

Excisional treatment for cervical intraepithelial neoplasia: Experience of RIPAS Hospital

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INTRODUCTION

Excisional method is the most recommended for treatment of cervical intraepithelial neoplasia (CIN) because it provides a good histological specimen.¹ Before excision, it is mandatory to evaluate the abnormality with colposcopy with or without biopsy.²

The main concern of excisional treatment is incomplete removal of the lesion. A study showed that the entirely lesion was left un-excised in 2.2% and margins were not clear in 13.5%.³ The rate increased to almost 50% in one study.⁴ A meta-analysis found that 23% had at least one excisional margin involved with the disease.⁵

Different studies have proved that residual or recurrent disease is associated with some risk factors: incomplete excision^{4,5}, older age⁶, post-menopausal status⁷, use of LEEP and higher HIV RNA level.⁸

In our centre (RIPAS Hospital), patients with CIN are treated with traditional step by step approach. This study evaluated our practice of cervical excision including surgical specimen quality and completeness of excision aiming to improve the diagnostic and therapeutic standards in management of CIN.

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MATERIALS AND METHODS

Forty-eight patients underwent cervical excisional treatment in the period between 1st January 2010 and 30th June 2011 in RIPAS hospital (550 bedded hospital), Brunei Darussalam. For this retrospective study, 18 case-cases in which treatment steps were adequately and systematically recorded, were selected for evaluation of communication practice and 26 histology reports were reviewed for treatment standard.

RESULTS

Out of 18 women, 17 (94.4%) had prior colposcopy and 16 had biopsy. Acetic acid was used in 22.2% of the cases. In 50% of cases, excisional biopsy revealed the same histology as compared to initial biopsy and 16.7% had higher grade. In 16.7%, invasive cancer was reported only on excisional biopsy histology but not on initial histology.

No case was complicated with primary haemorrhage but one patient needed readmission for treatment related complications.

All women had follow-up within three months following treatment and follow-up smear revealed normal in 66.7%. Abnormal smear was found in 13.3% and the report was not ready in three patients.

As shown in Table 1, specimen sent in single piece was in 77% and 73% had a marker at 12 o'clock position. Specimen depth in the deepest part was > 7 mm in 46.2% and 92.4% were reported as representative specimen. The margin was

Table 1: Analysis on quality histopathological specimen

		LLETZ n (%)	Cone n (%)	Total n (%)
Number of pieces in the specimens	Single	4 (80)	16 (76.2)	20 (77)
	More than one	1 (20)	5 (23.8)	6 (23)
	Total	5 (100)	21 (100)	26 (100)
Marker put in the 12 o'clock position	Present	3 (60)	16 (76.2)	19 (73)
	Absent	2 (40)	5 (23.8)	7 (27)
	Total	5 (100)	21 (100)	26 (100)
Depth of cervical excision	>7mm	3 (60)	9 (42.9)	12 (46.2)
	≤ 7mm	2 (40)	9 (42.9)	11 (42.3)
	Not mentioned	0 (0)	3 (14.2)	3 (11.5)
	Total	5 (100)	21(100)	26 (100)
Representative specimen	Yes	4 (80)	20 (95.2)	24 (92.3)
	No	1 (20)	1 (4.8)	2 (7.7)
	Total	5 (100)	21 (100)	26 (100)

involved in 19% of knife cone specimens but none in LLETZ group. Margin involvement could not be reported in two cases (Table 2).

Additional data shown in Supplementary texts available (Table 3 and Figure 1).

DISCUSSION

Effective communication is crucial in management of CIN because women certainly experience some degree of anxiety and other psychological symptoms at any stage of treatment and follow-up especially pre and post surgery.⁹ However, it is hard to assess validity and completeness of information given to the women.

It is alarming to note that use of acetic acid was reported only in one-fifth of procedures audited because diagnostic value of acetic acid is undeniable in localising the abnormal area.¹⁰ One patient underwent definitive treatment without prior colposcopy while achievable target for this vital step is 100%.

None of the patients had primary haemorrhage therefore less than 5% standard is met. This finding is satisfactory because a significant proportion of the women in this study had cold knife conisation which is considered to be associated with more bleeding than other methods. But readmission rate due to treatment complication was 5.5% exceeding the expected rate of less than 2%.

Table 2: Margin involvement with disease.

