

Eyebrow transplantation using donor hair from sideburns

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Introduction

There are many factors that influence the optimal result of eyebrow transplantation. First, donor hair should be selected to match the caliber, texture, and color of the existing eyebrows. Second, the prepared grafts should be skinny containing only single hairs to achieve a natural look. In addition, proper surgical technique is needed for inserting grafts in the recipient site. The preferred technique is "stick and place" using the smallest sized needle, usually 21-23G, to match the size of the grafts. Alignment of grafts is equally important in achieving an aesthetic result. Finally, only appropriate post-operative care can ensure a good outcome.¹

As mentioned above, a crucial point is how and where to select the donor hair. Normally, hair that would match the eyebrow has been selected from the mid-lower occipital area, because the hair is coarser than from other areas, more single-hair grafts are present, and it is usually the last to turn gray.² Other possible donor areas are the temporal, post-auricular, and sideburn areas. Existing hair on the eyebrow and scalp are different from patient to patient, and there is no definitive donor site for every patient. A simple way to match the grafted hair to existing hair is to clip a few hairs from various sites and compare them to the recipient hair with the naked eye or using micro-calipers.

We present a case of eyebrow transplantation using donor hair from the sideburns. Sideburn hair is coarser than scalp hair and is an alternative donor site in some patients

Case Description

A Caucasian male patient, 46 years old, was diagnosed as androgenetic alopecia, Norwood Class V. He had thinning of both eyebrows over the lateral one-third without scarring or tattoos (Figure 1).³ He desired scalp and eyebrow transplantation in the same session and wanted to restore only the lateral eyebrows. He had no medical illness,

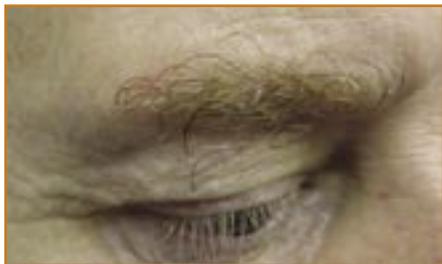


Figure 1. Thinning of the eyebrows over lateral one-third.

did not drink or smoke, and was not on any medications. The outline was drawn and a requirement of 40 single-hair grafts on each side was estimated. Characteristics of his existing eyebrow hair were grade A in caliber, light brown, and wavy. Some hairs were longer than normal, which is a usual finding in aging people. The hairs from his occipital and temporal areas were grade B, but the hair from the sideburn was coarser and matched exactly with those of his eyebrow (Figure 2). The width and length of the sideburns was 2cm and 5cm, respectively. His hair density, estimated using a

densitometer, was 60 hairs per cm².

Donor hairs were selected from both sideburns without trimming. An elliptical strip of 0.4 × 2.5cm and 0.4 × 2.0cm from the left and right sides were taken re-

spectively. The total area removed was 1.8cm². The outline of the strip was marked close to the tragus to hide the scar



Figure 3. The outline of the strip was marked close to the tragus to hide the scar post-operatively.

(Figure 4).^{1,5}

The recipient site was injected with 1% Xylocaine with 1:100,000 epinephrine without tumescent fluid. Implantation was done using the stick-and-place technique with 22G needles. Insertion was started from the lateral end of the eyebrow, maintaining as acute an angle as possible. The alignment of the grafts was in a convergence fashion until the existing hair was reached medially (Figure 5).^{2,6} After completion, the patient was asked to take a look in the mirror to suggest further changes. Next, 44 and 40 single-hair grafts were inserted over the left and right eyebrows, respectively, to



Figure 2. Hair from eyebrow, sideburn, and occipital area. Hair from sideburn was coarser and matched exactly with those of the eyebrow.

post-operatively. The donor area was anesthetized using 1% Xylocaine with 1:100,000 epinephrine followed by tumescence until turgor was achieved. Harvesting was done meticulously using an open technique to minimize transection.⁴ The wound was closed using 5/0 Nylon with mid-dermal simple running sutures (Figure 3).

The strip was dissected under 10 × magnification stereomicroscopes into skinny single-hair grafts keeping the hair 1cm in length



Figure 4. Skinny, long, single-hair grafts.

satisfy him with a complete and symmetric look.

Immediately after completion of the procedure, clear Chloramphenicol eye ointment was applied over the eyebrow. The patient was instructed to come back for shampooing and wound care the day after surgery. To keep the direction and angle of grafts flat to the skin, he was advised to apply eye ointment twice a day for 10 days without any dressing on top. The stitches at the donor areas were removed 5 days post-operatively. He was told he could trim the transplanted eyebrow hair after 10 days.



Figure 5. The stick-and-place technique with 22G needles. Keep the angle as steep as possible and align the grafts in a convergence pattern.



Figure 6. Post-op result after 5 days.

Result

The patient was immensely satisfied with the result because the grafted sideburn hair matched well with the existing eyebrow hair (Figure 6). There was a minimal bruise over the left upper eyelid.

Discussion

Although the size and texture of the hair in the donor and recipient sites was properly matched, one disadvantage of sideburn hair is that they might turn gray in the future and coloring might be needed. Eyebrow transplantation from the sideburns should be utilized in select cases. Long-term follow-up is required. A good result on an eyebrow case will raise a thousand brows.

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