Grafting With Frog Skin.

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The idea of grafting granulating surfaces with frog skin was put into practice by me as far back as 1886–7 in India, at Chunat, Bengal, where some of the men were affected by ulcer of the legs more or less indolent in character. I cannot say for certain now exactly how I got the theory, but think it was suggested through some native source. At any rate, as frogs, ulcers, and time were plentifully at my disposal, I experimented with satisfactory results to the patients, gratification to myself, and the least possible inconvenience and injury to the frogs. My reason for recalling the matter is that, being quartered in France, where supply and demand of material are both abundant, I have been enabled to reapply the method with again the same gratifying results. The large number of open granulating wounds, caused chiefly by shrapnel, which are slow in healing and in which a contracting scar is likely to give possible inconvenience later, on account of position, friction, etc., induced me to again resort to this method of grafting. During the past month I have collected fourteen cases, as follows:

—Sergt. W.S., 8th E. Lancs.—Shrapnel wound, left thigh, July 14, Contalmaison. Graft applied August 6; unsuccessful. This wound was a profusely suppurating one, and the graft did not adhere. Another was applied August 17; healed August 30. Pte. A.G., 9th North. Fus.—Shrapnel wound, right thigh, July 7. Grafted August 27; healed September 2. Pte. H.J., 8th Norfolks. —Arm grafted August 5; healed September 2. Corpl. G.D., 8th W. Yorks.—Shrapnel wound, left arm, July 15. Grafted August 3; healed August 25. Pte. J.S.W., 10th Cheshire.—Shrapnel wound, right arm, July 24, Beaumont Hamel. Grafted August 6; healed August 17. Pte. W.B., 8th K.O.R.L.—Bullet wound, left upper arm, High Wood. Grafted August 3; healed August 19. Sergt. A.F., 7th Seaforths.—Bullet wound, right upper arm, July 18, Longueval. Grafter August 3; healed September 2. Gnr. E.S., R.F.A—Wounded by bomb, July 3, Aveluy. Grafted August 24; healed September 2. Pte. A.E.M.cD., 6th A.I.F.—Bullet wound across left breast, July 25, at Pozieres. Grafted August 26; healed September 8. Pte. G.F.H., 55th A.I.F.—Bomb wound, left buttock, July 20, Armentieres. Grafted August 24; unsuccessful. Pte. E.E.T., 8th Canadians.—Shrapnel wound, back, July 25, Ypres. Three grafts applied August 17; healed August 30. Pte. A.T.M., M.G.C., 92nd Co., E. Yorks.—Gunshot wound, back, July 25, Festubert. Two grafts applied August 17; healed August 30. Pte. R.I.S., 26th A.I.F.—Shrapnel wound, side, July 4, healing well at date.

The above wounds varied roughly from 1 ½ to 4 inches in length by ½ to 1 ½ inches in breadth. No. 1 was unsuccessful on account of the condition of the wound at the time of grafting, the profuse suppuration washing off the graft. In No. 11, the wound being on the buttock, dressings were difficult to keep in position, and in No. 14 two out of the three grafts failed to adhere for the same reason.

The ideal wound to graft is a flat one without much suppuration or excessive protuberant granulations. The rapidity with which the wound commences to heal after the graft has successfully adhered is in marked contrast to its sluggishness before the operation.

My modus operandi is simple: The wound having been gently cleaned without antiseptics and as gently dried, the loose skin on the inner side of the frog's thigh is carefully pinched up in a pair of dressing forceps, snipped off with scissors, spread out, and applied by its under surface to the wound. A strip of gutta percha tissue smeared with some mild and soft non-irritating emollient is then placed over it, fixed in position at its ends by adhesive plaster, and a dry dressing applied over all. The whole is gently removed in three days' time, when the site of the graft will be noticed as a purplish spot branching outwards to the periphery of the wound. A similar dressing is again applied for two days to avoid unnecessary interference, after which the wound may be dressed daily without the gutta percha

tissue, with some simple non-irritating ointment, such as boracic, until healing is completed. The gap in the skin's continuity is by this process filled up and unsightly or inconvenient contraction avoided.

I have tried frog skin grafting once only in this interval of thirty years, in New Zealand, after a radical mastoid operation, but have no knowledge of the ultimate result, as the patient left, I believe, for her home in Germany, shortly afterwards.

In addition to leaving a supple scar, this method has the advantage of transplanting skin free of hair, and is inocuous of diseases possibly conveyed in human skin. My reason for not using antiseptics is to avoid destroying the delicate epithelium formed from the graft, in the same sense that injudicious antisepsis may render a vaccination inert.

I think the method would prove useful in many kinds of slowly-healing sores, varicose ulcers with or without a tendency to adhere to the bony tissues beneath, burns after the acute stages have passed off, large abrasions or ulcerating surfaces on the face or exposed parts or in mastoid cavities where transplantation of skin is indicated.

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