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RESEARCH

Acuration of Visual Inspection on Asetat Acid in Low Squamous Intraepithelial Lesion Compared With Colposcopy in Gynecology Polyclinic Of Dr. M. Djamil General Hospital

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Abstract

LSIL is a low grade cervical cancer prelesion, which through prompt diagnosis and therapy, could reduce cervical cancer incidence to 90% and reducing mortality rate for 70-80%. Colposcopy will speed up diagnosis of cervical precancer lesions thus gaining prompt management, and beneficial for patients from afar. Combination of Pap's smear, colposcopy and biopsy is a good diagnostic package to perform in medical practice. This study was conducted using statistics diagnostic test with cross-sectional design. This research was carried out among women diagnosed with LSIL (Pap's smear) which then colposcopy was performed in Gynaecology Clinic in Dr.M.Djamil Hospital Padang, during July to December 2014. The study was performed to determine the definitive diagnosis of LSIL (Pap's smear). Total number of women included in this study were 70, which were divided into 2 groups: 35 women in VIA positive group and 35 in VIA negative group and statistical anal- ysis was performed using unpaired t test and chi square in SPSS 18.0 for windows. From statistical analysis using chi-square test, obtained a statistical significance between VIA test and colposcopy, it can be seen from the p-value 0.002 (p <0.05). There is a statistical significance between VIA test and colposcopy.

Keywords: *VIA, colposcopy, LSIL, biopsy*

INTRODUCTION

Cervical cancer is one of the main cancers that have become a threat to women in the world. In Indonesia it is the second leading cause of death after breast cancer, every 1 hour in the world a woman dies from cervical cancer. And in Jakarta every 3 days 2 women die from cervical cancer. More than 70% of women get examined when they are in an advanced stage, resulting in death, because cervical cancer does not directly cause symptoms. In fact, this cancer can be prevented. Primary prevention is done by education/ outreach and vaccination. Secondary prevention is done with early detection of cervical cancer to determine and treat pre-cancerous conditions. Tertiary prevention is useful to reduce complications or prevent the increasing stage of the disease.[1]

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Early detection of cervical cancer includes an organized screening program that targets the right age group and an effective referral system at all levels of health care. Some screening methods that can be used are cytological examination in the form of conventional Pap test or often known as Pap test and liquid-base cytology (LBC) examination, HPV DNA examination, and visual inspection in the form of visual inspection with acetic acid (VIA) and inspection visual with lugol iodin (VILI).[2]

Cervical cancer is considered a preventable disease because it has a long preinvasive time, cervical cytology screening programs are currently available, and the treatment of preinvasive lesions is quite effective. Although the screening program in the United States is well established, it is estimated that 30% of cervical cancer cases will occur in women who have never had a Pap test.[3]

The screening method to date is generally still using pap smears. The combined pap smear, colposcopy and biopsy are good diagnostic packages used for services. Pap smears are a well-known screening method. The sensitivity of pap smears when done every year reaches 90%, every 2 years 87%, every 3 years 78% and every 5 years reaches 68%.[4]

Analysis of LSIL Pap smear results conducted in Thailand, it turns out that the LSIL cytology conducted by colposcopy and histological examination found 36.3% HSIL, microinvation and invasive cervical cancer in 5%. These results indicated that the results of the LSIL Pap smear contain the risk of suffering from HSIL and cervical carcinoma. To avoid mistakes, LSIL should perform Colposcopy examination.[5]

In 1985 WHO recommended an alternative approach for developing countries with the concept of down staging for cervical cancer, one of which was by means of Visual Inspection with Acetic Acid (VIA). The application of 3-5% acetic acid to the cervix in the abnormal epithelium gives a white patch called acetowhite epithelium. This picture rose because of the high level of core density and protein concentration. This allows the introduction of white spots on the cervix with the naked eye/ without enlargement.[6]

With this background the writer wanted to conduct research to know the results of LSIL Pap smears by examining the accuracy of VIA compared to colposcopy and then biopsy at the Gynecology polyclinic of M. Djamil Padang General Hospital.

