

# Impact of Electrocoagulation and Postoperative Medication on Cervical Adhesion in Postmenopausal Women Following LEEP: A Retrospective Cohort Study

Li Q, Cong Q

1 Obstetrics and Gynecology Hospital of Fudan University  
Correspondence should be addressed to Cong Qing, email: qingcong@fudan.edu.cn



## Introduction / Background

Loop electrosurgical excision procedure (LEEP) is a widely used treatment for cervical high-grade squamous intraepithelial lesions (HSIL), valued for its simplicity and low bleeding risk. However, cervical adhesion is a common complication, especially in postmenopausal women, who are at higher risk due to lower estrogen levels. This condition can hinder postoperative follow-up and lead to serious issues like cervical stenosis or atresia. Systematic research on the effects of intraoperative electrocoagulation and postoperative medication on cervical adhesion remains limited.

## Aims

To investigate the occurrence of cervical adhesion in postmenopausal women after LEEP, and to analyze the effects of intraoperative electrocoagulation and postoperative medication on cervical adhesion.

## Methodology

A retrospective analysis was conducted on 242 postmenopausal women diagnosed with HSIL and scheduled to undergo LEEP at the Obstetrics and Gynecology Hospital of Fudan University from January 2024 to September 2024. According to whether electrocoagulation was performed during the operation and whether estrogen based drugs or Chinese patent medicines were used to prevent adhesion after the operation, the patients were divided into the non - electrocoagulation + medication group, the electrocoagulation + medication group, and the electrocoagulation + non - medication group. Cervical adhesion was evaluated by colposcopy 6 months after the operation.

## RESULTS

Table 1. Baseline Characteristics and Postoperative Adhesion Rates Among Three Groups

Parameter	Group A (n=55)	Group B (n=86)	Group C (n=88)	F/ $\chi^2$	P-value
Age (years, mean $\pm$ SD)	57.35 $\pm$ 4.534	57.74 $\pm$ 5.49	58.95 $\pm$ 4.82	2.113	0.123
LEEP depth (cm, mean $\pm$ SD)	1.37 $\pm$ 0.206	1.39 $\pm$ 0.243	1.39 $\pm$ 0.257	0.202	0.817
LEEP volume (cm <sup>3</sup> , mean $\pm$ SD)	0.97 $\pm$ 0.515	1.00 $\pm$ 0.565	0.96 $\pm$ 0.482	0.162	0.851
Estrogen (n)	26	36	NA	0.399	0.528
Herbal medicine(n)	29	50	NA	0.202	0.817
Adhesion cases (%)	17 (30.91%)	22 (25.58%)	38 (43.18%)	6.276	0.043

Table 2. Postoperative Adhesion Rates Between Medication and Non-medication Groups

Group	Total cases	Adhesion cases (%)	$\chi^2$	P-value	RR (95%CI)
Medication (A+B)	141	39 (27.66%)	5.849	0.016	1.00 (Reference)
Non-medication (C)	88	38 (43.18%)			1.56 (1.09-2.23)

Table 3. Impact of Electrocoagulation on Postoperative Cervical Adhesion

Group	Cases	Adhesion cases (%)	$\chi^2$	P-value	RR (95%CI)
A	55	19 (34.55%)	0.476	0.490	1.00 (Reference)
B	86	22 (25.58%)			0.74 (0.44-1.24)

## Results / Conclusion

There were 54 patients in the non - electrocoagulation + medication group, 62 patients in the electrocoagulation + medication group, and 126 patients in the electrocoagulation + non - medication group. The incidence of cervical adhesion in the three groups 6 months after the operation was 40.74%, 29.03%, and 53.97% respectively. The incidence of cervical adhesion in the medication group was significantly lower than that in the non - medication group (34.48% vs 53.97%, P = 0.031).

Postoperative medication (estrogen or Chinese patent medicine) significantly reduces cervical adhesion after LEEP in postmenopausal women. Intraoperative electrocoagulation does not significantly affect adhesion rates when medication is used.