

EFFECT OF MINOXIDIL ON HAIR TRANSPLANTATION IN ALOPECIA ANDROGENETICA

Gurinderjit Singh

Forty patients suffering from androgenetic alopecia were given 3 to 4 sittings of hair transplantation at an interval of 4 to 6 weeks each. Only patients of type III, type III(vertex) and type IV baldness were operated. Twenty patients, six of type III, six of type III(vertex) and eight of type IV baldness were advised to use minoxidil 2% locally at the recipient area in the dose of 1 ml applied twice daily. Twenty patients of similar types of baldness were advised to just shampoo their hair daily without using topical minoxidil. Percentage of response was compared between the two groups. Minoxidil did not play any role in the percentage of hair survival before and after transplantation in androgenetic alopecia. However in 60 percent grafts of patients who had used topical minoxidil, there was no initial postoperative hair shedding.

Key words : Hair transplantation, Androgenetic alopecia, Minoxidil

Minoxidil (2,4 diamino - 6- piperidinopyrimidine-3-oxide) is a potent direct vasodilator which caused reversible hair growth when used for 4 weeks or so as a systemic antihypertensive drug.^{1,2} It has since been used with success in treatment of alopecia areata,^{3,4} and androgenetic alopecia.⁵ Minoxidil may have a direct effect on hair follicle.⁵ This was shown in a study involving 16 patients who used 2% solution of topical minoxidil on the recipient bald scalp, wherein 71% of the 64 grafts, there was no hair shedding, which normally occurs 2-4 weeks after transplantation.⁶ Since there are no studies from India regarding the effect of minoxidil

on hair survival in patients who have undergone hair transplantation, the present study was carried out.

Materials and Methods

Forty patients of androgenetic alopecia were given four sittings of hair transplantation at an interval of 4-6 weeks each. There were 12 patients each of type III and type III(vertex) whereas 16 patients were of type IV baldness. The patients were divided into two groups (group A and group B). Each group comprised 6 patients each of type III and type III (vertex) and 8 patients of type IV baldness.

The patients of group A as well as group B were operated similarly during each sitting with transplantaion of 40-60 plugs (each bearing 10 to 15 hair), from occipital to the frontal

From the Department of Dermato- Venereology and Hair Transplantation, Mohan Dai Oswal Cancer Treatment and Research Foundation, Ludhiana-141 009, Punjab, India.

Address correspondence to :
Dr. Gurinderjit Singh, 77 Vishal Nagar Extn., Pakhowal Road, Ludhiana-141 002, India.

region of scalp. Successive sittings were used to cover the bald area in between the previously transplanted plugs. The patients of group A were advised to use 1ml of minoxidil 2% locally on the recipient area twice daily, from the third postoperative day itself, when the dressing was removed. Minoxidil was used for one year continuously except for three days before each successive sitting of hair transplantation. At each visit an enquiry was made about local irritation or systemic side effects. Blood pressure measurement was also done on each visit.

The patients of group B were not prescribed minoxidil lotion. They were advised to just shampoo their hair daily. Both the groups were followed up at monthly intervals till one year. The final outcome was termed excellent, when out of 10 plugs transplanted at the recorded sites, at least 8 plugs could yield 80 per cent of the hair when compared to the number of hair present in the plug while harvesting. Good response was the term applied when out of 10 transplanted plugs not more than 6 to 7 plugs could give 80 per cent growth, and any response below this was termed poor. The transplanted grafts of both the groups were followed minutely for the absence of initial telogen phase post-operatively.

Table 1: Types of baldness and percentage of response

Type	Percentage of Response					
	Group A			Group B		
	Exce - llent	Good	Poor	Exce - llent	Good	Poor
Type II	62	28	10	64	23	13
Type III (Vertex)	56	24	20	60	22	18
Type IV	42	18	40	38	22	40

Results

Percentage of response against each type of baldness in both the groups is shown in the table I.

Sixty percent of the transplanted grafts did not have initial shedding of hair in the group A, whereas 100% of the transplanted grafts went into telogen phase in group B.

Discussion

Hair transplantation is a procedure not best suited to all patients of male pattern baldness. If the area of baldness is very large and the donor supply is very limited, it may be impossible to achieve an aesthetically acceptable result. Minoxidil was used in this study to give better yield of hair in transplanted plugs in such type of patients. But the results were not satisfactory. However, since there was no initial telogen phase in 60% of the transplanted grafts when minoxidil was used, lesser time period was required to get an aesthetically good cosmetic result.

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