Margin	LLETZ	Cone	Total
Clear	3 (60)	13 (61.9)	16 (61.5)
involved	0 (0)	4 (19)	4 (15.4)
Not given	1 (20)	3 (14.3)	4 (15.4)
Unable to report	1 (20)	1 (4.8)	2 (7.7)
Total	5 (100)	21 (100)	26 (100)

We discovered some deficiencies in providing cervical excision specimen for histological evaluation. Specimen sent in single piece was 77% while the target was 80%.² Although it is a very fundamental step to put a marker at 12 o'clock position of specimen to give an orientation for the pathologist, 26% of specimens were sent without a marker. Besides, the depth was greater than 7 mm in less than 50% of the specimen showing short of the target standard 95%.² These findings highlighted that surgeons' technical skill needs to be enhanced. The colposcopists practising in the UK need certification and three-yearly re-certification by BSCCP/RCOG.² It would not be sensible to establish similar guideline in local setting but the true fact of need for close supervision and monitoring of the trainees should not be ignored.

The predictive value of a colposcopic diagnosis of a high grade lesion should be at least 65%² and 64% was achieved in RIPAS colposcopy clinic as reported in our previous study.

The margin involvement rate in this study was 15.4% that is comparable previous studies findings^{1, 3, 5} however it is hard to understand that it was not reported in 15.4% and was not reportable in 7.7% while the majority were knife cone specimens which usually provide clean cut margins.

All women had follow-up within three months achieving the target in this aspect.² However, residual dyskaryosis (13.3%) exceeds the auditable standard of less than 10%² and this might also be a reflection of technical imperfection during excision.

The followings recommendation can be made in order to enhance the current practice for management of CIN in the department.

- A local guideline is needed to assure the accuracy, adequacy and consistency in providing this very specific treatment.
- Each trainee should be well supervised and monitored and a trainee register should be in place.
- A meticulous checklist on technical aspect like: acetic acid application to identify abnormal areas, use of colposcopy during excision, removal of transformation zone in a single piece and insertion of a marker, aiming to minimise the difficulties encountered in histopathological evaluation.
- All trainees should be familiar with the guideline for management of CIN.
- Histological reporting should be standardised although the department has a decent practice of discussing all cervical pre-malignant and malignant histology results in multi-disciplinary tumour board in order to overcome that inadequate reporting.

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REFERENCES

- 1:** Zaitoun AM, McKee G, Coppen MJ, Thomas SM, Wilson PO. Completeness of excision and follow up cytology in patients treated with loop excision biopsy. *J Clin Pathol.* 2000; 53:191-6.
- 2:** Lusley D. Colposcopy and programme management, guidelines. NHS cervical screening programme, NHSCSR publication No.20; 2004.
- 3:** Duesing N, Schwarz J, Choschzick M, et al. Assessment of cervical intraepithelial neoplasia (CIN) with colposcopic biopsy and efficacy of loop electrosurgical excision procedure (LEEP). *Arch Gynecol Obstet.* 2012; 286:1549-54.
- 4:** Gardeil F, Barry-Walsh C, Prendiville W, Clinch J, Turner MJ. Persistent intraepithelial neoplasia after excision for cervical intraepithelial neoplasia grade III. *Obstet Gynecol.* 1997; 89:419-22.
- 5:** Ghaem-Maghani S, Sagi S, Majeed G, Soutter WP. Incomplete excision of cervical intraepithelial neoplasia and risk of treatment failure: a meta-analysis. *Lancet Oncol.* 2007; 8:985-93.
- 6:** Paraskevaidis E, Kalantaridou SN, Paschopoulos M, et al. Factors affecting outcome after incomplete excision of cervical intraepithelial neoplasia. *Eur J Gynaecol Oncol.* 2003; 24:541-3.
- 7:** Cheng X, Feng Y, Wang X, Wan X, Xie X, Lu W. The effectiveness of conization treatment for postmenopausal women with high-grade cervical intraepithelial neoplasia. *Exp Ther Med.* 2013; 5:185-8.
- 8:** Reimers LL, Sotardi S, Daniel D, et al. Outcomes after an excisional procedure for cervical intraepithelial neoplasia in HIV-infected women. *Gynecol Oncol.* 2010; 119:92-7.
- 9:** McDonald TW, Neutens JJ, Fischer LM, Jessee. Impact of cervical intraepithelial neoplasia diagnosis and treatment on self-esteem and body image. *Gynae Onco.* 1989; 34:345-9.
- 10:** Hegde D, Shetty H, Shetty PK, Rai S. Diagnostic value of acetic acid comparing with conventional Pap smear in the detection of colposcopic biopsy-proved CIN. *J Cancer Res Ther.* 2011; 7:454-8.