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SUCCESSFUL SKIN GRAFTING IN PEMPHIGUS VULGARIS

Frederick Reiss and Michael Lewin

From the Skin Service, Department of Medicine, and Plastic Surgery Service, Department of Surgery, Montefiore Hospital and Medical Center, New York City, New York 10467, USA

Abstract. The report concerns a 64-year-old white woman who had been suffering for two years with a clinically and histologically confirmed pemphigus vulgaris. Under beta-methasone treatment in combination with the occasional injection of ACTH-gel, the disease was kept under control. She developed erysipelas of the left foot which improved under appropriate treatment. However, on the dorsum of the same foot a dry gangrene developed which was successfully treated with skin grafting. This is the 4th case described in the literature of successful skin grafting in a patient with pemphigus. It is noteworthy that despite the fragility of the epidermis of the pemphigus patient, such skin grafting can be performed without difficulty and without immediate or subsequent complications.

The prognosis of pemphigus vulgaris has improved appreciably since the introduction of corticosteroids. The life span of these patients can be prolonged with this therapy. Numerous undesirable side effects were unavoidable, particularly in patients who are kept on a high maintenance dose for a long time.

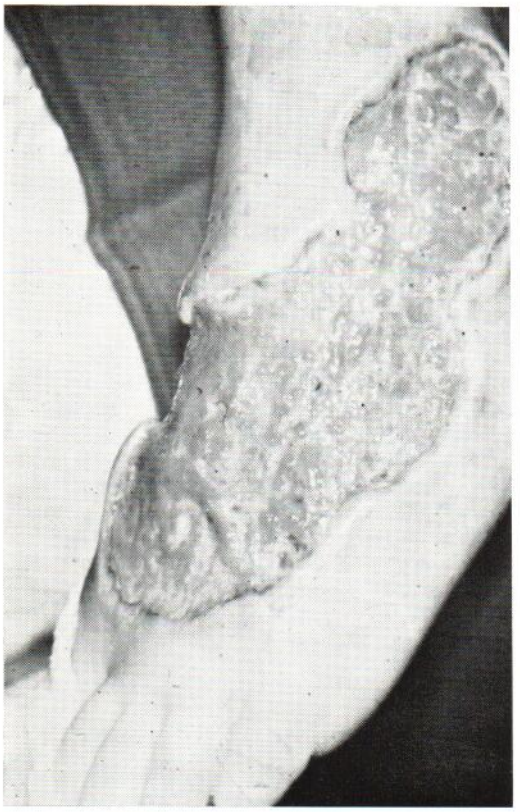

Fig. 1. Gangrenous area after debridement.

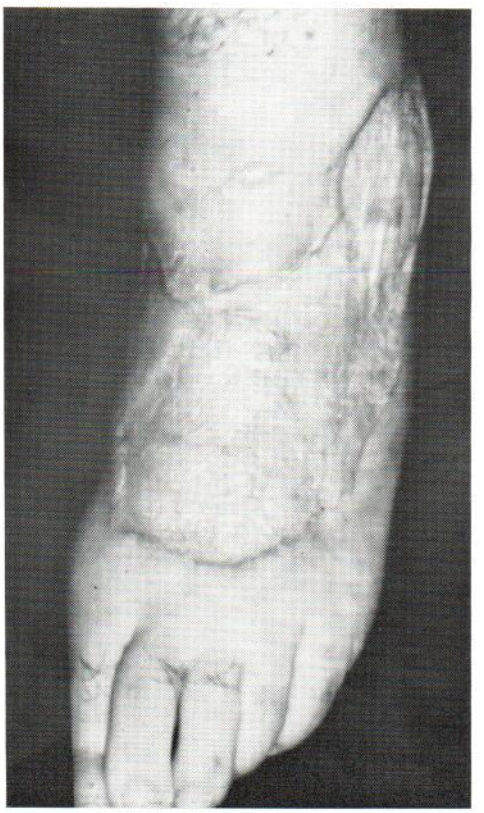

Fig. 2. Normally healed grafted area.

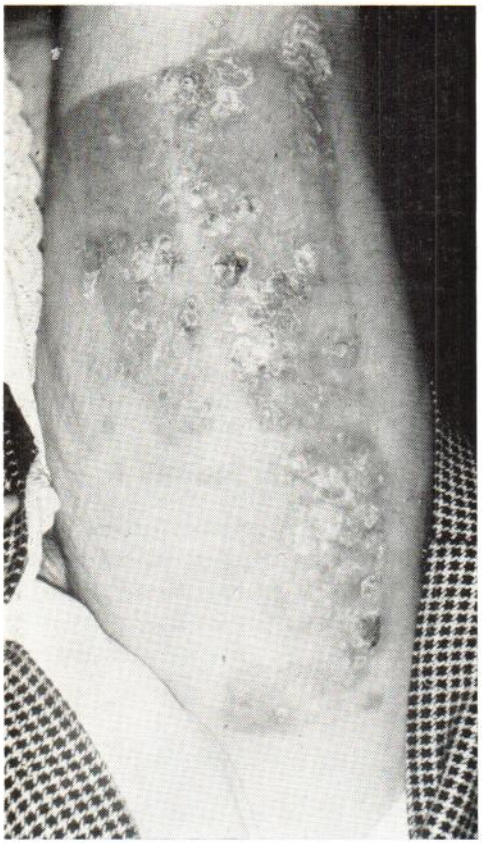

Fig. 3. Normally epithelized donor site with numerous pemphigus bullae.

