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=Abstract=

Prediction of Residual Neoplasia Based on Pathologic Severity and Resection Margin Status of Conization Specimens

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Objective: To evaluate the status of cone margins and severity of cervical neoplasia as predictors of residual lesions in the remaining cervixes, and provide guideline for further treatment or close follow-up.

Method: We performed a 3-year retrospective study and reviewed 95 patients who had undergone cervical conization followed by subsequent hysterectomy.

Result: The prevalence rates of positive cone margins were 33, 50, 44, 71 and 88% respectively in patients with cervical intraepithelial neoplasia(CIN)II, CIN III, cervical cancer stage Ia1, Ia2 and Ib1. The prevalence rates of positive residual lesions in postcone hysterectomy specimens were 0, 31, 19, 29 and 59% respectively in patient with CIN II, CIN III, cervical cancer Ia1, Ia2 and Ib1. Residual lesions were significantly more frequently found in patients with positive cone margins(51%) than in those with negative margins(4.8%). Positive predictive values of margin status for the presence of residual lesions were 0, 56, 36, 40 and 67% respectively. Negative predictive values of margin status for the absence of residual lesions were 100, 94, 94, 100 and 100% respectively.

Conclusions: (1) The prevalence of positive cone margin and residual lesion increased with more severe cervical neoplasia. (2) Positive cone margins had significantly higher risks of residual lesion than negative cone margins. (3) Positive cone margin does not invariably indicate the presence of residual lesion. (4) Negative cone margin does not ensure the absence of residual lesion.

Subsequent hysterectomy may be reserved for the patient with CIN III or cervix cancer having positive cone margin or invasive lesion, or the patient who is not reliable for continuous follow-up.

Keywords: Conization, Cervical Intraepithelial Neoplasia, Cervical Carcinoma, Residual Neoplasia, Resection Margin

가
가
가 가
가 가
(Cervical Intraepithelial Neoplasia,
CIN) 가 가
45)
, Moore 6
가
knife 가
가
(large loop excision of transformation zone,
LLETZ)
가
가
1995 3 1997 7
2 5
가
95
37가 (High Frequency Unit; Dr. Shi-
modaira's coagulator MGI 201)
, 1)
.2) , .3)

culum) 1cm (tena-
360 °
가
therapy probe H) 120 20 60
가 5mm (bended
semi-ball)

12
10% 4 12
3 , 6 , 9 4
2mm
Chi-square test p < 0.05

(CIN) II(n = 3), CIN III(n =
36), Ia1(n=32), Ia2(n = 7), Ib1(n = 17)
7)
30 가 43 (45.3
40 , 50
(Table 1).
CIN III가 55 가
(Table 2).

Table 1. Age Distribution

Age	Number of patients(%)
< 30	1(1)
30 ~ 39	43(45.3)
40 ~ 49	30(31.3)
50 ~ 59	12(12.5)
> 60	9(9.4)
Total	95(100)

Table 2. Indication of Conization

Number of Patients(%)	
ASCUS	7(7.4)
CIN	4(4.2)
CIN	4(4.2)
CIN	55(57.3)
Microinvasive SCC	24(25.3)
Others	1(1.0)
Total	95(100)

* ASCUS: Atypical Squamous Cells Undetermined
Significance

* CIN: Cervical Intraepithelial Neoplasia

* SCC: Squamous Cell Carcinoma

* Others: Adenocarcinoma

CIN II가 1 (33.3%), CIN III가
18 (50%), Ia1 14 (43.8%), Ia2가 5
(71.4%), Ib1 15 (88.2%) (Table 3).

CIN II CIN
III 11 (30.6%), Ia1 6 (18.8%),
Ia2가 2 (28.6%), Ib1 10 (58.8%)

가
(Table 4).

CIN II 2
CIN III Ia1 18
1 (5.6%)

Ia2 Ib1
(Table 5).
CIN II 1
, CIN III 18 10 (55.6
%) 8
가
CIN III 2
Ia1 Ia1 14
5 (35.7%) Ia2 5
2 (40.0%) Ib1 15
10 (66.7%)

(Table 6).

