A "See and Treat" Approach for High Grade Squamous Intraepithelial Lesion on Cervical Cytology

Kittipat Charoenkwan MD*, Jatupol Srisomboon MD*,
Sumalee Siriaunkgul MD**, Surapan Khunamornpong MD**,
Prapaporn Suprasert MD*, Chailert Phongnarisorn MD*,
Sitthicha Siriaree MD*, Chalong Cheewakriangkrai MD*

** Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University*
*** Department of Pathology, Faculty of Medicine, Chiang Mai University*

Objective : *To examine the final histologic findings as well as to correlate colposcopic and histologic findings in patients who had a high-grade squamous intraepithelial lesion (HGSIL) on the Pap smear and underwent colposcopy followed by LEEP on the "See and Treat" basis without intervening colposcopically directed biopsy.*
Material and Method: *The medical records of patients with HGSIL on cytology who underwent LEEP without prior cervical biopsy at Chiang Mai University Hospital over a 5-month period were reviewed. The authors summarized the final LEEP histologic results and correlated colposcopic and histologic findings in these patients.*
Results : *Of 55 patients who had a see-and-treat LEEP, 53 patients (96%) had a high-grade intraepithelial lesion or higher. There were 11 patients (20%) who had invasive squamous cell carcinoma. Of 4 patients with a low-grade lesion on colposcopic examination, all had a high-grade lesion or higher on final histology. Forty-four patients (96%) with high-grade impression on colposcopy had high-grade or more severe lesion on the final histologic diagnosis.*
Conclusion : *For patients with a high-grade lesion on the Pap smear, LEEP according to the "See and Treat" approach appeared to be a reasonable alternative to conventional colposcopically directed biopsy, especially in low resource settings.*

Keywords : *Cervical neoplasia, Colposcopy, High-grade squamous intraepithelial lesion, Large loop excision of the transformation zone, Loop electrosurgical excision procedure*

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Loop electrosurgical excision procedure (LEEP), also known as large loop excision of the transformation zone (LLETZ), is an effective and widely accepted treatment for cervical intraepithelial neoplasia (CIN) especially high-grade lesions. A definitive histopathologic diagnosis is also achieved with this technique, therefore the possibility of missing early invasive carcinoma is reduced. For patients with a high-grade squamous intraepithelial lesion (HGSIL) on the Papanicolaou (Pap) smear, the procedure is usually performed after confirming the histology of disease with a colposcopically directed biopsy[1].

However, in developing countries, early detection and subsequent appropriate management of CIN continue to be a huge public health problem. Apart from absence or failure of national screening programs, other factors such as a lack of experienced colposcopists and cytologists, inadequacy of effective colposcopic and cytologic units, and follow-up non-compliance by patients also have significant impact.

Many clinicians have advocated the alternative approach of "See and Treat" rather than initial colposcopically directed biopsy for all women with abnormal Pap smears[2-5]. Potential advantages of this approach include a more accurate histologic

Correspondence to : Charoenkwan K. Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Chiang Mai 50200, Thailand. Phone: 0-1992-0845, E-mail: kicharoe@med.cmu.ac.th

diagnosis due to a larger histologic specimen compared with that obtained from biopsy, a reduction of patient visits and follow-up noncompliance, a decrease in cost, and a shorter diagnosis to treatment interval[6]. This approach seems to be attractive especially for developing countries where shortage of experienced colposcopists, follow-up noncompliance, and healthcare costs are of major concern. However, the concern of overtreatment in patients who may not require excision of the cervix could not be overlooked. The authors conducted the current study to examine the final histologic findings as well as to correlate colposcopic and histologic findings in the patients who had HGSIL on the Pap smear and underwent colposcopy followed by LEEP according to the "See and Treat" approach without intervening colposcopically directed biopsy.

Material and Method

From February 2003 to June 2003, 55 patients who had HGSIL on the Pap smear underwent colposcopy followed by LEEP without a prior diagnostic biopsy in the Department of Obstetrics and Gynecology, Chiang Mai University Hospital. Either the Department of Pathology at this same institution or outside pathology laboratories depending on the original sites at which the patients had the Pap test done interpreted the Pap smear results.

