5C.120 USE OF LLETZ

If the woman is to be treated by LLETZ/NETZ (needle excision), prior colposcopic assessment is essential.

In selected cases LLETZ can be performed following colposcopy, at the first visit i.e. select and treat, (see 5C.50 Clinic Organisation and Function).

A full excision of the transformation zone should not be performed if there is clinical evidence of invasion. Under these circumstances, the lead colposcopist and the consultant responsible for the care of the woman should be informed as soon as possible. The regional gynaecological oncologist or cancer lead must be informed to decide definitive management.

The treatment of large preinvasive lesions, especially those involving the vagina, may be better combined with another treatment modality. In this situation the central area is excised with a loop and the peripheral area is ablated or excised.

General anaesthesia is usually required for treatment of vaginal disease or for CIN/CGIN if a woman is unduly anxious.

5C.120.1 Contraindications

There are no known contraindications to the use of electrosurgery. The use of external or internal pacemakers, monitoring equipment, and the woman's condition may require special precautions (eg anticoagulation, severe orthopnoea).

Colposcopic biopsy may be a procedure from which bacteraemia may occur for susceptible individuals. Antibiotic prophylaxis may be appropriate for susceptible individuals if LLETZ is planned.

5C.120.2 Equipment

An electro-surgical generator is used (eg ValleyLab or ERBE). The generator produces a high frequency (500 kilohertz) monopolar current in cutting and coagulation modes or combinations of these modes.

5C.120.3 Procedures

Manufacturers operating instructions and the NHSCSP Equipment report 0401: Guidance Notes on Electrical Safety in Rooms Used for Colposcopy and the Safe Use of Electrosurgery for LLETZ should be read or viewed and thoroughly understood by all personnel, before use of the equipment. Copies should be kept available in the treatment room.

Under no circumstances must the active LLETZ or coagulation ball be energized within the vagina but away from the excision site.

During surgical LLETZ, it is normal for sparking to occur at the active electrode. These sparks are easily able to ignite fluids or dry swabs. Therefore it is important not to use spirit based fluids or dry swabs near the active electrode.

A lowest power consistent with effective cutting and haemostasis should be used in line with manufacturer's recommendations to ensure that the specimen is suitable for histology.

5C.120.4 Attachment of the Return Electrode

It is recommended that a disposable return electrode (thigh pad) is used, positioned properly in accordance with manufacturer's guidance.

Single use plates must not be reused since the conducting gel which is used to coat the contact surface would not be intact and result in impaired conduction of the return current.

Reusable return electrodes must provide whole area contact without wrinkles.

The return electrode should not be attached in the area of prosthetic inserts. In the case of women fitted with pacemakers, advice should be sought from the pacemaker manufacturers on the use of electrosurgery and recommended location of electrodes.

5C.120.5 Connection of the Active Electrode

Where a choice of length of active electrode lead is available from the supplier choose the shortest length that will allow the lead to run from the LLETZ electrode to the connection on the generator. Any surplus lead must **not** be coiled. The lead should not be attached to the examination couch or the equipment trolley.
Positioning of the lead should allow freedom of movement whilst minimising tension on the cable.

Before use, the LLETZ cutting loop should be carefully inspected and not used if the insulation is damaged. A holster, positioned within easy reach of the colposcopist, should be used to house the active electrode when not in use.

5C.120.6 Lead Safety

Trailing leads on the floor of the treatment room should be avoided, particularly when the woman is being brought in and taken from the room.

Only leads and connectors designed for direct connection to the equipment must be used and the manufacturer's recommendations about use, storing, cleaning and checking followed.

5C.120.7 Electrical Isolation of the Woman

When the active electrode is energised, the whole of the woman's body is available to act as a return path due to capacitive effects. Electrical isolation of the woman from metal parts of the couch and leg supports, by use of insulating mattresses and tape is the most effective way of avoiding possible injury from burns. A discharge occurring over a large area such as the whole hand might be harmless, whereas finger tip contact with an earth path such as a metal frame would result in a painful burn. As a general rule, small area contact with the woman, such as lightly brushing the face should be avoided, when the electrode is energised. Similarly, if contact has to be made with equipment whilst it is energised, use the full hand, not a single finger.

