
Platelet-rich plasma has a place in the treatment of androgenetic alopecia



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Androgenetic alopecia (AGA) is one of the most common problems seen in dermatologic settings. Topical minoxidil and oral finasteride are the only treatments approved by the US Food and Drug Administration. While both treatments are effective, they are not without complications and require long-term daily use. Many studies have found platelet-rich plasma (PRP) to be beneficial¹; however, the criticism is that most studies are small, uncontrolled, reliant on the subjective analysis of results, and have a wide variation in methodologies. In my experience, patients are interested in more natural, alternative therapies for AGA to improve clinical outcomes while minimizing risk and the positive trends in the literature surrounding PRP make it a viable option.

Recent well-designed studies continue to expand our understanding of PRP. Alves and Grimalt² conducted a randomized, placebo-controlled, double-blind, half-headed trial. After 3 and 6 months, mean total hair density was the only statistically significant result in the PRP treatment group compared with placebo ($P < .05$). Shapiro et al,³ in a double-blind, randomized controlled study, showed that after 3 monthly injections, hair density increased after PRP treatment, although not significantly greater than placebo. Bruno et al⁴ randomized 26 patients to receive 4 subcutaneous injections of PRP or saline. They demonstrated a significant increase in hair count ($P = .0016$), hair density ($P = .012$), and percentage of anagen hairs ($P = .007$) in the PRP group versus the control group, without correlation with platelet counts or quantification of the growth factors in PRP. The lack of association between platelet count and growth factor levels and clinical improvement suggest that other mechanisms could be involved in this response and highlights a knowledge gap we need to fill.

Patient selection is important. Best responses can be expected in patients with lower Norwood–Hamilton (especially II-III) or Ludwig stages, and in patients within the first 5 years of noticeable hair loss.¹ In a recent meta-analysis, Gupta et al⁵ looked at sex-based differences in outcomes. In the studies evaluated, PRP significantly increased hair diameter in men and women but significantly increased hair density only in men.

Patients should be made aware of the risks and benefits before scheduling a PRP treatment. Note that there is no guarantee of efficacy. Make a concerted effort to deliver this information in an unbiased fashion to allow each patient to make an informed decision. Be sure to take clear, consistent photographs at each visit. Protocols vary widely in studies, but currently a regimen of 3 to 4 monthly treatments followed by maintenance treatments every 6 months has been successful for many patients in my practice.

We need better data to optimize and predict outcomes. Future investigations should seek to standardize protocols, define clear outcome measures, and follow double-blind, randomized, controlled methodologies. Currently, there is sufficient evidence to support efficacy and safety of PRP for AGA in your practice if you and your patient understand what is known and what is yet to be known.

Conflicts of interest

None disclosed.

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