

HAIR DISORDERS

A RANDOMIZED CONTROLLED STUDY EVALUATING THE ROLE OF AUTOLOGOUS GROWTH FACTORS IN PLATELET RICH PLASMA IN A HUNDRED AND FORTY MALES WITH ANDROGENETIC ALOPECIA

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Introduction: Minoxidil, the gold standard, FDA-approved topical for Androgenetic alopecia (AGA) shows modest efficacy, between 40 and 60%, with variability in compliance rate, as per Cochrane reviews. Growth factors in autologous Platelet-Rich Plasma (PRP), viz., Platelet-derived, epidermal and vascular endothelial growth factors trigger the dermal Wnt, Shh, Notch and β -Catenin signalling pathways to stimulate hair follicle morphogenesis.

Objective: This study evaluates the efficacy of growth factors, combined with Minoxidil, versus Minoxidil monotherapy in patterned alopecia.

Material and Methods: This randomized, controlled study was conducted at the Dermatology department of a military tertiary care hospital over two years. A hundred and fifty-two men with AGA were selected on the basis of eligibility criteria, classified into Hamilton-Norwood grading, and divided randomly into 2 treatment arms (76 each): Group A (M+PRP): received monthly intradermal PRP for 6 months alongwith topical Minoxidil, twice daily, for 12 months. Group B (MM): received topical 5% Minoxidil monotherapy. PRP was prepared using the double-spin method. Efficacy variables were standardized global photography, target area trichoscopy and an indigenous Quality-of-Life (QoL) questionnaire.

Results: 140 subjects completed the study. On global photographic assessment, using the standardized seven-point scale, +3 grade improvement was shown by 61.43% (n-41/70) in Group A versus 32.86% (n-23/70) in the monotherapy group. Trichoscopic evaluation of Hair Diameter Diversity (HDD) was done by a four-point scale. Group B showed Grade IV improvement in 41.43% (n-29/70) v/s 31.11% (n-14/45) in Group A. The combination group showed statistically higher satisfaction levels on subjective questionnaire. (p – 0.039)

Discussion: PRP has a definitive role in stimulating hair growth, and hence, should be



offered as a part of the cafeteria approach to all patients with AGA, for improved compliance, and its synergistic action with Minoxidil. This is the largest controlled study (n=140) conducted, as per global literature, on PRP in patterned alopecia.

