

Plastic surgery for pigmented hairy naevus of the eyelids

By excision and masquerade skin graft

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The simultaneous excision of a lesion affecting the skin of both upper and lower eyelids carries with it the problem of skin replacement. Both aesthetic and functional requirements will have to be met in the reconstruction. Ectropion could complicate such a repair, and loss of eyelashes would add to the disfigurement. All these aspects had to be considered in a patient with a darkly pigmented hairy naevus involving both eyelids and the surrounding skin.

Case report

A 15-year-old boy had a deeply pigmented hairy naevus of the upper and lower eyelids on the left side. The naevus extended to both inner and outer canthi, the eyebrow, and the temporal and cheek regions (Fig. 1). The ciliary borders of both eyelids were also involved. The operation was indicated because of severe psychological disturbances engendered by this disfigurement.



FIG. 1 *Appearance before operation*

Operative technique

The naevus was almost completely excised, apart from its extension into the eyebrow. Both upper and lower eyelashes were removed together with the naevus. Care was taken not to interfere with the lacrimal punctum. Immobilization of both eyelids was attained by a continuous wire suture running intratarsally. In effect, this adaptation of eyelid margins resulted in almost a complete tarsorrhaphy. Drainage of excess discharge from the eye took place in the region of the punctum.

A thick split-thickness skin graft taken from the inner side of the arm was used to cover the defect. The "outlay" technique of Gillies (1918) was used to introduce as much skin as possible into the transverse and vertical planes. The take of the graft was complete (Fig. 2), and 2 weeks later the palpebral fissure was reopened—the wire suture guiding the direction of the incision (Fig. 3).

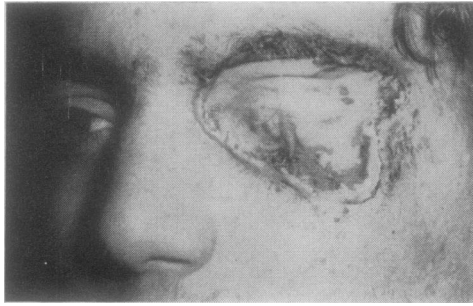


FIG. 2 After excision of naevus and replacement with a single sheet of thick split-skin graft. The "outlay" technique can be noted. The ends of the continuous intratarsal wire suture can be seen passing through the graft

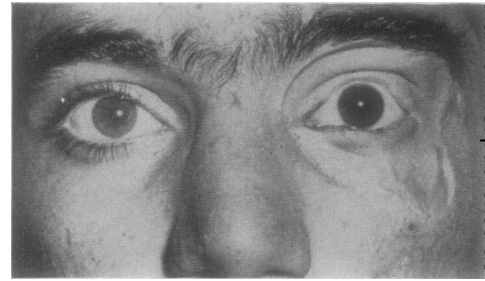


FIG. 3 After release of tarsorrhaphy, 2 weeks after first operation

Both upper and lower eyelashes were replaced by eyebrow hair grafts and the take was complete with a good growth of hair. A final operation was performed, in which Z-plasties were used to break some linear scars along the margins of the graft. Fig. 4 shows the final appearance, in which both the cosmetic and functional results are satisfactory.



FIG. 4 Final appearance, showing satisfactory cosmetic and functional condition of the eyelids with grafted eyelashes. The remnant of the naevus in the lateral part of the eyebrow is scarcely noticeable

Comment

An excellent historical account of thin "dermo-epidermic" grafts for eyelid reconstruction is given by Hughes (1943). Parker (quoted by Selby, 1915) used a single large Ollier-Tiersch graft to cover the entire area of upper and lower eyelids for the correction of bilateral ectropion. Wheeler (1922a, b) used a similar technique for a case of extreme ectropion of both upper and lower lids as a result of an extensive facial burn.

However, the use of thin split-thickness graft carries with it the possibility of contracture and subsequent ectropion. In order to overcome this, Gillies (1918) modified the epidermal inlay method of Esser (1917) to introduce excess skin laid in a pocket. This pocket was formed by the undermined edges of a skin incision a few millimeters away from and parallel with the lid margin. Converse and Smith (1959) used the Gillies outlay technique for the simultaneous correction of ectropion of both upper and lower eyelids. A tarsorrhaphy was performed before the application of the split-thickness graft.

Snyder and Edgerton (1964) coined the name "masquerade" graft for simultaneous skin grafting to both eyelids. They presented two cases of massive eyelid skin replacement of lids destroyed by blastomycosis and amyloidosis. A single sheet of full or thick split-thickness skin graft was used in each orbital area.

Some operative details in the management of our patient are worthy of discussion:

(1) Skin replacement of both eyelids was achieved by a large sheet of thick split-skin graft (0.020 in.) taken from the inner aspect of the arm. This is almost a full-thickness graft and the donor area itself required skin grafting.

(2) The excision included the involved eyelid margins together with the eyelashes. Our feeling is that to leave this thin pigmented strip would be unsightly in a man.

In contrast, the naevus affecting the eyebrow was retained in view of the fact that the pigmentation of the naevus toned in with the colour of the dark eyebrow hairs.

Mustardé (1966) presented a similar case in which the involved eyelid margins were untouched whereas the affected eyebrow was discarded.

(3) Inasmuch as the eyelid margins were excised their adaptation by means of a continuous intratarsal wire resulted in a virtually complete tarsorrhaphy. The aim of this procedure was to achieve immobilization of the eyelids and therefore maximal take of the graft. Snyder and Edgerton (1964) used the tarsorrhaphy in their cases temporarily for the duration of the operation. Thereafter the palpebral fissure was reopened.

In our patient the indication for operation was a psychological disturbance due to this severe aesthetic deformity. There was no functional disability nor was any expected in the future. Bornstein (1960) reported a case of a hemifacial hairy mole leading to profound maladjustment and criminal tendencies. In such severe deformities reparative surgery offers the only chance for the patient to lead a normally adjusted existence. Following the good cosmetic result the patient was released from his emotional disturbance and readjusted well to a normal life.

Summary

The case is reported of a youth with a pigmented hairy naevus of both left eyelids and the surrounding skin which led to severe emotional disturbance.

A single sheet of thick split-skin graft was used, both eyelids being covered simultaneously. This has been termed a "masquerade" graft because of its resemblance to a mask. An almost complete tarsorrhaphy was maintained during the first 2 weeks, after which the palpebral fissure was reopened. Eyelash replacement completed the cosmetic reconstruction of the eyelids. The return to a normal emotional state of the patient justified the series of complicated operative stages.

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