Less common complications are thromboembolic phenomena and gangrene. The present report concerns a patient who had a chronic pemphigus vulgaris and developed extensive gangrene. This necessitated skin grafting during the active stage of the disease.

CASE REPORT

A 64-year-old Jewish-American woman of Hungarian origin had been suffering for two years with a clinically typical and histologically confirmed pemphigus vulgaris. The daily maintenance dose was 1.2 mg beta-methasone (Celestone®) combined with 1 cm^3 of ACTH-Gel every two weeks. The dosage schedule of beta-methasone had to be increased occasionally because of the appearance of new lesions in the mouth. On October 1, 1965 the patient left for Israel. On December 1, 1966 the patient was admitted at the Tel-Hashomer Hospital, Tel Aviv, because of severe pain in her left leg and fever (39.3°C). She had a mild moonface and scattered bullae behind her ears on both upper and lower extremities and posterior chest wall, as well as erosions in the groins. On the upper third of the left leg was a well defined, red, glistening, painful swelling (erysipelas) and an edematous swelling of the left foot. On dexamethasone, chloramphenicol, erythromycin penbritin, and tetracycline therapy, the pemphigus bullae subsided as did the erysipelas.

However, the swelling of the left foot did not subside in spite of diuretics and elevated position of the left leg. In the center of the swelling, blisters developed which gradually changed into gangrene.

Because of this complication, the patient requested a transfer to New York and was admitted to Montefiore Hospital and Medical Center on December 4, 1966. Her chief complaint was pain in her left foot. The general physical condition was good. Besides a few scattered bullae, a 22×5 cm dry gangrenous patch appeared on the left foot, extending from the external malleolus to the entire dorsum of the foot (Fig. 1). No definite evidence of a thrombotic vessel was found. Roentgenological examination did not reveal evidence of osteomyelitis.

Laboratory findings. Serum glucose, electrolytes, bicarbonate and total proteins were within normal limits. Cultures from the gangrenous leg yielded a pseudomonas species and a hemolytic staphylococcus aureus.

Because a thrombotic vessel was not detected and the general physical condition was good, debridement of the wound was initiated, combined with wet dressings with Dakin's solution. During the period of debridement, doses of 5 mg prednisone and 25 mg hydrodiuril were administered three times daily. The wound was abraded, the recesses curetted and the margins excised. Since the previous bacteriological tests showed that the patient's cultures were sensitive to streptomycin and neomycin, a solution of both antibiotics was used for irrigation.

At the same time, moderately thick split grafts were taken from the anterior lateral proximal thigh. The grafts were refrigerated and 24 hours later were cut to the size of postage stamps and applied close to each other covering the entire wound.

The entire procedure was done at the patient's bedside without anaesthesia. The grafts were kept moist with the antibiotic lotion.

A cage-like appliance was constructed to prevent bed clothes from touching the grafted area. The donor site was the left leg which was left exposed. The recipient site healed normally, as did the donor site. However, in contrast to the recipient site, which revealed a healthy epidermis (Fig. 2), numerous pemphigus bullae developed on the re-epithelized donor site (Fig. 3). The patient followed a general conditioning exercise program and was discharged with a maintenance dose of 5 mg prednisone twice daily, combined with 25 mg hydrodiuril twice daily, and 100 mg decandurobolin once a month. At the time of discharge (January 23, 1967) almost all bullae had disappeared.

DISCUSSION AND CONCLUSION

The fragility of the skin in pemphigus caused by acantholysis combined with the alleged impaired wound healing tendency arising from systemic

corticosteroid therapy was previously considered a hazard for skin grafting. Ziprkowski et al. (3) were the first to perform skin grafting on several pemphigus patients. The papers by Rome et al. (2) as well as McKinney et al. (1) are the only comparable case reports.

The case described constitutes the fourth report in the world literature dealing with successful skin grafting in a patient with pemphigus. The interesting feature in our patient is the excellent healing of the recipient area which remained free of bullae, whereas on the donor site numerous bullae developed. This unusual and unexpected eruption may be interpreted as a giant Koebner phenomenon. The excellent wound healing of our patient is rather encouraging, showing that one can proceed without fear of defective wound repair in patients with pemphigus and on corticosteroid therapy.

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Frederick Reiss, M.D.
19 E. 80th Street
New York, N.Y. 10021
USA