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A CASE OF ECTROPION SUCCESSFULLY TREATED BY TRANSPLANTATION OF SKIN FROM THE ARM

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SURGEON TO THE WEST OF ENGLAND EYE INFIRMARY AT EXETER
SURGEON TO THE WEST OF ENGLAND INSTITUTION FOR THE DEAF AND DUMB AT EXETER

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A CASE OF ECTROPION SUCCESSFULLY TREATED BY TRANSPLANTATION OF SKIN FROM THE ARM.

At a meeting of the South-Western Branch of the British Medical Association, held at Exeter on October 5, 1881, I showed a patient from whose arm and forearm I had removed large pieces of skin on July 28th, 1881, transplanting them to his left upper and lower eyelids respectively.

The operation has proved so successful that I propose to describe the case somewhat in detail, and I have the more reason for doing so because the operation in question appears to have been but rarely performed in this country. This is the more to be regretted because there are many cases of deformity and contraction where a similar transplantation operation offers the best hope of a successful issue.

C. W., a boy aged 10, was severely burnt about the head and face several years before he came under my care, the result being an amount of disfigurement which exceeded anything that I remembered to have seen before. The whole of the left side of the face and forehead presented one uniform surface of dull, white cicatricial tissue, the outer two-thirds of the left upper lid was much everted, and the palpebral conjunctiva was in consequence much exposed, even when the boy looked straight in front of him.

The edge of the upper lid was dragged up close to the margin of the brow, against which the lashes rested, with their points directed upwards; and when the boy attempted to close his eye, or to look downwards, the eversion became still more marked, little or nothing of the lid being seen, except its conjunctival surface. There was considerable corneitis with opacity present in the left eye, due in part probably to the eyeball remaining uncovered during sleep, so that he appeared to be staring at any one standing by his bedside.

The position of the edge of the left lower

lid was shown by a row of lashes, apparently growing from the cheek, an inch or so below the eyeball, and the mucous membrane was to a considerable extent replaced by what could not be distinguished from ordinary skin. Over this surface the tears were continually flowing, and had produced an excoriation.

In addition, the almost complete eversion of the lower lip, over which the saliva was constantly running, the right eye with an opaque and staphylomatous cornea (sight quite lost), and a considerable ectropion of the right lower lid, produced an amount of deformity which was certainly unusual in its extent. As the dense cicatricial tissue extended over the whole of the left side of the face, and along the forehead to the outer side of the right eye, and also partly involved the right side of the nose and the skin immediately beneath the right lower lid, there was no healthy skin available for the formation of a flap, whether sliding or otherwise, and it appeared to me that there was only one operation which presented even the very faintest hope of success.

The boy being placed under chloroform, I

made an incision parallel with the edge of the left upper lid, as shown by the row of lashes mentioned before, and about a quarter of an inch above it, and dissected the remains of the lid well down over the eyeball. I then made a similar incision just below the edge of the lower lid, as evidenced by the lashes growing from the cheek, and dissected up the remains of the lid, until the two lids thus formed could be easily approximated, leaving a large raw surface above and below the eye, from which the bleeding was so free that one or two small arteries had to be twisted. I then pared slightly the edge of each lid, and united them with two or three strong silk sutures; next I cut off from his right arm, with a sharp triangular knife, a semicircular piece of integument, about two and a quarter inches in length, by one and an eighth in breadth, carefully cleaned it from all areolar tissue and fat, and secured it in the gap above the eye by means of four fine silk sutures. The flap for the raw surface beneath the eye was obtained from the forearm, and was about two-thirds as large as the flap from the arm.

It was carefully cleaned of areolar tissue like the other, and fastened into its bed by means of five fine silk sutures.

Goldbeater's-skin was placed over both lids, and over this abundance of cotton wool, which was kept in its place by an ordinary roller bandage. The outer dressings were changed at the end of four days, but the goldbeater's-skin was not removed until the sixth day, when some of the stitches were removed from the flaps. The remaining sutures were removed two days later. Eleven days after the operation the stitches which united the lids were removed, and the latter were found to be firmly grown together.

On the following day, the lids were separated by means of a bistoury, when the cornea was found to be much improved in appearance. The dressings were gradually left off, but were not entirely discontinued until about five weeks after the operation.

The graft in the upper lid remains almost exactly the same in size as when first placed in its bed, measuring from one and three-eighths to one and a half inches in length, and even

now, four months after the operation, its boundaries can be distinctly traced from its colour offering a considerable contrast to the cicatricial tissue round it. The same remarks apply, word for word, to the graft in the lower lid, save that the outline of the latter is not quite so well defined, and that I think a part of it was lost by ulceration; it measures about an inch in length.

The ectropion of the upper lid has been completely cured by the operation, and the conjunctival surface is no longer exposed, not even when the patient looks downwards.

In the lower lid, notwithstanding the presence of the large skin-graft, the deficiency of lid tissue is shown by its still slanting downwards unduly, but this defect I hope to rectify at some future date by a similar operation. In sleep his eyeball is now quite covered, and his cornea presents a nearly normal appearance.

I should mention that the wounds of arm and forearm, caused by the removal of the skin-grafts, had their edges brought together as nearly as possible by strong silk sutures and sticking plaster, were treated in accordance

with the general rules of surgical practice, and were both healed in about a month. My experience of transplantation operations in general has been such as to make me warmly recommend their adoption in suitable cases, but I may perhaps be permitted to say that success can hardly be expected in any of them unless certain points of detail be carefully attended to. I would therefore urge, when a similar operation is contemplated,—

That the graft should be cut with a sharp knife, and not with a pair of scissors.

That in size and shape the graft, *after removal*, should approximate as nearly as possible to the size and shape of the bed in which it is to be placed, allowing not less than 40 to 50 per cent. for the inevitable shrinking which takes place as soon as it has been removed.

That all areolar tissue and fat be carefully removed from the graft, notwithstanding that during the process it is rapidly getting cold.

That the graft be secured in its new situation by stitches, which should be very fine, but sufficiently numerous to ensure exact co-aptation.

That the dressings be not interfered with for some days after the operation, and that the graft be kept thoroughly warm for some weeks at any rate.

That the most scrupulous care be taken, especially during the necessary dressings, to prevent the graft, or any part of it, from becoming detached from its bed, which disaster, by the way, is much less likely to occur if goldbeater's-skin be applied next the graft, with a layer of absorbent cotton wool outside it, since both of these applications admit of being easily removed.

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