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Original Article

Rejuvenating bad hair transplants

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Abstract

Objective To share the experience of corrective surgery for bad hair transplants.

Patients and methods This study was carried out at the Aesthetic Plastic Surgery, Rawalpindi, from January 2007 to December 2008. All the male patients having unsatisfactory results after hair transplant surgeries were included. Patients having problems with front hairline were included in group A. Patients having problems in mid-scalp were placed in group B, whereas patients with problems in donor area were placed in group C. In all patients, the corrective procedures were performed under local anesthesia, with a single dose of sedative (diazepam 10mg) and first generation cephalosporin. The donor area was infiltrated with a mixture of normal saline, lidocaine and epinephrine (1:100,000). The strip was harvested in prone position. The donor area was closed with single 3-0 non-absorbable running suture. Undermining of the wound margins was performed in almost all the cases to avoid the stretch on the suture line. Slits were made according to the preoperative plan. Large hair plugs were removed/excised/extracted. The defects were closed using very fine sutures. Hair plugs were also removed in cases of very low hair line. Only single follicular unit grafts were used to reconstruct the anterior hairline. The remaining follicular unit grafts were distributed according to the preoperative plan. Transplanted areas were left open without any dressing. The first wash was started after 48 hours. The donor area stitches were removed on 12-14 days.

Results A total of 26 patients were included who had previous surgeries at other centres and were not satisfied with the results. The mean age of the patients was 30.8 years. Majority of the patients (42.5%) belonged to younger age group 20-30 years. 69.2% patient complained of a prominent unnatural hairline and 46.2% of these patients had multiple hair plugs in the anterior hairline. 80.8% patients had unnatural angles of the hair. Donor scar problems were also seen including wide scar (69.2%) and poor positioning in 26.9% patients.

Conclusion Presented with significant cosmetic problems and severely limited donor reserves, the surgeon performing restorative transplantations faces distinct challenges. Meticulous surgical techniques and optional utilization of a limited hair supply will enable the surgeon to achieve the best possible cosmetic results for patients requiring repairs.

Key words
Hair transplant, bad hair transplant.

Introduction

Hair transplant surgery is the most frequent cosmetic procedure performed in men. The art of hair transplantation has greatly progressed over the last decade. The micro/ minigraft techniques have been replaced by follicular unit transplantation (FUT). The use of punches is almost obsolete. The techniques of harvesting follicular units have evolved to be more patient friendly. The results of good surgeries are natural. The donor scar visibility is reducing as a result of good closure techniques.

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A significant portion of any hair transplantation surgeon's practice involves management of previously transplanted patients.[1] Potential problems may involve harsh frontal hairlines lacking a natural appearance, or plug grafts. In addition, there may be incorrect angling of the transplanted hair, inappropriately placed hairlines, or improperly distributed hair. There may be bad donor scars which may be too wide or incorrectly positioned.

Rejuvenation of these bad hair transplants varies from case to case. The main objective of corrective surgery is to restore a natural looking front hairline. The restoration procedures include three mechanisms: adding more hair, removing the previously transplanted hair or redistribution of already transplanted hair.[2]

The main aim of the study was to share the experience of corrective surgery.

Patients and methods

All male patients having unsatisfactory results after hair transplant surgeries were included (none of the surgery was done by the author). The patients were categorized according to the deformity (**Table 1**). Patients having problems with front hairline were included in group A. Patients with problems in mid-scalp were placed in group B, whereas patients with problems in donor area were placed in group C. Group A included patients with too low hairline, straight front hairline, unnatural hair angles or multiple hair plugs in front hairline. Group B included patients with poor distribution of hair, unnatural hair angles, multiple hair plugs or sprouted grassy looks. Group C included patients with wide scars in the donor area (>3-4 mm), a well-demarcated line with in-dipping (step deformity), or low-lying scars.

In all patients, the corrective procedures were performed under local anaesthesia, with a single dose of sedative and first generation cephalosporin. The donor area was marked and probable number of follicular unit grafts was calculated. The planning was done according to the available number of grafts; the priority was given to the anterior hairline.

The donor area was infiltrated with a mixture of normal saline, lidocaine and epinephrine. The strip was harvested in prone position. The donor area was closed with single 3-0 non-absorbable running suture. In some cases, undermining of the wound margins was performed to avoid the stretch on the suture line. The recipient area was infiltrated with a solution of normal saline, 1% lidocaine and 0.5 mg of epinephrine. Slits were made according to the preoperative plan. Large hair plugs were removed/excised. The defects were closed using very fine sutures. Hair plugs were also removed in cases of very low hair line. Only single follicular unit grafts were used to reconstruct the anterior hairline. The remaining follicular unit grafts were distributed according to the preoperative plan. Transplanted areas were left open without any dressing. The first wash was started after 48 hours. The donor area stitches were removed on 10-13 days.

Results

A total of 17 patients were included who had previous surgeries at other centres and were not satisfied with the results. Majority of the patients belonged to younger age group 25-35 years (47.1%). 52.9% patients complained of a prominent unnatural hairline (**Table 1**) and 52.9% of these patients had multiple hair plugs in the anterior hairline. 76.5% patients had unnatural angles of the hair. Donor scar problems were also seen, including wide scar (52.9%) and poor positioning in 23.5% patients.

Table 1 Details of the deformities (n=17).

