

## Comparison of Pap Smear Examinations Result between Post LEEP and Electrocauter in Low-Grade Squamous Intraepithelial Lesion Patients

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### ABSTRAK

Kanker serviks menempati urutan kedua tertinggi di dunia setelah kanker payudara. Pap smear adalah skrining untuk mendeteksi tahap awal lesi prakanker. Tujuan dari penelitian ini adalah untuk mengetahui hasil pap smear kauterisasi pasca elektro dan LEEP pada pasien LSIL dan membandingkan pap smear hasil pemeriksaan antara kedua terapi. Penelitian ini merupakan retrospektif deskriptif dengan rancang cross-sectional. Penelitian dilakukan di klinik rawat jalan Onkologi RS Dr Soetomo Surabaya, mulai bulan Mei 2010 sampai April 2011. Ada 68 pasien yang menjalani LSIL kauterisasi LEEP atau elektro. Setelah kami melakukan pengecualian, kami menemukan 14 pasien yang menjalani electrocauterization dan 19 pasien yang menjalani LEEP memenuhi syarat untuk riset ini, dan kami melakukan pap smear 2-5 bulan setelah terapi. Peneliti mengenali dan membandingkan pap smear dari hasil kauterisasi elektro pos dan pasien pasca LEEP. Dari 19 pasien yang menjalani LEEP, hasil pap smear yang dilakukan 2-5 bulan kemudian menemukan bahwa semua 19 kasus (100%) menunjukkan hasil pap smear normal. Dari 14 pasien yang menjalani kauterisasi elektro, hasil pap smear yang dilakukan 2-5 bulan kemudian menemukan bahwa semua 19 kasus (100%) menunjukkan hasil pap smear normal. Sebagai kesimpulan, Hasil pap smear pasien LSIL yang telah menjalani kauterisasi dan LEEP umumnya negatif. Hasil pap smear pada pasien LSIL yang telah menjalani LEEP tidak berbeda dengan hasil pada pasien LSIL yang telah menjalani kauterisasi elektro. (MOG 2011;19:69-72)

**Kata kunci:** LEEP, kauterisasi elektro, pap smear, LSIL

### ABSTRACT

Cervical cancer ranks the 2nd highest disease in the world after mammary cancer. Pap smear is a screening to detect at early phase the precancerous lesion. The objective of this study was to recognize pap smear result post electro cauterization and post LEEP in LSIL patients and to compare pap smear examination result between both therapy. This research was a retrospective descriptive with cross-sectional study. Performed in Oncology outpatient clinic Dr. Soetomo Hospital Surabaya, starting from May 2010 until April 2011. There were 68 LSIL patients who underwent LEEP or electro cauterization. After we performed exclusion, we found that there are 14 patients who underwent electrocauterization and 19 patients who underwent LEEP eligible for this reasearch, and we performed pap smear 2-5 months after the therapy. Reasercher was trying to recognize and compare pap smear result between post electro cauterization and post LEEP patients. From 19 patients who underwent LEEP, pap smear result which was performed 2-5 months later found that all 19 cases (100%) showed normal pap smear result. From 14 patients who underwent electro cauterization, pap smear result which was performed 2-5 months later found that all 19 cases (100%) showed normal pap smear result. In conclusion, Pap smear result post-cauterization and post-LEEP in LSIL patients are generally negative. Pap smear results in LSIL patients who had LEEP are similar to those in LSIL patients who had electrocauterization. (MOG 2011;19:69-72)

**Keywords:** LEEP, electrocauterization, Papsmear, LSIL

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### INTRODUCTION

Cervical cancer ranks the 2nd highest disease in the world after mammary cancer, about 15% from various cancers in women, and also it ranks the 1st in developing countries, around 20% to 30% from cancers in women. In the western countries, only 4% to 6%. This big difference shows the importance of screening using several cervical cytological examination methods.<sup>1,2</sup> In Indonesia, cervical cancer ranks the highest amongst all 5 types of cancer in women.<sup>3</sup> To diagnose cancer is not difficult especially in the late

stage. But the problem is how to diagnose as early as possible and to do the right management when the lesion is still in preinvasive phase.<sup>3</sup> The main goal of cervical screening is to prevent cervical cancer. This can be achieved by early detection, eradication and follow up from the preinvasive lesion.<sup>3</sup>

The characteristic of cervical cancer is the long term progression and passing the preinvasive lesion phase that can be identified before it progresses to invasive lesion. Therefore, if it is detected before it becomes invasive there are many choices of treatment and many

of them are satisfying.<sup>4</sup> Pap smear is a screening to detect at early phase the precancer lesion so we can prevent the cervical cancer to become invasive. This examination is done in a person during preclinical phase without clinical symptoms. Pap smear examination is also cheap and can be accepted relatively by the clinicians and patients.<sup>5,6,7</sup>

In dr. Soetomo Hospital during year 2009, the sum of patients with cervical precancer lesion admitted to oncology outpatient clinic is 1239 patients, 1112 old patients and 127 new patients. From 127 new patients with CIN, we get 122 patients (96.1%) with LSIL consists of 110 patients with CIN I + HPV infection (86.6%) 12 patients with CIN I (9.4%) and 5 patients (3.9) with HSIL consists of 1 patient with CIN II (0.8%) 3 patients with CIN II + HPV infection (2.4%) and 1 patient with CIN III (0.8%).

