

HAIR DISORDERS

CHARACTERISATION OF FOLLICULAR SULFOTRANSFERASE ACTIVITY LEVELS IN PLUCKED HAIR FOLLICLES OF ANDROGENIC ALOPECIA PATIENTS IN INDIAN SUBCONTINENT.

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Introduction: Several studies established that sulfotransferase enzyme activity in hair follicle predicts response to topical minoxidil; however, the prevalence of this enzyme among Indian patients has not been studied. Also, to-date no reports in the literature characterize sulfotransferase activity based on sex, age, duration and grade of hair loss and family history. In this study, we characterize the sulfotransferase in 120 patients of pattern hair loss patients visiting dermatology clinic in India.

Method: 120 patients above 18 years of age with patterned hair loss treated or untreated were included in the study after obtaining informed consent. A total of 75 men and 45 women were recruited. 8-10 hair samples were plucked with the help of tweezers at vertex/mid-scalp and inspected visually for an intact bulb. Suitable anagen hairs were processed for sulfotransferase assay analysis. All patients were treated with topical minoxidil for 3 months. 95 patients completed the study. Post 1 month again hair samples were taken for sulfotransferase assay.

Result: Overall, 40.83% of patients with AGA had low level of sulfotransferase. Surprisingly, 49.3% of men had low levels of sulfotransferase vs 26.6% of women. No correlation was found between sulfotransferase activity and age, duration of hair loss, grade of hair loss, or family history. There was no significant difference in sulfotransferase enzyme activity before and after minoxidil treatment.

Conclusion: Our study shows high prevalence of patients having low levels of sulfotransferase activity in Indian population. Thus, it is high time to reconsider minoxidil as monotherapy for patterned hair loss. Sulfotransferase activity assay before commencement of therapy would be of great help in ruling out non-responders and also prescribing the accurate dose of minoxidil to AGA patients. Our study is first of its kind to characterize sulfotransferase activity levels and see effect of minoxidil on sulfotransferase enzyme activity. Our study is first to be conducted in Indian population.