TREATMENT OF CHRONIC ULCERATION AFTER IRRADIATION OF PLANTAR WART

BY

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The plantar wart is commonly cured by irradiation. In wartime the condition was a frequent cause of minor disability in the Services, and was treated by radiotherapy under out-patient arrangements. A record of dosage sometimes failed to follow the patient on his travels; and over-exposure undoubtedly occurred in some instances. Chronic intractable ulceration of the sole resulted in prolonged disability out of all proportion to the importance of the original lesion.

The ulcer heals slowly or not at all when treated with recumbency and local applications. Deep fibrosis leads to an unstable tender scar on the sole which prevents normal walking. Recurrence follows simple excision performed without skin replacement. A "free" skin-graft is unlikely to provide a permanent cover in this situation even if it succeeds on the relatively avascular base. Local pedicled flaps are as unsatisfactory on the sole as they are on the palm.

Radical excision down to healthy tissue and outwards to normal skin, however, leaves a defect which can readily be filled by means of a direct pedicled flap from the opposite leg. This provides a stable skin cover with a subcutaneous pad. The patient can walk in normal shoes without pain in six to eight weeks. It should be emphasized that this method of treatment is advised for ulceration which results in all probability from the radiation itself, and not for that which may follow repeated attempts to eradicate the plantar wart by mechanical, thermal, and chemical means.

Case 1

A married woman aged 36 complained of an extremely tender ulcer on the sole of the foot. The ulcer had persisted for two and a half years after a repeated application of deep x-ray therapy to a plantar wart. Excision had been performed more than once, and many remedies had been applied locally. The ulcer varied in size and in degree of infection, but had never healed.

When seen on Sept. 4, 1944, the ulcer was 1 1/2 in. (1.25 cm.) in diameter, had an indolent rolled edge, but was relatively free from infection after treatment with penicillin cream during a recent puerperium. A haemolytic staphylococcus was cultured.

On Sept. 7 the ulcer was excised down to healthy plantar fascia and a margin of apparently healthy skin was included; a pedicled flap was raised from the opposite leg to fill the defect. A five-day systemic course of penicillin was given. The pedicle was separated and the flap implanted on Sept. 26. Healing was rapid. The patient left hospital able to walk in normal shoes on Nov. 3.

The pathologist's report was as follows: "The skin changes are compatible with irradiation dermatitis (hyperkeratosis, obliterative endarteritis, and atrophic changes in accessory skin structures), followed by superficial ulceration and subcutaneous fibrosis. There is no evidence of malignant change in the section examined."

Case 2

A soldier aged 34 had suffered from the effects of a plantar wart since 1943. This had been pared by a chiropodist, excised at least four times in different hospitals, and cauterized. The ulcer had been treated with permanganate, salicylic acid, vitriol, formalin, flavine, eusol, gentian violet, penicillin cream, and several other less certain substances. Deep x-ray treatment had been given at more than one hospital, and in several doses.

FIG. 1.—The ulcer in Case 2.

When seen on July 12, 1946, there was an ulcer on the sole of the right foot, 1 1/4 in. (3 cm.) in diameter (Fig. 1). The base consisted of firm tender granulations with a yellow slough. The edge was indolent and blue in colour, and was surrounded by an area of dusky induration. The Wassermann reaction was negative.

The ulcer was excised on July 29 and the defect, which extended down to plantar fascia and measured 2 in. (5 cm.) square, was filled by means of a direct pedicled flap from the

FIG. 2.—Application of a pedicled flap from the opposite leg.

opposite leg (Fig. 2). The secondary defect of the donor leg was closed by a dermatome graft from the thigh. A systemic course of penicillin was administered for five days.

The pedicle was divided on Aug. 23, and the flap implanted. The patient began to walk after a course of physiotherapy. He went before the medical board on Oct. 24 and was discharged

FIG. 3.—Showing the foot soundly healed.

from the Army. The foot was soundly healed (Fig. 3). The pathologist's report was: "Portion of skin shows ulceration with fibrinoid necrosis in the floor of the ulcer."