METHOD

This research is a diagnostic test. The study was conducted at the Gynecology Polyclinic of RSUP Dr. M. Djamil Padang, starting from July to December 2014. The population were all women who underwent Pap smear examinations at the Anatomy Pathology (PA) Laboratory at the Faculty of Medicine, M. Djamil Hospital PA Laboratory, and Ibnu Sina Padang Hospital PA Laboratory with Pap's smear results LSIL by meeting the inclusion and exclusion criteria. Samples that met the inclusion criteria were given an explanation of the purpose of the study and requested approval to participate in the study. Colposcopy Examination was done then

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assessed with Reid and Scalzi index, biopsy was performed, and then the samples were examined at RSUP M.Djamil PA Laboratory.

RESULTS AND DISCUSSION

Characteristics

In this study, based on the age characteristics, the mean age value in group CIN 1 was 46.62 ± 7.91, while the mean value in the group other than CIN 1 was 46.57 ± 9.60. Results of further statistical analysis, the difference in age at CIN 1 with other than CIN 1 was equivalent, this can be seen from the p value of 0.983 (p> 0.05). In this study the first age of coitus found the mean age value of the CIN 1 group was slightly higher than the mean value in groups other than CIN 1 (23.84 ± 4.84: 21.94 ± 4.65). This matter showed that the first age difference in coitus in patients with CIN 1 was equivalent to other than CIN 1, this can be seen from the p value of 0.100 (p> 0.05).

Age and age at first coitus were risk factors that play an important role in the development of precancerous cervical lesions. The longer coitus the more frequent cervical trauma events, the more likely it is for precancerous cervical lesions, the younger the first time coitus (<20 years) the risk of cervical cancer was 2x fold.

In this study, the highest frequency of education in the CIN 1 group was Higher Education with 20 people (66.7%) and the highest number of non-CIN 1 groups was 15 people (65.2%). The results of further statistical analysis, differences in educational levels in CIN 1 with other than CIN 1 did not have significant difference, this can be seen from the p value of 0.074 (p <0.05).

In this study, the highest frequency of jobs in the CIN 1 is a civil servant of 20 people (64.5%) and groups other than CIN 1 were mostly in high school as many as 21 people (56.8%). The results of further statistical analysis, differences in the level of education in CIN 1 with other than CIN 1 had differences that was not contributive, this can be seen from the p value of 0.215 (p <0.05).

In this study the most jobs in the CIN 1 group were 19 people (64.5%) and the most private groups besides CIN 1 were 18 people (35.5%).

The results of further statistical analysis, the difference in the level of husband's job in CIN 1 with other than CIN 1 had no significant difference, this can be seen from the p value of 0.650 (p <0.05).

In this study parity obtained the highest frequency of parity in the CIN 1 group were 2-4 children, as many as 27 people (38.6%) and the most groups besides CIN 1 were 2-4 children, as many as 31 people (44.3%). The results of further statistical analysis, the difference in parity in CIN 1 with other than CIN 1 had no significant difference, this can be seen from the p value of 0.395 (p <0.05). No association was found between age, parity, contraception, anti-HIV or

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menstrual status detected in HSIL or invasive cervical cancer found between age, parity, contraception, anti-HIV or menstrual status detected in HSIL or invasive cervical cancer.

In this study the most used contraception in LSIL patients was injection (hormonal). Several factors were considered as cofactors (accompanying factors) of cervical cancer including multiparity, smoking, hormonal contraception, sexual intercourse disease, and nutritional factors. The amount of parity increases the risk of suffering from cervical cancer (after adjusting for the number of sexual partners and the first time of intercourse). The risk of suffering from cervical cancer increases with the increase in the number of cigarettes consumed, but is not related to the duration of smoking. The use of hormonal contraception increases the risk of suffering from cervical cancer, and 10-year use increases the risk by up to two times. Sexual disease increases the risk of suffering from cervical cancer. Research on herpes virus infection, HIV proves an increased risk of cervical cancer.[7]