Group	*Deformity*	*No. of Patients*	*%*
A	Straight anterior hairline	12	70.5
(Anterior Hairline)	Unnatural angles	9	52.9
	Too low hairline	7	41.2
	Multiple plugs in hairline	9	52.9
B	Poor distribution/thinning	10	58.8
(Mid Scalp)	Straight angles	13	76.5
	Multiple hair plugs / Sprouted grassy Looks	9	52.9
C	Wide donor scar	9	52.9
(Donor Area)	Poor position of scar	4	23.5

Case 1

A 32-year-male had a surgery about 4 years back. The patient had a straight anterior hairline. The hair was scanty and punch grafting was done containing 2-3 hair grafts in the anterior hairline (**Figure 1**). The patient was not satisfied with the angles of the hair. A corrective surgery was performed under local anaesthesia. 1750 grafts were planted to improve the anterior hairline. The patient was satisfied with the end result.

Figure 1 Undesirable surgery

Case 2

A 49-year-old male had surgery 4 years ago. Patient had an unnatural hairline, along with a low lying, wide scar (**Figure 2**). The patient underwent a revision surgery of 1300+ grafts. The anterior plugs were removed. The patient was satisfied with the final result.

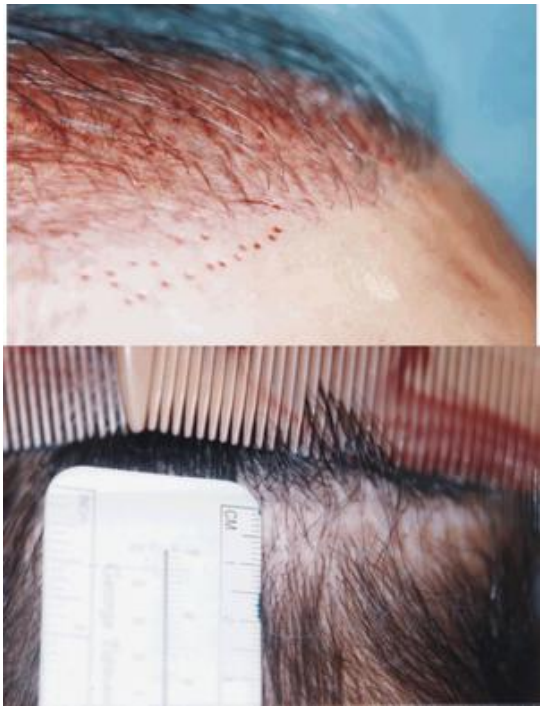

Figure 2 Revision surgery and poor scar of previous surgery.

Discussion

Rejuvenation of previous surgeries is dependent on various factors. Careful assessment is required during the consultation with specific attention to be paid to the characteristics, density of the remaining donor area, the potential impact of possible future hair loss, and the result of previous surgery. As long as adequate donor hair remain, significant visual benefits are routinely obtained from renovation. This improved cosmesis is based on better general coverage of

the balding areas together with a more natural look from modern grafting techniques. In patients with poorly planned or performed previous surgery, the improved cosmetic result is based in part on correction of these planning or surgical deficiencies. Once these deficiencies have been corrected, further benefits will again depend on the quality and quantity of the remaining donor hair. Some patients presented with almost no available donor hair. In such cases, only minor changes such as removal and relocation of previously grafted area may make a significant improvement. In these patients, follicular unit extraction from the occipital area or other body area provides another tool in the armament of a hair restorative surgeon.

The overall strategy of corrective surgery is to achieve maximum impact. This is generally best achieved by improving coverage in the cosmetically significant areas. The patient's goals must always be aligned with the amount and quality of the remaining donor area. Generally in patients with limited donor supply, a side part will produce the best cosmetic result.

Incorrectly placed hairline should be corrected prior to further thickening so that a coordinate plan may be utilized. Stray hair from previous grafts are frequently left in spite of excision and may continue to present a cosmetic problem. In certain cases, laser hair removal may benefit. Various treatment techniques have been mentioned in the literature to rejuvenate the previous poor results [1,3-5] but the plan must be designed on individual basis. Sound surgical principles of accurate approximation and closure with little or no tension will give fine scars. Various suturing techniques are available [6-8], but the proper positioning of the initial scar is of the utmost importance. If the scar is placed too low, it is likely to be wider. Moreover, a tight donor closure can result in cosmetically unacceptable scars and should be avoided. In wider scars, simple serial scar excisions may not help but multiple W-plasties may help to disperse the scar. The best way to successfully revise the wider scars is the use of tissue expansion. Another way is to plant a few follicular unit grafts by follicular unit extraction into the scar. The surgeon must try to achieve a 'single scar' every time the surgery is performed.

Conclusion

Although the hair transplant surgeries are performed very frequently, proper training under good supervision is must to obtain good results.

References

1. Knudsen R. Renovation of previous transplants. In: Haber RS, Stough DB, editors. *Hair Transplantation*. Phladelphia: Elsevier; 2006. P. 157-67.
2. Epstein JS. Revision surgical hair restoration: repair of undesirable results. *Plast Reconstr Surg* 1999; **104**: 222-32.
3. Bernstein RM, Rassman WR, Rashid N, Shiell RC. The art of repair in surgical hair restoration Part I: basic repair strategies. *Dermatol Surg* 2002; **28**: 738-94.
4. Vogel JE. Correcting problems in hair restoration surgery: an update. *Facial Plast Surg Clin N Am* 2004; **12**: 263-78.
5. Unger W. Correction of cosmetic problems in hair transplantation. In: Unger W, Shapiro R, editors. *Hair Transplantation*. NewYork: Marcel Dekker; 2004. P. 663-87.
6. Frechet P. Scalp surgery with invisible scars. *ESHRS J* 2005; **5**: 10-11.
7. Ziering C, Lin R, Calder J. The Ziering tunnel technique: a new technique for reducing donor closure tension in hair transplant surgery. *ESHRS J* 2001; **1**: 10-12.
8. Brandy DA. Intricacies of the single-scar technique for donor harvesting in hair transplantation surgery. *Dermatol Surg* 2004; **30**: 837-45.