THE TREATMENT OF PIGMENTED MOLES BY
SHAVING AND SKIN GRAFT

By WILFRED HYNES, F.R.C.S.

Plastic and Jaw Department, United Sheffield Hospitals

PIGMENTED moles of large extent or situated on the face can be extremely difficult to treat. Excision followed by some form of skin grafting, or serial excision with advancement of adjacent healthy skin after wide undermining, is usually carried out. These procedures have serious drawbacks—a long operation with danger of haematoma and partial loss of the skin graft with the first method, and a number of major operations over a long period with the second. In either case the final result may be marred by noticeable residual scarring.

The writer has devised a simple method of treating many of these cases at one short operation which produces a result associated with minor, hardly visible scars.

PRINCIPLE OF THE METHOD

A skin graft “takes” most readily when it is placed on a defect with a free capillary circulation, and the richer this circulation the more rapid and satisfactory is the healing. Such a free capillary circulation exists in healthy dermis and is evidenced by the multitude of bleeding points seen on the normal dermis exposed when a skin graft is cut. If a skin graft is placed on such a de-epithelialised dermal surface it “takes” rapidly and completely.

If a pigmented mole is shaved through the deep layer of its dermis, most of the pigment is removed. The deep dermal layer exposed in this way shows profuse capillary bleeding, and when this ceases a little patchy residual pigment can be seen on its surface. If the shaved mole is left in this condition it will epithelialise itself in ten to fourteen days and will then show a recurrence of the pigmentation, which, however, is lighter than the original; and in the case of hairy moles the healed surface will again grow hairs though less thickly than did the lesion before treatment.

If after deep shaving of a mole the exposed dermal layer is covered with a thick skin graft, however, the graft “takes” rapidly and with absolute certainty and masks the light residual pigmentation still present on its deep surface. With non-hairy pigmented moles this treatment is most effective as the covering skin possesses a very thick dermal layer derived from the residual dermal layer left behind after shaving the mole together with that of the thick covering skin graft; its colour is excellent and it has a normal skin consistency. With hairy pigmented moles, however, those hairs which regenerate from the follicles which have been left behind after deep shaving grow through the overlying skin graft in two to three weeks. This growth of hair occurs around the centre of the treated area, and although sparser than on the original lesion it can easily be seen.

Treatment by deep shaving and skin graft is therefore ideal for non-hairy
pigmented moles of any extent and in any position; if used for hairy pigmented moles, some recurrence of hair can be expected though the colour of the graft will be normal.

**TECHNIQUE**

The mole is shaved through its deep dermal layer and, to ensure a subsequent almost invisible peripheral scar round the treated area, the shaving also takes a very thin layer off the normal skin immediately round the edge of the mole. If the mole lies on a surface which can be flattened, the writer shaves free-hand with a Blair knife; any portions of the mole which cannot be levelled in this way are shaved by means of a small knife blade (No. 10 or 15). Copious capillary hemorrhage, which occurs from the raw surface, stops in a few minutes; any small persistent area of bleeding is treated by the application of a drop of adrenaline (1:1,000).

A skin graft, a little larger than the shaved area and of the same shape, is then cut from a suitable donor site. A Blair knife is used for this purpose so that, although the graft itself is thick, its edges are cut thin. This can easily be done by marking out the size and shape of the graft required on the donor area with Bonney's blue; an assistant then grasps the donor limb so as to alter the convexity of the surface presented to the graft-cutting knife in such a way that the body of the graft will be of the required thickness, whereas its edges will remain thin. When facial moles of small or moderate size are being treated, the graft can be cut from the auricular or post-auricular skin by means of a large scalpel blade.

The graft is then placed on the shaved area in the usual way so that its thin peripheral margin lies on the lightly shaved edge of the surrounding normal skin and it is held in position by a few tacking sutures. In this way the edge of the graft, when it "takes," will merge imperceptibly with the normal skin around it and an almost invisible peripheral scar will result. A pressure dressing is applied, but, owing to the certainty with which the grafts "take," immobilisation of the jaws and special counter-pressure appliances are unnecessary when lesions of the lips or cheeks are treated.

As stated above, the peripheral scar round the treated area can be made almost invisible if the skin graft is correctly cut. In cases where the edge of the graft has been cut too thick, its margin will be raised a little above the level of the adjacent normal skin and will then be more noticeable. All patients are therefore reviewed six to nine months after operation and any "stepped" edges are shaved flush with the surrounding skin. This is a minor procedure and can be carried out under local anaesthesia.

**ILLUSTRATIVE CASES**

Case I.—M. L., aged 5 years, had a congenital non-hairy brown mole on the back of the right side of the neck (Fig. 1, A). The mole was shaved and a thick skin graft with thin edges from a non-hairy donor site was applied. The graft "took" perfectly, and six months later the result was considered extremely satisfactory—the colour match was excellent and the peripheral scar round the graft was almost invisible (Fig. 1, B).
Case 2.—P. B., aged 31 years, complained of a congenital, non-hairy, deeply pigmented, nodular mole covering the dorsum of the right foot (Fig. 2, A). For certain reasons it was decided to treat this case in two stages.

10th March 1955. The inner half of the mole was shaved and skin grafted as described, the pathologist describing the tissue removed as a simple melanoma. The graft “took” perfectly.
6th July 1955. The remainder of the mole was similarly treated with a like result.
10th November 1955. Eight months after the commencement of treatment the patient had a functionally normal right foot covered with skin of excellent colour, of normal skin consistency, and with peripheral scars that were hardly visible (Fig. 2, B).

Case 3.
A, Pre-operative appearance.
B, Appearance seven months after operation.

The excellent cosmetic result was marred by a little residual punctate pigmentation at the junction of the grafts applied at the two operations—this was due to the fact that at the second operation the mole adjacent to the edge of the skin graft applied at the previous operation was shaved too superficially.
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Case 3.—K. G., aged 15 years, complained of a congenital hairy pigmented mole on the outer aspect of the lower third of the left leg (Fig. 3, A). It was treated by shaving and skin graft.

Fig. 3, B, taken seven months later, shows the growth of a few hairs at the centre of the treated area and a peripheral scar of excellent appearance. This figure does little justice to the colour of the graft, which appears to be pigmented along its anterior and posterior margins. The patient suffered from acrocyanosis and the apparently pigmented areas were really blue in colour.

CONCLUSIONS

Non-hairy pigmented moles can be treated easily and quickly by deep shaving and skin graft with extremely satisfactory results.

If hairy pigmented moles are treated in the same way the colour can be eliminated, but the result is marred by a sparse growth of hair, particularly at the centre of the treated area. In spite of this it is considered well worth doing for patients with extensive lesions where complete excision is difficult or unjustified (Fig. 4).