Recurring transient lymphadenopathy after microneedling with platelet-rich plasma for androgenetic alopecia

To the Editor: We read with great interest the recently published article by Stojadinovic et al[1] on the adverse effects of platelet-rich plasma and microneedling. The authors reported scalp itching (14.28%), transient hair shedding (1.42%), and lymphadenopathy (1.9%) among 210 patients. We would appreciate the authors' addressing the following issues.

First, what type of alopecia did their patients have? As they also mentioned, this treatment modality is applied in different types of alopecia such as androgenetic alopecia and alopecia areata. Concomitant therapeutic agents such as topical minoxidil for androgenetic alopecia can also cause similar adverse effects; namely, scalp pruritus and transient hair shedding.[2]

Second, the authors describe 4 patients with cervical lymphadenopathy in their study. The lymphadenopathies arose 1 to 3 days after the session and subsided spontaneously in a few days in 3 patients, whereas 1 patient had oral antibiotic therapy. We would like to learn how many treatment sessions the authors performed and whether they observed recurrent lymphadenopathies in these 4 cases, or witnessed any new patients with lymphadenopathies in the subsequent treatments. Recently, we had 2 female patients (aged 24 and 37 years) with lymphadenopathy after microneedling with platelet-rich plasma for androgenetic alopecia. They had microneedling with platelet-rich plasma biweekly for 3 months while using 5% topical minoxidil solution once a day. Microneedling was performed by an electronic device (Dermastamp, GmbH, Berlin, Germany) after the topical application of platelet-rich plasma (5 to 7 mL) (Ycellbio Medical Co, Seoul, South Korea) on the crown and vertex area. In addition, 1 mL of platelet-rich plasma was injected intradermally within the same area. The next day of the procedure, both patients developed bilateral painful postauricular and cervical lymphadenopathies that resolved spontaneously in 2 to 3 days. Lymphadenopathies arose at the first session in one patient and at the second session in the other one. However, they recurred and regressed in exactly the same course in both patients at every following treatment session.

Third, the authors commented that proinflammatory cells such as lymphocytes and monocytes in platelet-rich plasma together with microneedling may induce an exacerbated immunoresponse, leading to lymphadenopathy. Indeed, there is supporting evidence for increased inflammatory reaction after platelet-rich plasma treatment for musculoskeletal pathologies.[3] Nevertheless, there are also a few studies reporting transient cervical lymphadenopathy after microneedling with other medications such as minoxidil solution for androgenetic alopecia,[4] or trichloroacetic acid for facial acne scars.[5] The question that needs to be clarified is what is the underlying cause of these acute, painful, yet transient lymphadenopathies occurring in a small number of patients after microneedling with platelet-rich plasma? The role of infection seems unlikely in these cases because of rapid spontaneous regression.

Microneedling with platelet-rich plasma for alopecia has been reported with tolerable adverse effects such as pain during the procedure and transient scalp erythema with tenderness afterwards. Nevertheless, accumulating data indicate that self-limited, painful lymphadenopathies can develop in the neck area, and they may recur in subsequent sessions, as in our patients.

Cemile Tuğba Altunel, MD, and A. Tülin Güleç, MD

From Başkent University Faculty of Medicine, Department of Dermatology, Ankara, Turkey.

Funding sources: None.

Conflicts of interest: None disclosed.

Reprints not available from the authors.

Correspondence to: A. Tülin Güleç, MD, Başkent University Faculty of Medicine, Department of Dermatology, Mareşal Fevzi Çakmak Caddesi, 53. Sokak, No. 48, Ankara, Turkey

E-mail: tulinogulec@hotmail.com

REFERENCES

1. Stojadinovic O, Morrison B, Tosti A. Adverse effects of platelet-rich plasma and microneedling. *J Am Acad Dermatol*. 2020;82(2):501-502.
2. Blume-Peytavi U, Hillmann K, Dietz E, et al. A randomized, single-blind trial of 5% minoxidil foam once daily versus 2% minoxidil solution twice daily in the treatment of androgenetic alopecia in women. *J Am Acad Dermatol*. 2011;65(6):1126-1134.
3. Kaux JF, Croisier JL, Léonard P, et al. Exuberant inflammatory reaction as a side effect of platelet-rich plasma injection in treating one case of tendinopathy. *Clin J Sport Med*. 2014;24(2):150-152.

4. Bao L, Gong L, Guo M, et al. Randomized trial of electrodynamic microneedle combined with 5% minoxidil topical solution for the treatment of Chinese male androgenetic alopecia. *J Cosmet Laser Ther*. 2020;22(1):1-7.

5. Garg S, Baveja S. Combination therapy in the management of atrophic acne scars. *J Cutan Aesthet Surg*. 2014;7(1):18-23.

https://doi.org/10.1016/j.jaad.2020.03.107