4%) subjects with secretory phase endometrial histopathology results, 6 (23.1%) subjects with histopathologic results of endometrial simple hyper-plasia w/o atypia and 14 (53.8%) subjects with inadequate histopathology results (obtained only mucus only). Taking endometrial tissue by curettage in this study obtained 1 (3.8%) subjects with histopathologic results of endometrial malignancy (adeno-ca), 1 (3.8%) subjects with histopathologic results of endometrial endocervix with squamous metaplasia, 3 (11.5 %) subjects with the histopathologic results of endometrial proliferative phase, five (19.2%) subjects with secretory phase endometrial histopathology results, 7 (26.9%) subjects with histopathologic results of endometrial simple hyperplasia w/o atypia and 9 (34.6%) subjects with Inadequate histopathology results (obtained only mucus only).

Histopathologic results of operations on the distribution of this study obtained 1 (3.8%) subjects with histopathologic results of endometrial malignancy (adeno-ca), 1 (3.8%) subjects with histopathologic results of endometrial polyps, 2 (7.7%) subjects with histopathologic results of endometrial atrophy, 13 (50%) subjects with histopathologic results of endometrial proliferative phase, seven (26.9%) subjects with histopathologic results of endometrial secretory phase, and 2 (7.7%) subjects with histopathology results of simple endometrial hyperplasia w/o atypia.

Statistical analysis to test Fisher's Exact showed That the results of histopathology of endometrial tissue biopsy Pipelle obtained a significant difference with the results of histopathology of endometrial tissue by curettage is obtained 12 and 17 subjects with the pathology result adequate (the pathology result can be assessed) and 14 and 9 subjects with the pathology result Inadequate (pathology result results can not be assessed (p -value = 0.014). Kappa That analysis showed the results obtained meaningful agreement histopathologic examination of the between the between the Pipelle endometrial tissue biopsy with curettage (p = 0009).

This study uses statistical analysis by Mc Nemar test to show the results of comparative histopathology tissue Pipelle endometrial biopsy and curettage with histopathology results of operations. From this study obtained five (19.2%) biopsy histopathologic results pipelle same with histopathology results of operations and 21 (80.8%) biopsy histopathologic results differ pipelle with histopathology results of operations. While the decision of endometrial tissue obtained by curettage of 9 (34.6%) histopathological results with histopathological results of operations and 17 (65.4%) different from the results of histopathology results of operations. The difference was statistically significant results with p -value = 0034. Kappa analysis showed that the significant results obtained agreement between the histopathological examination of biopsy Pipelle endometrial tissue with surgery (p = 0.018). Making procedures with biopsy Pipelle endometrial tissue has an accuracy of 19.2%. While shooting with curettage endometrial tissue has an accuracy of 34.6% when compared with histopathology results of operations.

The distribution of histopathological results endometrium network retrieval methods Pipelle biopsy samples obtained from 26 of 12 (46.2%) samples that can be read while 14 (53.8%) samples can not be read or obtained samples judged to be inadequate. The results of this study is similar to a study conducted on 100 patients with abnormal uterine bleeding at Middlemore

Hospital, Auckland, New Zealand, which in this study found 33 (33%) Pipelle biopsy results can not be judged or inadequate. Other studies show that inadequate Pipelle biopsy samples ranged from 15-50%. The main cause of this difference is the ability and experience of the operator.⁶ Pipelle biopsy results showed none of the 26 samples that showed endometrial malignancy. This is because the incidence of endometrial cancer is associated with patient age. Existing data show trends of endometrial malignancy patients experienced approximately 15% at age 50-59 years, 35% at age 60-69 years, and 42% at age 70-79 years.⁷ The subjects of this study have an age range 33-68 years with an average age of subjects was 48 years old. In addition the research subjects who have under 50 years of age was 16 (61.5%) and subjects with age above 50 years is 10 (38.5%). Proportion of subjects with age below 50 years is one factor the low incidence of endometrial malignancy in this study.

The distribution of the removal of tissue histopathology results endometrium obtained by curettage and 17 (65.4%) samples that can be read while 9 (34.6%) samples can not be read or obtained samples judged to be inadequate. Similar results obtained on 397 study subjects who underwent curettage at the University of Bari in Italy. The results of this study showed 111 of 397 subjects or about 25.4% with the results of inadequate samples. Other studies also indicate inadequate sample on endometrial tissue sampling ranged between 20-37%.⁸ The comparison of the results of endometrial tissue sampling by Pipelle biopsy with curettage method. The results showed there were significant differences between the Pipelle biopsy with curettage surgery when compared with histopathology. The results of this study indicate there are two factors that cause this difference, that is, when viewed from the adequacy of Pipelle biopsy samples then have the result of inadequate samples was higher than curettage. This difference suggests that a better network adequacy on curettage. The main contributing factor in this difference is on Pipelle biopsy, endometrial sampling results is largely determined by the ability and experience of the operator. The second factor is the difference between making the network diagnostic accuracy of endometrial biopsy with Pipelle (19.2%) with curettage (34.6%).

This indicates that curettage has better accuracy compared to the Pipelle biopsy. Studies have been conducted have not shown consistent results about the accuracy of Pipelle biopsy. Research conducted on 40 subjects showed an accuracy of 97 Pipelle biopsy. While research on 100 subjects with abnormal uterine bleeding in New Zealand Pipelle biopsy showed an

accuracy of only 50. Though because it's still more research is needed to prove the effectiveness of the use of Pipelle biopsy to replace curettage in endometrial tissue sampling.

CONCLUSION

The accuracy of Pipelle biopsy method is less than that using the method of dilatation-curettage in endometrial tissue sampling.

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