From the total of 122 LSIL patients, 18 patients (14.8%) got conservative treatment, 4 patients (3.3%) got electrocauterization, 99 patients (81.1%) got LEEP and 1 patient (0.8%) was done conization. From 18 patients that got conservative treatment, 12 of them was lost to follow-up so the follow up loss percentage in conservative treatment is 66.6%, meanwhile on the LSIL patients that has done LEEP, from 99 patients, 14 were lost to follow up so the follow up loss percentage in LEEP is 14.1%

In women that has been performed LEEP in general there's an increase of preterm labour probability (7.9% versus 2.5%) and premature preterm rupture of membrane (3.5% versus 0.9%) Women that has been performed LEEP also have low birth weight babies (5.4% versus 1.9%).<sup>8</sup>

In dr. Soetomo Hospital during year 2009, we have quite a high rate of incidence in age 15-44 that is 79 cases (62.2%) whereas in that range of age is a reproductive age and if we perform LEEP it will cause a complication to the pregnancy, while electrocauterization which is a proper treatment for LSIL is rarely done, so we are willing to investigate is there any difference doing Pap smear examination in LSIL patients post-therapy electrocauterization and LEEP.

## MATERIALS AND METHODS

This research is a retrospective descriptive with cross-sectional study. Performed in Oncology outpatient clinic Dr. Soetomo General Hospital Surabaya, starting from May 2010 until April 2011. With method of sampling by Total sampling. We include all women with histopathology biopsy result LSIL that has complete data that has been performed LEEP/Electrocauterization during the period of research. Then we exclude several conditions

such as pregnant women, women aged above 45 or already menopause, women who receive immunosuppressive drugs, women who had sexual intercourse 2 months after both procedures. After LEEP or electrocauterization, we performed Pap smear examination 2-5 months after. Then the data from Pap smear examination were collected and compared between the 2 groups. The Pap smear result is negative if after 3 months post-therapy we got Pap smear result class 1 and 2, and is positive if the Pap smear result post-therapy is still LSIL or class 3 or above

## RESULT AND DISCUSSION

This research took the samples from oncology outpatient clinic in dr. Soetomo Hospital since May 1st 2010 until April 30th 2011. During this period, the sum of patients with precancer lesion is 643 patients, 47 old patients and 96 new patients. From 96 new patients, there are 68 LSIL patients and 2 HSIL patients and 26 referred patients from another hospital with IVA (+) and no abnormalities findings in colposcopy examination. From 68 HSIL new patients, we have quite high number on age 15-44 that is 49 cases (72.1%) then at the age 45-54 there are 16 cases (23.5%) on age above 54 there are 3 cases (4.4%) and age 0-14 there is 0 case (0%). Based on the parity, from 68 LSIL new patients, we got quite high incidence in 2-3 parities group, there are 46 cases (67.6%), in > 3 parities group there are 12 cases (17.6%) and in 0-1 parity group there is 10 cases (14.7%)

Based on the pathology anatomy examination on 68 LSIL patients, we got CIN I + HPV infection at all examination results. We can conclude from the research algorithm that from 96 new patients with precancer lesions there are 68 LSIL cases after we add the inclusion criterias we got 14 cases as the sample to have electrocauterization, all patients went to control therefore they become the research sample and 42 cases were performed LEEP, 11 patients were aged > 45 years old (exclusion criteria) 12 patients didn't go to control (drop out) so the sample becomes 19 cases. From 19 LSIL new patients that was performed LEEP we got high incidence on age 15-44 that is 17 cases (89.5%) then on age 45-54 there are 2 cases (10.5%) on group age > 54 there is 0 case (0%) and on group age. In LSIL patients that was performed electrocauterization, from 14 new patients we got on age 15-44 13 cases (92.9%) on group age 45-54 there is 1 case (7.1%) on group age > 54 there is 0 case (0%) and on group age 0-14 there is 0 case (0%).

Based on the parity, from 19 patients we got quite high rate on group 2-3 parities which is 14 cases (73.72%) on group 0-1 parity there are 5 cases (26.3%) on group > 3 parities there is 0 case (0%). Based on the parity, from

14 LSIL patients that were performed electrocauterization, on group 2-3 parities there are 10 cases (71.4%) group 0-1 parity there are 2 cases (14.3%) and group > 3 parities there are 2 cases (14.3%). From 19 LSIL patients that had been performed LEEP procedure and had Pap smear examination after 2-5 months we got 19 cases (100%) with negative Pap smear result and 0 case (0) positive Pap smear result so from this research we got cure rate on LSIL patients that had LEEP procedure 100%. From 14 HSIL patients that had been performed electrocauterization and had Pap smear examination 2-5 months after we got 14 cases (100%) with negative Pap smear, and 0 case (0%) with positive Pap smear so from this research we got cure rate from HSIL patients that had LEEP procedure 100%