Colposcopy was performed in all patients. Colposcopic impressions on severity of intraepithelial lesions are based on colposcopic characteristics of the lesion: acetowhite changes, border, vascular patterns, and atypical vessels. If invasive cancer was not suspected, LEEP was performed regardless of the colposcopic findings without intervening directed biopsy. Informed consent was obtained from each patient. In every case, the cervix was infiltrated with local anesthesia. A loop excision of the entire transformation zone and the entire visualized lesion was performed using a diathermy loop of variable size depending on the size of the cervix and the extent of the lesion. The electrical power for the loop electrode was set to 60 W cut and 40 W coagulation in blended mode. Endocervical curettage (ECC) was performed after the LEEP in the majority of cases and hemostasis was usually achieved by coagulation with subsequent application of Monsel's solution. All patients were given a 2-week follow-up appointment for planning on definitive treatment based on detailed histopathologic diagnosis of the LEEP specimens. The treatment was then arranged and commenced as soon as possible after the definite plan had been made.

All tissue specimens were evaluated by one of two gynecologic pathologists at our institution. The entire process of specimens handling, histopathologic evaluation and interpretation usually takes 1-2 weeks. This rate is comparable to that of averaged pathological laboratories in other major institutions with a high volume of submitted specimens. Relevant clinical, cytologic, and histologic data was prospectively stored in our computerized colposcopy database. The data was then retrospectively analyzed.

Results

Mean age of the patients in this study was 44 years (range 31-61). The final histopathologic diagnosis of LEEP specimens from all 55 patients is shown in Table 1. The pathologists were able to make a diagnosis in all the specimens without significant thermal artifacts that interfere with microscopic evaluation of the excised tissue. In this series of patients with HGSIL Pap smear, all had the final histologic diagnosis of neoplasia (at least low-grade intraepithelial lesion). The majority of the patients (76%) had HGSIL (CIN 2 or 3) and 11 patients (20%) had invasive carcinoma.

Of the 11 patients with a final diagnosis of invasive carcinoma, 10 had squamous cell carcinoma

Table 1. Correlation of colposcopy impression and LEEP histologic diagnosis

Colposcopy Impression	LEEP histologic diagnosis				
	Normal/Inflammation	LGSIL	HGSIL	Invasive	Total
Normal/Inflammation	0	0	1	0	1
LGSIL	0	0	3	1	4
HGSIL	0	2	35	9	46
Not recorded	0	0	3	1	4
Total	0	2	42	11	55

(7 Stage IA1, 3 Stage IB1 according to FIGO), whereas 1 had adenosquamous carcinoma (Stage IB1).

The distribution of histologic results for patients who had the Pap smear done and interpreted at Chiang Mai University Hospital and outside centers appeared to be similar.

A correlation of colposcopic impression and the histologic diagnosis is presented in Table 1. Of 4 patients with a low-grade lesion on colposcopic examination, 3 (75%) and 1 (25%) had high-grade and invasive lesions respectively on the final histology. Of 46 patients with high-grade impression on colposcopy, 44 patients (96%) had high-grade or more severe lesion on the final histology. There was one patient with no significant lesion on the colposcopic examination whose final histologic result turned out to be a high-grade lesion.

Discussion

The authors have shown in the current study that for patients with HGSIL on the Pap smear who underwent colposcopy followed by LEEP according to the "See and Treat" approach, the majority of them (76%) had a final histologic diagnosis that was consistent with the high-grade cytology result. This confirms a good correlation between cytologic and histologic findings in the group of patients with high-grade cytologic abnormality in previous studies[5,7,8]. In addition, a significant proportion of the patients in this study (20%) had a more severe lesion, i.e. invasive carcinoma than what would be expected from cytology alone. It means that the risk of overtreatment in this group of patients is quite low and the benefits of a more accurate histologic diagnosis from a larger specimen, a reduction of patient visit and follow-up noncompliance, a decrease in cost, and a shorter diagnosis to treatment interval clearly outweigh the risk.

The correlation of colposcopic impression and LEEP histologic diagnoses was good (76%) when colposcopic examination showed high-grade lesions. This is compatible with the 71% correlation in Szurkus and Harrison's study[9]. However, the colposcopic-histologic correlation was quite poor when low-grade colposcopic lesions were considered. This supports the concept of performing immediate LEEP where there is inconsistency between cytologic result and colposcopic findings in patients who have HGSIL on the Pap smear.

Even though the authors do recognize the weaknesses of the study which include the retrospective design with small sample size and the lack of central cytologic review, we still strongly feel that our data provides a solid support for the use of LEEP according to the "See and Treat" approach in patients with HGSIL cytology. With this management scheme, colposcopy would be used to identify suspicious lesions for invasive carcinoma for which intervening colposcopically directed biopsy is still worthwhile and to aid in selecting the proper-size of electrosurgical loop for LEEP.

