

**Abstract N°: 6742****Comparative Analysis of Platelet-Rich Plasma (PRP), Exosomes, and Minoxidil Therapy for Androgenic Alopecia**Karim Karray¹, Anfisa Lepekhova¹, Vera Smoliannikova¹, Olga Olisova¹¹Sechenov University, Department of skin and venereal diseases V.A Rakhmanova, Moscow, Russian Federation**Introduction & Objectives:**

Androgenic alopecia, also known as male or female pattern hair loss, is a common condition characterized by progressive hair thinning due to genetic and hormonal factors. Current treatments include minoxidil, finasteride, platelet-rich plasma (PRP), and novel regenerative approaches like exosome therapy. While minoxidil is established as a first-line treatment, PRP and exosomes offer regenerative potential by stimulating hair follicle activity. This study aims to compare the efficacy between different types of treatment.

Materials & Methods:

Three patients were referred to our clinic with a confirmed diagnosis of androgenic alopecia, as established by phototrichogram analysis. The first patient, a 33-year-old male, underwent a series of five platelet-rich plasma therapy sessions; the second patient, a 27-year-old male, was prescribed topical 5% minoxidil solution, applied twice daily; and the 31-year-old female received four sessions of salmon-derived exosome therapy, delivered through microneedling.

To objectively assess treatment efficacy, serial phototrichogram evaluations were performed, with particular attention to key parameters: the percentage of vellus hairs, the anagen-to-telogen ratio, and overall hair density. These metrics provided quantitative insights into follicular activity and regrowth patterns.

Results:

Quantitative trichoscopic analysis revealed distinct therapeutic responses between treatment modalities. The PRP therapy outcomes demonstrated significant improvement in follicular metrics. The vellus hair proportion decreased from 41% to 11%, anagen hair prevalence increased from 68% to 100%, and telogen hair decreased from 32% to 0%. The minoxidil therapy outcomes demonstrated an increase in anagen hair from 84% to 93%, telogen from 16% to 7%, and vellus from 40% to 16%; however, exosomes showed a decrease of vellus hair proportion from 21% to 10%.

Conclusion:

The results of this comparison highlight the strong promise of exosome therapy as a groundbreaking treatment for androgenic alopecia. With its ability to induce rapid and robust follicular regeneration evidenced by near-complete vellus hair reduction, full anagen induction, and complete telogen suppression, exosome therapy demonstrates clear advantages over conventional treatments like PRP and minoxidil.