5C.120.8 Use of computers in colposcopy and associated electrical safety

The computer used for imaging should be connected directly to the wall mains supply and not to power sockets on trailing leads. Non-medical equipment may not be included within the 'woman environment' which encompasses a volume around the woman and couch.

5C.120.9 Colposcopist

Surgical gloves cannot be regarded as an effective insulator; similarly the use of a condom, with the teat removed, over the jaws of the speculum should be regarded only as a means of bracing the unsupported tissue rather than an effective means of insulation.

If a metal speculum is used, the colposcopist is brought into close contact with the source of the current and must take measures to ensure they are isolated from 'earthed' bodies. These include the examination couch and the base and supporting column of the colposcope.

The use of plastic or fully insulated metal specula, the latter being autoclavable, is advised where other means of isolation for vulnerable areas of the body are impracticable.

The eye piece of a teaching arm fitted to a colposcope should also be non-metallic and may be safely touched by the observer, but the observer must take similar isolation measures to those taken by the colposcopist and not touch the woman when the electrode is energised.

5C.120.10 Smoke Evacuation

Use of a smoke evacuator to allow clear observation of the site and removal of the potential health risk to personnel is advised. The hospital vacuum system should not be used for this purpose. Portable suction units exhausting unfiltered air into the room should also be avoided.

5C.120.11 Precautions in the Use of Swabs and Solutions

Consideration should be given to labelling containers of spirit based cleaning and preparation materials and non-water based lubricants, such as petroleum jelly, with a

cautionary note about the danger of their use in conjunction with LLETZ.

Queries about suitability of fluids and lubricants from any source, for use in LLETZ, should be addressed to the hospital pharmacy department.

CSW advise the use of sterile x-ray detectable gauze swabs wherever possible when performing colposcopic procedures.

5C.120.12 Other Safety Measures

A contract schedule listing all checks to be carried out should be drawn up and dated. A signed report on the tests made and results obtained, where appropriate, must be provided by the service engineer at the conclusion of each visit.

5C.120.13 Technique

Colposcopy must be performed to visualise the abnormal area and plan the excision.

A speculum with a smoke extraction tube must be used.

Local analgesia is used if performed as an outpatient procedure.

The colposcopist should aim to remove the lesion in one specimen in at least 80% of cases. Large areas may need to be removed in 2 or 3 pieces. The orientation of the multiple segments may be difficult from the point of view of histology.

A suitable sized wire loop is selected depending upon the size of the area to be excised and the recommended depth of excision (5C.90, 5C.164).

The cervix is positioned so that the whole lesion on the ectocervix is visible, if possible. The wire is allowed to sink at a right angle to the surface until the correct depth is reached.

Thereafter, progress parallel to the surface and usually in a horizontal rather than vertical direction. The loop is allowed to come to the surface at a right angle once again

when it is removed at the opposite edge of the lesion. The angle of the loop may need to be modified, or the cervix moved for eccentric lesions or if access is difficult.

For loop specimens involving the endocervical canal a further excision may be taken from the base of the crater using a smaller loop.

The loop crater is cauterised with the coagulating current as a fulgurating non-contact procedure. This aims to achieve good haemostasis.

Care must be taken not to touch the vaginal wall or speculum with the loop or diathermy ball as this is painful.

All the samples must be sent separately identified, with appropriate labelling.

5C.120.14 Post-treatment Advice

Post treatment advice should be given in accordance with section 5C.90.5.

A local clinic leaflet including a contact telephone number should be given to all women following treatment. Advice on alternative contacts outside clinic hours should also be given.

The woman is informed of her results and management plan when the histology is available (see 5C.80 Administration of Colposcopy Services).

5C.120.15 Further Guidance

Use of dental syringes for local infiltration prior to treatment of CIN is acceptable and normal practice in colposcopy and is endorsed by the BSCCP.