31 Introduction to Treatment of Benign Skin Lesions

A number of techniques are suitable for the treatment of benign skin lesions, including excision, cryotherapy, acid destruction, thermocoagulation, lasersurgery, radiotherapy, electrosurgery and timedsurgery.

31.1 **Surgical excision**

Surgical excision is the method of choice for undiagnosed lesions, for lesions requiring full histological diagnosis and for potentially malignant melanocytic lesions. Excision also allows the adequacy of the treatment to be verified. Viral warts, however, may recur after excision, owing to residual virally infected cells and, with small superficial benign lesions, the scar left by a full-thickness excision may be more evident than the original lesion. Surgical excision may be performed by means of timed or pulsed slow or rapid cutting (see section 43).

31.2 **Cryotherapy**

Cryotherapy with nitrous oxide or liquid nitrogen is used mainly for superficial lesions, as the circulation of blood impedes deep penetration of the cold. It has the advantage of seldom requiring local anaesthetic, but causes considerable post-operative pain. Cryotherapy is slow and imprecise and often needs to be repeated. Its main value is in the treatment of viral warts. Common warts situated on the load-bearing areas of the soles of the feet and in the area around the nails are treated after removal of the superficial layer of horny material which covers them. Cryotherapy has applications in other fields, for example cardiology, where it is used to treat of drug-resistant tachycardia by destroying alternative conduction pathways; high-frequency current has also been used for this purpose (Pace 1988).

31.3 **Acids and caustic salts**

Acids and caustic salts are used to treat viral lesions. The treatment is neither aggressive nor painful, but often requires several applications. Because it does not leave scars, the technique is recommended for plane warts and, after eliminating any cornified superficial cells, for common viral warts and plantar warts.

The wart should be pared down with a scalpel blade until the hyperplastic tissue has been removed and the small papillary vessels are seen as punctate bleeding points (**Fig.**

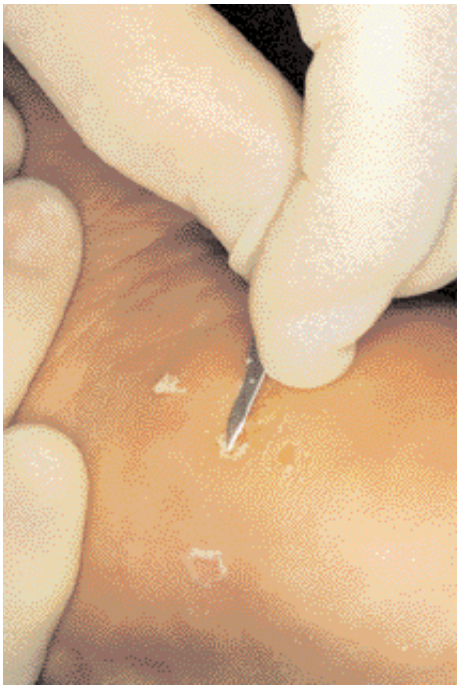

Fig. 31.3.1 Plantar wart. Removal of cornified layer with a number 15 scalpel blade.

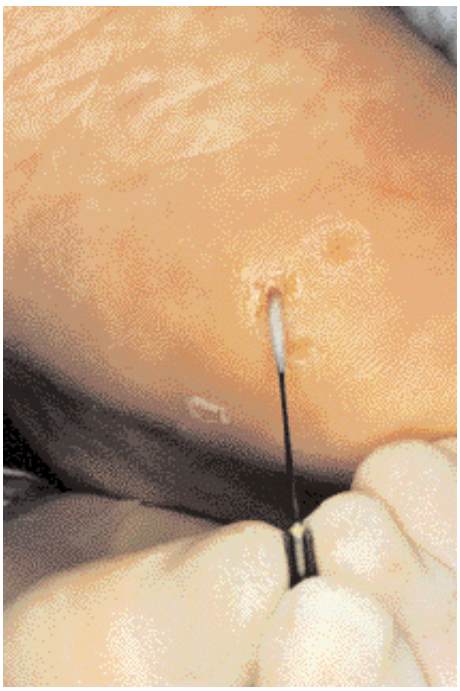

Fig. 31.3.2 Application of 70% trichloracetic acid

31.3.1). After the bleeding has been stopped, a caustic substance, such as potassium permanganate powder or 70% trichloracetic acid is applied (**Fig. 31.3.2**).