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การดูแลรักษาผู้ป่วยที่มีผลการตรวจทางเซลวิทยาของปากมดลูกแบบมะเร็งระยะก่อนลุกลามขั้นสูง โดยใช้ห่วงไฟฟ้าตัดปากมดลูกทันที หลังจากทำการตรวจปากมดลูกด้วยกล้องส่องขยายทางช่องคลอด

กิตติภัต เจริญขวัญ, จตุพล ศรีสมบูรณ์, สุมาลี ศิริอังกุล, สุรพันธ์ คุณอมรพงศ์, ประภาพร สู่ประเสริฐ, ชัยเลิศ พงษ์นริศร, สิทธิชา สิริอารีย์, ฉลอง ชีวเกรียงไกร

วัตถุประสงค์ *: เพื่อศึกษาผลการตรวจทางพยาธิวิทยาของชิ้นเนื้อปากมดลูกที่ได้จากการตัดปากมดลูกด้วยห่วงไฟฟ้า และศึกษาเปรียบเทียบถึงความเข้ากันได้ระหว่างผลการตรวจทางพยาธิวิทยาดังกล่าว กับผลการตรวจปากมดลูกโดยใช้กล้องส่องขยายทางช่องคลอด ในผู้ป่วยที่มีผลการตรวจทางเซลวิทยาของปากมดลูกแบบมะเร็งระยะก่อนลุกลามขั้นสูง ที่ได้รับการดูแลรักษาโดยใช้ห่วงไฟฟ้าตัดปากมดลูกทันที หลังจากทำการตรวจปากมดลูกด้วยกล้องส่องขยายโดยไม่ทำการตัดชิ้นเนื้อตรวจก่อนในขณะที่ทำการตรวจด้วยกล้องส่องขยาย*

วิธีการศึกษา *: ได้ทำการรวบรวมข้อมูลจากบันทึกทางการแพทย์ของผู้ป่วยที่เข้ารับการรักษาที่โรงพยาบาลมหาราชนครเชียงใหม่ด้วยเรื่องผลการตรวจทางเซลวิทยาของปากมดลูกเป็นแบบมะเร็งระยะก่อนลุกลามขั้นสูง ในช่วงเวลา 5 เดือน โดยทำการพิจารณาและสรุปผลการตรวจทางพยาธิวิทยาของชิ้นเนื้อปากมดลูกที่ได้จากการตัดด้วยห่วงไฟฟ้า และผลการตรวจปากมดลูกด้วยกล้องส่องขยายทางช่องคลอด ในผู้ป่วยที่ได้รับการรักษาโดยใช้ห่วงไฟฟ้าตัดปากมดลูก*

ผลการศึกษา *: จากผู้ป่วย 55 คนที่เข้าร่วมการศึกษา พบว่าร้อยละ 96 มีผลตรวจทางพยาธิวิทยาของชิ้นเนื้อปากมดลูกเป็นมะเร็งระยะก่อนลุกลามขั้นสูงเป็นอย่างน้อย (ร้อยละ 20 มีผลการตรวจที่เข้าได้กับมะเร็งระยะลุกลาม) ความเข้ากันได้ระหว่างผลการตรวจปากมดลูกด้วยกล้องส่องขยาย กับ ผลการตรวจชิ้นเนื้อปากมดลูกทางพยาธิวิทยาจะต่ำหากผลการตรวจด้วยกล้องส่องขยายเป็นมะเร็งระยะก่อนลุกลามขั้นต่ำ และมีความเข้ากันได้สูงหากผลการตรวจด้วยกล้องส่องขยายเป็นมะเร็งระยะก่อนลุกลามขั้นสูง*

สรุป *: สำหรับผู้ป่วยที่มีผลการตรวจทางเซลวิทยาของปากมดลูกแบบมะเร็งระยะก่อนลุกลามขั้นสูง การรักษาโดยใช้ห่วงไฟฟ้าตัดปากมดลูกทันที หลังจากทำการตรวจปากมดลูกด้วยกล้องส่องขยายทางช่องคลอด โดยไม่ต้องตัดชิ้นเนื้อปากมดลูกส่งตรวจก่อนนั้น เป็นอีกทางเลือกที่มีความเหมาะสม โดยเฉพาะสำหรับสถานพยาบาลหรือระบบสาธารณสุขที่มีทรัพยากรต่ำ*