Comment on "Treatment of male pattern alopecia with platelet-rich plasma: A double-blind controlled study with analysis of platelet number and growth factor levels"

To the Editor: We read with great interest the recently published article by Rodrigues et al[1] on the evaluation of platelet-rich plasma in the treatment of androgenetic alopecia (AGA). We would appreciate the authors addressing the following issues.

First, in their study, the diagnosis of AGA was based on a personal history of progressive hair loss for >2 years and on TrichoScan findings, such as the inversion of percentages of anagen and telogen hairs and a decrease in hair density. Diagnosis of AGA is usually established by its typical pattern distribution and hair thickness heterogeneity on trichoscopy, in addition to an appropiate medical history.[2] There is no identified criteria regarding the duration of hair loss in the diagnosis of AGA. In addition, TrichoScan software is not a diagnostic procedure; it is a tool for monitoring hairloss and treatment responses in AGA.[3]

Second, the authors describe subcutaneous injections of platelet-rich plasma (PRP) in their study. PRP has been proposed to stimulate hair regrowth by activating the stem cells in the hair bulge and dermal papilla cells located in dermis. Therefore, intradermal injections of PRP are suggested by most authors.[4]

Third, in their study, baseline hair density and hair counts of the control group were better than those of the PRP group, albeit both groups had an AGA-III vertex profile. Interestingly, the authors considered this difference an advantage for the control group and had expected a better response in them. Despite the evidence that patients with lower AGA scores may respond to treatment better than patients with advanced stages,[5] there is no scientific data that patients with higher hair counts favor a better treatment response in AGA. Total number of hairs varies among individuals, so hair count is not a reliable measure for determining the severity of alopecia or comparing the degree of hair loss between individuals.[2]

Furthermore, a detailed explanation of the TrichoScan procedure, particularly the TrichoScan analysis of the same area of the scalp at 3 different time points used throughout the course of the study, was not given. To ensure the reproducibility and accuracy of subsequent assessments, application of a tattoo to the target area is advised.[2] Because no tattoo is observed in the figures,[1] we wonder how the authors overcame this problem? Moreover, how did the authors blind the operators, as saline is colorless and PRP is yellow or pinkish-yellow?

Last, the authors commented that needling had no effect on treatment of AGA, as there was no improvement in the control group. However, subcutaneous delivery of saline or PRP by just 20 injections cannot be accepted as proper needling. Needling is repetitive puncturing of skin with sterilized microneedles (0.5-1.5 mm in length) penetrating into the epidermis or dermis.[4] Microneedles are applied to the entire skin, covering the crown and vertex area. Therefore, in our opinion, their study did not demonstrate that needling is not effective in AGA.

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REFERENCES

1. Rodrigues BL, Montalvão SAL, Cancela RBB, et al. Treatment of male pattern alopecia with platelet-rich plasma: a double-blind controlled study with analysis of platelet number and growth factor levels. *J Am Acad Dermatol*. 2019;80(3):694-700.
2. Hoffmann R. TrichoScan: a novel tool for the analysis of hair growth in vivo. *J Investig Dermatol Symp Proc*. 2003;8(1):109-115.
3. TrichoScan Professional Version 3.0 User Manual Website. http://trichoscan.com/media/ download/ts-professional-manual_ts2008_01_16.pdf. Accessed June 26, 2019.
4. Shah KB, Shah AN, Solanki RB, et al. A comparative study of microneedling with platelet-rich plasma plus topical minoxidil (5%) and topical minoxidil (5%) alone in androgenetic alopecia. *Int J Trichology*. 2017;9(1):14-18.
5. Won YY, Lew BL, Sim WY. Clinical efficacy of oral administration of finasteride at a dose of 2.5 mg/day in women with female pattern hair loss. *Dermatol Ther*. 2018;31(2):e12588.

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