

LARGE LOOP EXCISION OF THE TRANSFORMATION ZONE (LLETZ) - FIRST IMPRESSIONS AT GCRI

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SUMMARY

Large Loop Excision of the Transformation Zone (LLETZ) is fast gaining popularity as a method of investigation and treatment of cervical intraepithelial lesions. The equipment and technique are simple, results reliable and morbidity minimal.

Presented is a brief description of the technique, along with a preliminary report of the first 15 cases. In all cases the procedure was performed with minimal morbidity. The specimen, including margins, was adequate for histological examination in 14 cases. At 3 weeks follow-up 7 cases showed excellent healing. 4 cases were hysterectomised and 2 were lost to follow-up. 2 patients required antibiotics for discharge. Preliminary results are encouraging; but proper indications must be kept in mind.

INTRODUCTION

All women with abnormal smears or clinically abnormal cervixes must undergo colposcopic examination. Once the existence and degree of Intraepithelial neoplasia is established, the traditional treatment

consists of either destruction (cryo, electrocautery or laser vapourisation) or excision (knife \ laser conisation) of the transformation zone.

Destructive methods can only be used if the entire transformation zone is visible and a directed biopsy from the area of maximum abnormality has ruled out invasion. General anaesthesia is required. The main

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disadvantage is that no tissue is available for histological examination. Hence invasive disease may be missed. Advantages of the destructive techniques are simplicity, economy and a very low complication rate.

Excision methods may be used even if the entire transformation zone is not visible. Their major advantage is that tissue is available for histological examination. Hence invasive disease can be excluded and the margins of excision can be assessed. The disadvantages of excision methods are that they are costly and have considerable short and long term morbidity.

Since the last decade a simple, quick and highly successful method for management of cervical intraepithelial neoplasia has evolved which combines the advantages of both destructive and excision methods.

Cartier (1984) set the ball rolling. He described a small loop for investigation and treatment of cervical intraepithelial neoplasia. Prendiville (1989) refined and developed the technique to what is known today as Large Loop Excision of the Transformation Zone (LLETZ).

Technical aspects :

The loop wire is made of very thin (0.2 mm), hard stainless steel or tungsten. The loop is attached to an insulated arm which in turn is connected to an insulated shaft. When it is to be used the shaft is inserted into the hand control unit of the electrosurgical apparatus. This machine supplies the power and allows a blend of cutting and coagulation. (Fig 1)

Loops of various sizes are available. Loop size must be chosen according to the size and shape of the transformation zone and the surface anatomy. The larger



Fig. 1

the loop, the greater the diathermy power required for excision. Power should be sufficient to cut easily through tissue; but not enough to produce tissue damage. Reusable loops are also available.

METHODS

Local anaesthesia is sufficient for the procedure. However it is always advisable to do the first few cases under short general anaesthesia, during the learning curve.

The appropriate loop size is chosen according to size and shape of the transformation zone. Under colposcopic guidance, the loop is placed 0.5 mm outside the transformation zone at the upper margin. Using the cutting mode, the loop is slowly advanced across the cervix, underneath transformation zone, and brought out at the lower margin; once again 0.5mm outside the periphery of the transformation zone. The excision can also be done from side

to side instead of above downwards. In this way the entire transformation zone is removed, usually in one sweep. It is important to advance slowly and gently; "following the current", as it were, instead of pulling through. This ensures an adequate specimen, and a clean, dry cut with minimum thermal damage.

The bed is usually dry, but even so, should be quickly and superficially fulgurated, using a ball electrode and the coagulation mode without changing the power setting. Throughout the procedure smoke evacuation is necessary or else vision will be obscured. Special speculae are available to which the suction tube can be attached. A simple alternative is for an assistant to hold a suction canula just inside the speculum.

