

MODES OF TREATMENT FOR SQUAMOUS CELL CARCINOMA

Treatment is indicated in early lesions without evidence of secondary spread to adjacent structures (e.g. bone) or metastases to the drainage lymph nodes.

Several techniques are available and include:

- (a) excisional surgery (will be discussed in detail separately)
- (b) cryotherapy
- (c) hyperthermia
- (d) radiotherapy (rare)
- (e) immunotherapy (rare)
- (f) combinations of a+b, a+d or c+e

CRYOTHERAPY

Cryotherapy is particularly advantageous since the technique avoids haemorrhage and is simple and relatively fast. The small liquid nitrogen flask (Nitrospray® [Arnolds]) is adequate for lesions up to 5 cm diameter and 1 cm deep.

- protect eye from inadvertent freezing by inserting 'Styrofoam' strips or acrylic between lid and corneal surface. Apply water-soluble lubricants or vaseline to skin of surrounding healthy area
- clip and wash affected area and put on disposable rubber gloves
- freeze the area twice (liquid nitrogen) or three times (nitrous oxide, carbon dioxide) initially using a spray tip

- include at least 5 mm width border of clinically healthy tissue
- evert tissue lying close to cornea by grasping with towel clips or Allis tissue forceps, before applying probe head which is designed to deal with lesions of the third eyelid
- use thermocouples if available, inserting points 5 mm from margin of lesion and stopping freeze when they indicate a temperature drop below -20°C

Advantages of cryotherapy over knife surgery in treatment of SCC are:

- simple, cheap and rapid method
- good post-operative analgesia
- minimal pre-operative preparation and usually no post-operative medication necessary
- procedure may be repeated if there are multiple lesions
- no bleeding

Disadvantages of cryotherapy are:

- lesions > 2.5 cm diameter require relatively prolonged application of probe head for complete iceball formation
- lesions exceeding 5 cm must be treated in two stages, alternatively an initial surgical debulking procedure
- initial instrumentation cost is high, but treatment cost per lesion is then low

RADIOFREQUENCY HYPERTHERMIA

Application of heat (50°C for 30 seconds) to various surface points of tumour and surrounding skin using probe head. Penetration is limited to 0.5–1 cm, therefore inappropriate for large masses.

RADIOTHERAPY

Radon and gold seed implants have both been successfully used in valuable cattle. Penetration is again only 0.5–1 cm.

IMMUNOTHERAPY

Local infiltration of mycobacterial cell wall fraction immunostimulant (Regressin®[Ragland], USDA-approved drug for immunotherapy). Dose rate is 0.5 ml for each centimetre of tumour diameter, i.e. 5 cm diameter mass is given 2.5 ml. It is claimed that untreated sites often undergo spontaneous regression.