The acid is applied with a small cottonwool bud fashioned by wrapping cottonwool around a small stick. The treated area turns white, and should be protected with an adhesive plaster. Treatment is repeated weekly until the wart disappears.

It is often helpful to apply 15% and 10% trichloracetic acid after coagulation or timedsurgical de-epithelialisation (see section 32).

The above-mentioned acids and caustic salts are only suitable for use by medical staff, while preparations of salicylic acid (10% to 60%) may be applied by the patient. The most common formula contains salicylic acid, lactic acid and flexible collodion. Every evening the patient must bathe the area in lukewarm water for at least five minutes, remove the superficial cornified layer with a blade or abrasive stone, dry well, then put a drop of the solution onto the remaining wart and cover it with adhesive plaster after it dries (Tomas 1988).

31.4 **Thermocoagulation**

Cauterisation has ancient origins. Cautery apparatuses consist of a transformer which supplies a low-voltage current to a fine wire electrode, which is thus heated to incandescence. A cherry-red colour indicates that the element has reached the correct temperature. Too low a temperature causes the coagulated tissue to adhere to the metal; too high a temperature

makes the electrode fragile and destroys too much tissue over too wide an area. A rheostat enables the current to be regulated. The metallic loop cannot maintain a constant temperature as it loses heat as soon as it comes into contact with the tissues. Coagulation with a cautery apparatus is indiscriminate and the extent of necrosis, which is the same as a burn, is not easy to predict. Lesions produced with this technique are slow to heal. Heat from the element is transferred by conduction and radiation. The burn produced by thermocautery is more painful than that produced by a diathermic current and the burning sensation remains for longer (see section 3.3). Residual scars from thermocoagulation may be unsightly and even hypertrophic. For these reasons the uses of thermocautery are limited.

31.5 **Lasersurgery**

Several types of laser are now available for skin treatment. One of the main areas of application is that of vascular malformations, and port wine stains. For the treatment of benign skin neoformations, the selective effect of lasersurgery depends upon the different absorption of the laser light by the lesion to be treated and the patient's skin.
Unfortunately therefore, most lasers are of limited value in patients with deeply pigmented skin. Laser treatments have aroused considerable interest which, for many applications, may be unjustified.
"Perhaps the prospects we foresee for laser surgery are excessive; realistically, the future of the technology will be tempered by a more complete comprehension of the physical and chemical mechanisms by which light interacts with the organs and cellular organisms. This research will help us to understand when to use and when not to use a laser. Knowing that in some cases a simple scalpel or electrosurgery may be more appropriate and less risky and costly than complex laser apparatus will be essential for future success in the medical field." (M.W. Berns in "Le Scienze" No. 276, August 1991).

31.6 **Radiotherapy**

Radiotherapy is used on inoperable, radiosensitive, malignant skin lesions, in a few benign lesions, keloid scars and, occasionally, angiomas.
The dangers of irradiation and the chronic effects of radiodermatitis limit its use.

31.7 **Electrosurgery**

Electrosurgery (surgical diathermy) has several advantages. It uses cold electrodes (see section 4.2) which may be very fine and of numerous shapes. It is controllable, precise, powerful, able to work in depth and allows rapid execution with optimum and prolonged control of bleeding.
In unanaesthetised patients it produces little post-operative pain. Scars are of good quality, soft and rarely hypertrophic. It is economical, and its action is independent of the colour of the lesion. The generator is easily transportable and no routi-

ne maintenance is required apart from cleaning and sterilisation of the electrodes and their substitution when worn out. Apart from monopolar and bipolar coagulation, the high-frequency current allows other functions to be utilized: cutting, coagulating cutting (blend), fulguration and micro-arc.

31.8 **Timedsurgery**

With the development of timedsurgery and its associated technology, many of the drawbacks of traditional electrosurgery have been overcome, thus enabling many procedures to be performed which were formerly impossible.
Timedsurgery utilises operating techniques specific to each procedure. These techniques are standardised and yield consistent results. Timedsurgery is the simplest and most versatile operating system in the field of dermatological, plastic and aesthetic surgery.