Pinch Grafts in the Treatment of Chronic Venous Leg Ulcers

L. C. Y. Ho, B. N. Bailey and P. B. Bajaj

Stoke Mandeville Hospital
Plastic Surgery and Jaw Injury Service
Aylesbury, Buckinghamshire, England

Received June 18, 1974

Summary. 130 patients with 170 chronic recurrent venous ulcers of the leg treated with pinch grafts following elimination of underlying venous disease are presented. Pinch grafts, when used by the method described, form a soft, pliable and highly resistant skin cover which withstands the stresses of daily life.

The modern routine treatment of venous leg ulcers, which consists of cleaning up the ulcer, elimination of the underlying venous disease and then healing of the ulcer through conservative means as an out-patient, yields good results. Nevertheless, some chronic ulcers will not heal (Fig. 2a) or ulceration recurs in a proportion, particularly those with chronic, longstanding, large ulcers with extensive skin changes around the ulcer (Figs. 3a and b).

In the last 20 years, we have treated 130 patients with a total of 170 chronic, longstanding, recurrent, venous ulcers of the leg; these were bilateral in 40 patients. Their ages ranged from 43 years to 76 years, with an average of 62 years. The history of the ulcer ranged from 4.5 years to 32 years, with an average of 9.8 years. 122 ulcers (72 %) had been present for more than six years. The size of the ulcer varied from a few square centimetres to ulcers which practically covered the circumference of the lower third of the leg. All these chronic or recurrent venous ulcers were surrounded by brown, dry, atrophic, scarred and unstable epithelium (Figs. 1a, 2a and 3a and b).

It has not been possible to establish the number of patients who had a previous history of venous thrombosis as previous medical records were not available and many patients were poor historians. 135 ulcers (79.4 %) had had their varicose veins eliminated, incompetent perforators ligated and the ulcers unsuccessfully treated in other hospitals before being referred to us. The remaining 30 chronic venous ulcers (21.6 %) did not have any previous surgical treatment of the ulcer or underlying venous disease.

Due to the advanced age of these patients, many had other diseases which had an adverse affect on their chronic venous leg ulcers. 26 patients suffered from cardiac failure and hypertension; 11 from rheumatoid arthritis and 27 had iron deficiency anaemia. From the practical point of view of longterm management, the vast majority of these patients were from the lower socio-economic groups; they generally had low nutritional and hygienic standards and were indifferent to their general health and well-being.
Fig. 1. (a) Patient aged 37 years with chronic venous ulcer of eight years standing; healed by conservative means and elimination of underlying venous disease. Ready for shaving off of all scarred, unhealthy and unstable epithelium and pinch grafts. (b) Three months following take of pinch grafts — Note the marked “cobblestone” appearance. (c) Four years following pinch grafts

The aims of treatment are to eliminate the underlying cause of chronic venous leg ulcers (Cockett, 1959) and to obtain a healthy, strong, durable and resistant skin cover over the ulcer and surrounding unstable epithelium.

**Method of Treatment**

Our method consists of complete bed rest with elevation of the lower extremities above heart level, daily baths and the application of wet dressings to