The following is a preliminary report of our first fifteen cases managed with LLETZ. All cases had cytology and colposcopy performed at a previous visit. Being the first cases, they were performed in the operation theatre under general anaesthesia. Our plan is to perform future cases in the out-patient colposcopy clinic under local anaesthesia. After excision the wound was left open. No antibiotics were routinely prescribed. Patients were advised to avoid intercourse until their first followup visit at three weeks, when healing was noted. Whenever possible colposcopy and smear were performed at three months. If hysterectomy was performed for other reasons, the specimen was examined for residual disease.

RESULTS

Table I shows the salient features of each case.

In 11 cases cytology, and in 7 cases

colposcopic prediction correlated exactly with loop histology. In 2 cases cytology and in 5 cases colposcopy overestimated the lesion. In one case colposcopy was satisfactory and normal, but cytology showed severe dysplasia. The loop histology showed carcinoma-in-situ. In this case colposcopy was not useful as a predictor of neoplasia.

In all cases except one, the specimen, including the margins, was judged adequate for examination by our pathologist. Margins of the specimen were free of dysplasia in all cases except the one case mentioned above; in which no opinion could be given due to thermal artefact.

Two cases were lost to followup. Nine cases were seen at three weeks followup. Seven of these had very good healing and minimal or no discharge. One patient had mild slough and discharge; was prescribed antibiotics; and two weeks later had complete healing. One patient complained of excessive discharge: however she had undergone laser vapourisation of vaginal warts along with loop excision. She improved with antibiotics and proper hygiene.

One patient had bleeding for 7 to 10 days after the procedure. She responded to conservative treatment.

Two patients experienced mild lower abdominal pain for two weeks.

Colposcopy at three months revealed a satisfactory, normal transformation zone in 5 cases. One patient, originally CIN 2, again seemed suspicious for the same lesion. A repeat small loop biopsy did not reveal recurrence.

Hysterectomy was performed in 4 cases after the excision. (1-CIN1; 1-CIN2; 2-CIN3.) Indications for surgery were fibroids

Table I
SALIENT FEATURES OF EACH CASE

No.	Cytology	Colp. Pred.	Hist.	Morbidity	Healing (3 wks)	T. Zone (3 mths)
1	Sev. dys.	CIN II	Inf.	-	No follow-up	
2	Inf.	CIN II	CIN II	-	Good	?CIN
3	Inf.	CIN I	NAD	-	Good	-
4	Mod. dys.	CIN II	CIN II	-	Hysterectomy	
5	Sev. dys.	Unsat.	CIN-IHPV	-	Hysterectomy	
6	Sev. dys.	NAD	CIN III	Pain	Hysterectomy	
7	Inf.	CIN II	NAD	Discharge	Slough	Normal
8	Inf.	Irregular contour	NAD	-	Good	Normal
9	Sev. dys.	CIN III	CIN III	-	Hysterectomy	
10	Sev. dys.	CIN III	CIN III	-	No follow up	
11	NAD	CIN I	CIN I	-	Good	Normal
12	Inf.	HPV	NAD	Discharge	Good	
13	Inf.	CIN-IHPV	NAD	Pain	Good	Normal
14	Inf.	CIN I	NAD	-	Good	
15	Inf.	Unsat.	NAD	Bleeding	Normal	

ABBREVIATIONS :

Colp. = Colposcopic
Pred. = Prediction
Hist. = Histology
Dys. = Dysplasia
Mod. = Moderate

Sev. = Severe
Inf. = Infection
CIN = Cervical Intraepithelial
Neoplasia
T. Zone = Transformation Zone

in 1, cancer phobia in 2, and unreliability for followup in 1. All the hysterectomy specimens were examined \ reviewed at GCRI. No residual dysplasia was present in any case.

DISCUSSION

The small loop advocated by Cartier (1984) was refined by Prendiville et al (1989) to the present day large loop procedure.

As it stands today, LLETZ seems to be the perfect answer for diagnosis and management of cervical intraepithelial neoplasia. The method is very quick and simple, and can be done under local anaesthesia in a properly equipped outpatient department. The specimen margins have very minimal thermal damage. The entire transformation zone and dysplastic area can be easily excised.

