Surgical treatment of painful lichen planus of the hand and foot

A. L. H. MOSS and R. R. M. HARMAN

Department of Plastic Surgery, Frenchay Hospital, Bristol and Department of Dermatology, Bristol Royal Infirmary

Summary—Lichen planus of the hands and feet, although uncommon, can be very disabling with painful hypertrophic areas or ulcers, mainly of palmar and plantar surfaces. These lesions may not respond to conventional medical treatment. A case of surgical treatment with excision and split skin grafting of ulcerative lichen planus of the soles, with a fourteen year follow up, is reported. Only three other reported cases with a longer review period could be found. A second patient is described in which excision and grafting of painful, hypertrophic, ulcerative lichen planus of the hands achieved a satisfactory long term outcome. No other examples could be found in the English literature.

It is suggested that surgical treatment should be considered more often and sooner in painful lichen planus of the hands and feet.

Lichen planus may affect any part of the skin and mucous membrane. It is very uncommon on the hands and feet (Samman, 1979). The medical management of the disease on the palms and soles can be difficult, particularly where there is ulceration and pain (Cram et al., 1966). This can lead to a severe disability where surgery may be considered late as a desperate line of treatment.

Case 1
A 53-year-old Caucasian female was referred to the Plastic Surgery Unit with a 10-year history of painful ulcerative lichen planus of the soles of both feet (Fig. 1A and B). This patient also had involvement of the oral mucosa, forearms, groins, back and toenails. Medical treatment had failed to control these painful areas. As the patient was unable to walk surgery was considered. The ulcer on the right sole was excised and the defect covered with a split skin graft. Histology of the excised skin confirmed lichen planus.

Since that time, 14 years ago, the patient has had several other areas on both soles similarly treated with good results (Fig. 2). She has had relief of pain, with the grafted areas remaining stable and not becoming involved with the disease.

Case 2
A 46-year-old Caucasian housewife was referred to the Plastic Surgery Unit with painful hypertrophic lichen planus of both hands. She had received medical treatment over the previous 20 years and was unable to do her housework or hold objects. On examination, she had hypertrophic lichen planus involving both aspects of the hands with some ulceration on the palms (Fig. 3A and B). The only other areas involved with the disease were the soles of the feet and the knees, all to a minor degree.

Over an 18 month period, the patient had several areas on both hands excised and the defects covered with split skin grafts. Ten years after the first graft, she is free of pain and the hands are fully functional. There has been no involvement of the grafted areas with lichen planus while the disease has persisted in other areas (Fig. 4A and B). Histology confirmed lichen planus.

Histology
The features of the disease in the reported cases were characteristic with a neat and dense band of lymphocytic infiltration in the papillary and subpapillary dermis, basal liquefaction and “saw toothing” of the papillae. There were also colloid bodies and focal hypergranulosis (Fig. 5).

Discussion
Wilson (1962) described the twelve year follow up of a case presented at the Royal Society of Medicine (Morgan, 1951) where split skin grafting to the soles of the feet achieved a satisfactory result. Since then, very few patients have been reported concerning this technique with respect to the disease involving the feet (Cram et al., 1966; Lendrum, 1974; King et al., 1975; Male and Azambuja, 1975; Crotty et al., 1980; Oakley et al., 1985). The results have been uniformly encouraging, although the follow up period in most cases has been very short.
Figure 1—(A and B) Case 1. Both plantar surfaces with marked hypertrophic and ulcerative lichen planus.

Figure 2—Case 1. 14 years after excision of the ulcers and split skin grafting.
Figure 3—(A and B) Case 2. Both surfaces of the hands showing the ulcerative hypertrophic lichen planus.
Figure 4—(A and B) Case 2. The appearance 10 years after excision and split skin grafting, with no involvement of these areas with the disease.
Of the more lengthy reviews, King et al. (1975) described one case where there was no recurrence of the disease in a split skin grafted area after 18 months. Crotty et al. (1980) reported a follow up of 26 and 18 years respectively, on two patients previously described (Cram et al., 1966), who had good results. The case reported by Oakley et al. (1985) had repeated split skin grafts to both heels for ulcerative lichen planus over 24 years. It is not clear whether this was necessary due to the involvement of the original grafts with the disease or whether the second application was to an ungrafted area. This patient had ulceration in the heels within 4 months of being grafted. It is uncertain from the report if this was a recurrence of the disease process in the grafted areas or a result of trauma or infection in an unstable graft.

Our first case is described 11 years after being first reported (Lendrum, 1974). This case illustrates that the skin grafts have not been involved with the disease process and have stood up to the potential trauma and stress of being on a weight-bearing area, thus confirming the findings of Cram et al. (1966).

The second case illustrates the excellent results 10 years after excision and grafting of painful lichen planus of the hands on the palmar surface and other gripping areas. No similar report could be found in the English literature.

All the patients described in the literature had a long history of painful lesions, mainly ulcers, on the plantar aspect of the feet, which had failed to respond to conventional medical treatment. It is strongly advocated that surgery should be considered sooner and more often in this disease, for once established, painful ulceration of these surfaces rarely heals on medical treatment, and the complaint is very disabling (Cram et al., 1966; Lendrum, 1974; Male and Azambuja, 1975; Crotty et al., 1980). Scarring and secondary deformities may also be prevented by early surgery (Cram et al., 1966). The potentiality of developing squamous
cell carcinoma in lichen planus, although uncommon (Samman, 1979), is another valid reason for considering excision and grafting (Male and Azambuja, 1975; Crotty et al., 1980).

Acknowledgements

We would like to thank Mr R. W. Hiles and Mr R. W. Pigott for allowing us to report these patients, the Medical Illustrations Department, Frenchay Hospital for the photographs, and Professor J. Bradfield for reviewing the histology and the micrographs.

References


The Authors

A. L. H. Moss, MB, BS, FRACS, Senior Registrar, Department of Plastic Surgery, Frenchay Hospital, Bristol.

R. R. M. Harman, FRCP, Consultant, Department of Dermatology, Bristol Royal Infirmary.

Requests for reprints to: Mr A. L. H. Moss, FRACS, Department of Plastic Surgery, Frenchay Hospital, Bristol, BS16 1LE.