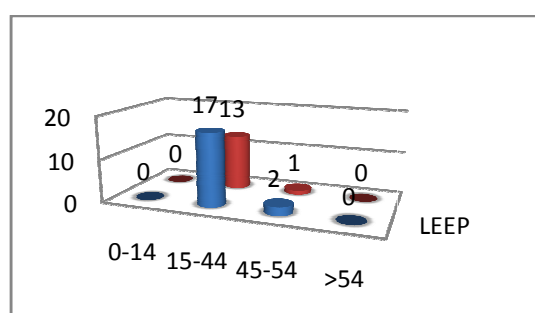


Figure 1. Distribution of new LSIL patients that were performed LEEP and electrocauterization based on age in oncology outpatient clinic dr. Soetomo Hospital since May 1st 2010 – April 30th 2011

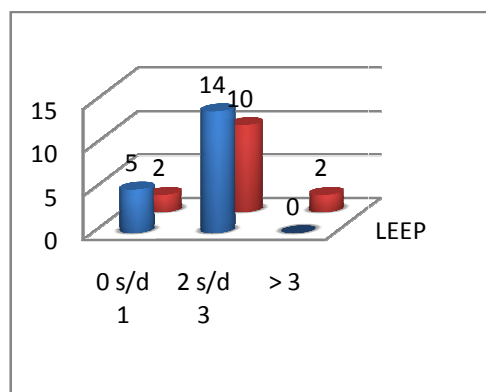


Figure 2. Distribution of new LSIL patients that were performed LEEP and electrocauterization based on parity in oncology outpatient clinic dr. Soetomo Hospital since May 1st 2010 – April 30th 2011

## DISCUSSION

Amongst many gynecologic malignant tumors, cervical and uterus cancer ranks the 1st in Indonesia. The age of

the patients are 30-60 years old, mostly on age 45-50 years old. Latent period from preinvasive phase (precancer lesion) becomes invasive in 10 years. Only 9% of women aged < 35 shows invasive cervical cancer, while 53% from CIS is in women aged below 35 years old.<sup>3</sup> Since the Pap smear examination was introduced by G. Papanicolaou, it becomes a reliable cytological examination to identify precancer lesion or early stage cervical cancer in women with no clinical symptoms.<sup>6,7</sup>

On women with CIN 1 or 2 and have satisfactory colposcopy result whether by excision or ablation, ASCCP is recommended. While in unsatisfactory colposcopy result we can perform diagnostic excisional procedure. If we find twice negative cytological examination, then the patient is suggested to have annual cytological examination. On teenagers who suffered CIN 2 or CIN 3, we can suggest one of the therapy or observe for 24 months using colposcopy and cytology on 6 months interval. Therapy is recommended in teenagers with CIN 2 or CIN 3 that is persisted until 24 months.<sup>9</sup>

During May 1st 2010 – April 30th 2011 period, there are 68 LSIL new patients that had been performed LEEP and electrocauterization, we got quite high rate on age 15-44 that is 49 cases (72.1%) then on group age 45-54 there are 16 cases (23.5%), group age > 54 there are 3 cases (4.4%) and group age 0-14 there is 0 case (0%). These finding doesn't differ much from the characteristic of LSIL patients age range during January 1st 2009-December 31st 2009 which is from 85 LSIL new patients we got high rate on age 15-44 which is 53 cases (62.4%) then on group age 45-54 there are 30 cases (35.3%) group age > 54 there are 2 cases (2.4%) and group age 0-14 there is 0 case (0%).

Based on the parity, from 68 LSIL new patients, we got quite high incidence in 2-3 parities group, there are 46 cases (67.6%), in > 3 parities group there are 12 cases (17.6%) and in 0-1 parity group there is 10 cases (14.7%) While the characteristic of LSIL patients age range during January 1st 2009-December 31st 2009 which is from 85 LSIL new patients we got high rate on group 2-3 parities which is 58 cases (68.2%) on group 0-1 parity there are 14 cases (16.5%) group >3 parities there are 13 cases (15.3%)

From 19 LSIL patients that had been performed LEEP procedure and had Pap smear examination after 2-5 months we got 19 cases (100%) with negative Pap smear result and 0 case (0) positive Pap smear result so from this research we got cure rate on LSIL patients that had LEEP procedure 100%. Compared to previous research during January 1st 2009-December 31st 2009 we got 85 LSIL new patients that had been performed LEEP procedure and had Pap smear examination after 2-5 months we got 84 cases (98.8%) with Pap smear

result class 2 and 1 case (1.2%) Pap smear result class 3 so from this research we got cure rate on LSIL patients that had LEEP procedure 98.8%. From 14 HSIL patients that had been performed electrocauterization and had Pap smear examination 2-5 months after we got 14 cases (100%) with negative Pap smear, and 0 case (0%) with positive Pap smear so from this research we got cure rate from HSIL patients that had LEEP procedure 100

## CONCLUSION

Pap smear result post-cauterization and post-LEEP in LSIL patients are generally negative. Pap smear results in LSIL patients who had LEEP are similar to those in LSIL patients who had electrocauterization.

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