Maturation and glycogenization of the vaginal and cervical squamous epithelium is influenced by ovarian hormones. Estrogen causes maturation, glycogenization and desquamation. Progesterone inhibits superficial maturation. This explains why squamous epithelium appears atrophic after loss of ovarian function, with pale and bleeding subepithelial spots due to increased fragility of the blood vessels beneath it. The glycogenization of mature squamous epithelium from the vagina and cervix under the influence of estrogen causes strong absorption of iodine lugol solution. This is the basis of the Schiller Test, which is used to distinguish normal and abnormal tissue. Squamous or HPV-infected squamous epithelium shows cessation of maturation and no glycogenization and will resist iodine staining. This dysplatic epithelium can show abnormal deposition of keratin in the upper layer of the epithelium.[8]

Deviations in the pattern of social life are risk factors that play a role. Other factors that are considered to be risk factors include sexual factors for the first time at a young age, smoking habits.

VIA accuracy with Colposcopy

After t-test for LSIL samples conducted by Colposcopy showed that there was a significant difference ($p < 0.05$) between CIN 1 and groups other than CIN 1, namely $p = 0{,}000$. Not many studies have compared the accuracy of positive and negative with colposcopy.

This is consistent with Royal Women Hospital research (Victoria, Australia) as much as 15% of LSIL from pap smears to HSIL, and 24% of ASCUS to HSIL based on colposcopy examination.[9]

Nakornping Hospital, Thailand conducted a study of 254 patients who had an initial ASCUS Pap smear examination. After colposcopy, 47 (18.5%) women were detected with HSIL, 20 (7.9%) had invasive cervical cancer detected (Watcharin S, et al., 2010). Chonburi Hospital Thailand, conducted a colposcopy study of 230 LSIL patients from Pap smears, obtained HSIL

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(16.5%), LSIL (66.5%) and normal/ cervicitis (17%) (Sukson C, et al., 2012). Vajira Hospital, Bangkok, Thailand from 2001-2005 conducted a study of 226 women detected by LSIL based on Pap smear examination, after colposcopy then obtained 58.8% LSIL, 15% HSIL, and 1.3% microinvasive cervical cancer.

The screening method to date is generally still using pap smears. The combined pap smear, colposcopy and biopsy are good diagnostic packages used for services. Pap smears are a well-known screening method. Pap smear sensitivity when done every year reaches 90%, every 2 years 87%, every 3 years 78% and every 5 years reaches 68%.[4]

Analysis of LSIL Pap smear results conducted in Thailand, it turns out that the LSIL cytology conducted by colposcopy and histological examination found 36.3% HSIL, microinvation and invasive cervical cancer in 5%. These results indicate that the results of the LSIL Pap smear contain the risk of suffering from HSIL and cervical carcinoma. To avoid mistakes, a colposcopy examination should be done at LSIL.[5]

In ASCUS and LSIL with Human Papilloma Virus (HPV) a positive test is recommended for colposcopy. In the study, if ASCUS was observed for 2 years, the risk of suffering from NIS-II in ASCUS with positive HPV 16/18 was around 26.7% while negative HPV 16/18 was 13%. Based on these data, the American Society of Colposcopy and Cervical Pathology (ASCCP) does not recommend examining genotyping in ASCUS. HPV genotyping is also not recommended for routine screening.[10]

Colposcopy examination is considered to accelerate the diagnosis of ASCUS and LSIL lesions thus subsequent management can be done quickly so as not to drag on. Direct examination with colposcopy is very beneficial for referral patients from distant regions because it will save costs. Colposcopy examination, and subsequent management depends on the results of colposcopy and pathological specimens found.[11]

Colposcopy examination is a gold standard examination if abnormal pap smears are found. Colposcopy examination is an examination with enlargement, see abnormalities of cervical epithelium, blood vessels after administration of acetic acid. Colposcopy examination is not only limited to the cervix, but the examination includes the vulva and vagina.

CONCLUSION

VIA examination has sensitivity, specificity, positive presumption value, negative presumption value and low accuracy compared to colposcopy examination which has sensitivity, specificity, positive presumption value, negative presumption value and high accuracy. Positive VIA examination is found to be more common in HSIL than LSIL based on colposcopy-biopsy, whereas negative VIA is found mostly in LSIL.

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