features

Are scalp reductions still indicated?
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Scalp reductions became popular at a time when the alternatives were large plugs and flaps. In the modern era of hair restoration surgery, in which the transplantation of large numbers of very small grafts are possible, one should reconsider the usefulness of this procedure. The recent thrust in scalp reduction surgery has been to overcome its technical problems, such as reducing stretch-back (with tissue expansion and scalp lifting), avoiding mid-line scars with more creative patterns of tissue movement and shortening the total time to achieve a desired result. The problems, however, are theoretical, not merely technical.

A balding patient's appearance is maximally enhanced by hair in the cosmetically most important area – the front of the scalp. A natural frontal hairline that frames the face and is supported by balanced density behind it will produce the best esthetic result. Since the crown is generally the least cosmetically important of the balding areas (and potentially the largest), crown coverage should not be a first priority. It should be addressed after the esthetically more important areas have been satisfactorily transplanted. If treated sooner, there must be sufficient donor reserves to handle any future loss or the surgeon must be certain that the front has little risk of baldness.

In all hair restoration surgery, the potential cosmetic improvement is ultimately limited by a finite donor supply. This in turn is strictly dependent on donor density and scalp laxity. Scalp reductions have the undesirable consequence of decreasing the effective amount of hair that can be moved to the cosmetically critical front and top of the scalp by simultaneously decreasing the donor density and scalp laxity.

yield the same amount of hair. This quantity of hair now becomes more difficult to remove due to a tighter scalp, especially after multiple reductions. When the strip is removed, some of the hair must then be placed back in the crown to cover the scar produced by the reduction. It has been explained by proponents of the operation that a scalp reduction "conserves hair by decreasing the size of the bald crown," but, in reality, the hair that is used to cover

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the crown will not be available for the front and top. The reduction, by moving the relatively high density of the back and sides upward, is actually committing large amounts of hair to the posterior scalp.

In many patients, the donor supply is very limited compared to the recipient demand. This is seen in potential Norwood Class 7 patients with average or below average donor density or potential Class 6 patients with below average density. Because the esthetically critical anterior portion of the scalp is significantly smaller in size than the posterior part, the trans-

satisfactory coverage of the front and top of the scalp. For these patients, the limited donor reserves do not often allow coverage of the entire scalp, and it is in the best interest of patients to provide very light coverage to the crown or leave it bare.

Once the crown is altered by a scalp reduction, however, the dynamics change totally. Hair must now be placed in the crown to cover the scar and address the problem of an unnatural balding pattern. The resultant scar always eliminates the option of leaving the crown untreated, and in a patient who becomes extensively bald, this can be a disaster.

Some authors have advocated a conservative approach to alopecia reduction with the removal of only 1.5 cm to 2.5 cm of scalp and a nontension closure. Certainly, this technique results in reduced post-operative pain and several other undesirable side effects of alopecia reduction, but the patient is still committed to future transplant work to hide the scar and is subject to the consequences outlined above.

In patients who might traditionally be considered ideal candidates for a reduction, such as those with a loose scalp, limited balding (Norwood Classes 3 Vertex, 4, 5 and 5A) and a bare crown that is cosmetically very bothersome, crown coverage can always be accomplished with transplantation by creating a delicate swirl in the center with one-, two- and three-hair units spiraling outward. The transplanted swirl will now provide for natural, permanent coverage if the bald area expands, which minimizes the need for further surgery. Furthermore, in patients with moderate donor density, only a conservative amount of hair is committed to the crown. When greater donor density permits, further crown coverage can

crown balding can progress in its natural radial pattern, and there is no scar.

The shifted density produced by the scalp reduction and the hair required to cover the scar not only hamper the ability to reduplicate the delicate swirl of hair that normally defines the crown but also create future problems. Since the scalp reduction scar is linear or geometric, the hair used to cover it will follow the same pattern. Eventually, as the balding progresses, the hair will recede from the area, leaving an isolated patch of hair in the same unnatural pattern as the scar it originally served to cover. The crown will then demand more hair to follow this new expanding cosmetic problem. After a reduction, the scarred scalp, the irregular balding pattern and the abnormal direction of hair may preclude the crown from ever looking normal. In patients with significant balding, the decreased donor density and scalp tightness can compromise the ability to adequately cover the cosmetically critical portions of the patients' scalp.

Although a scalp reduction may be performed with the best intent, it can place the patient in the precarious position of having more cosmetic problems than he started with and the lack of donor reserves to correct them. In light of the many new advances in hair restoration surgery, might it not be a good time to take a more critical look at this popular procedure? ■