Table 3. Cone Pathology with Positive Resection Margin

Cone Pathology	Number of Patient(%)
CIN II	1/3(33.3)
CIN III	18/36(50.0)
CxCa Ia1	14/32(43.8)
CxCa Ia2	5/7(71.4)
CxCa Ib1	15/17(88.2)
Total	53/95(55.8)

* CIN: Cervical Intraepithelial Neoplasia

* CxCa: Cervical Cancer

Table 4. Cone Pathology with Positive Residual Tumor in Hysterectomy

Cone Pathology	Number of Patient(%)
CIN II	0/3(0)
CIN III	11/36(30.6)
CxCa Ia1	6/32(18.8)
CxCa Ia2	2/7(28.6)
CxCa Ib1	10/17(58.8)
Total	29/95(30.5)

* CIN: Cervical Intraepithelial Neoplasia

* CxCa: Cervical Cancer

(50.9%, 27/53) (4.8%, 2/42) (p < 0.05).

CIN II 0%(0/1), CIN III 55.6%(10/18),
Ia1 35.7%(5/14), Ia2 40%(2/5), Ib1
66.7%(10/15), CIN II
100%(2/2), CIN III 94.4%(17/18), Ia1
94.4% (17/18), Ia2 100%(2/2), Ib1 100%
(2/2) (Table 7).

Table 5. Residual Lesion Severity in Postcone Patient with Negative Margins

Cone pathology	Residual lesion in hysterectomy							
	None	Yes(%)	CIN	CIN	CxCa	a1	CxCa	a2 CxCa b1
CIN II(n=2)	2	0(0)	0	0	0	0	0	0
CIN III(n=18)	17	1(5.6)	0	1	0	0	0	0
CxCa Ia1(n=18)	17	1(5.6)	0	0	1	0	0	0
CxCa Ia2(n= 2)	2	0(0)	0	0	0	0	0	0
CxCa Ib1(n= 2)	2	0(0)	0	0	0	0	0	0
Total(n=42)	40	2(4.8)	0	1	1	0	0	0

* CIN: Cervical Intraepithelial Neoplasia

* CxCa: Cervical Cancer

Table 6. Residual Lesion Severity in Postcone Patient with Positive Margins

Cone Pathology	Residual Lesion in Hysterectomy									
	None	Yes(%)	CIN	CIN	CxCa	a1	CxCa	a2	CxCa	b1
CIN II(n=1)	1	0(0)	0	0	0		0		0	
CIN III(n=18)	8	10(55.6)	0	8	2		0		0	
CxCa Ia1(n=14)	9	5(35.7)	0	0	5		0		0	
CxCa Ia2(n=5)	3	2(40.0)	0	0	0		2		0	
CxCa Ib1(n=15)	5	10(66.7)	0	0	0		0		10	
	26	27(50.9)	0	8	7		2		10	

* CIN: Cervical Intraepithelial Neoplasia

* CxCa: Cervical Cancer

(93.1%, 27/29)

2

CIN III
Ia1.9) Lapaquette1) White 10)
60%

. Paterson 11)

가

가

79%

95

가

가 60%

30.5%(29/95)

가

가

. Buxton 12)

가

가

가

. Pelps 4)

47%,

23%

42%

50.9%(27/53),

4.8%

(2/42)

가

57%

. Paraskevaidis 3)

가

가

. White 8)

1 4

. Husseinzadeh 13)

56%

가

가

36%

가 88% 1. CIN II 33.3%,
가 CIN III 50% Ia1 43.8%
%, Ia2가 71.4%, Ib1 88.2%
가
CIN II , CIN
III가 30.6%, Ia1 18.8%,
가 Ia2 28.6%, Ib1 58.8%
가
Cha- 가
ng 14) 가
1 2.
10.1% 가
4.8% 50.9%
4.8%
가
3.
가 49.2%
4.
가
4.8%
가

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