

Alopecia Areata—Successful Outcome with Microneedling and Triamcinolone Acetonide

Sir,

Alopecia areata (AA) is a chronic, organ-specific autoimmune disease, probably mediated by auto-reactive T cells, which affect hair follicles and sometimes the nails. The condition is often difficult to treat. Corticosteroids topically and intralesionally are useful but the injections can be painful in large patches.

We are presenting a novel method of treating resistant AA using microneedling with topical triamcinolone application with successful outcome in two patients.

Two patients presented with patchy hair loss on the frontal and vertex areas of scalp since 1 year [Figure 1a-c] and 6 months, [Figure 2] respectively. There was no history of any other systemic illness. The patients had been treated previously with intralesional injections of triamcinolone acetonide, topical steroid creams, and minoxidil 5% lotion but with no improvement.

Both of them were treated with microneedling using a derma roller having 192 needles of 1.5-mm length each followed by topical application of triamcinolone acetonide. Triamcinolone acetonide in concentration of 10 mg/ml (0.1 ml containing 1 mg of triamcinolone) was applied on each lesion twice, before and after performing dermaroller. Under aseptic precautions, the dermaroller was moved on the scalp patches diagonally, vertically and horizontally 4 to 5 times in each direction after applying triamcinolone acetonide. This created pin point bleeding which was taken as an end point, following which triamcinolone was applied topically. No anaesthesia was used as the procedure was relatively painless. A total of three sessions were done for both patients at 3 weeks interval. Both patients showed improvement with each Session, [Figures 3a, 4a] with excellent growth of hair after 3 weeks of last session (at

9 weeks) [Figures 3b, 4b]. The treatments were painless and there were no adverse effects during or after the treatment. The patients were regularly followed up every month for 3 months and no recurrence was noted.

Thus, our report demonstrates the efficacy of microneedling in combination with triamcinolone application. Microneedling therapy is becoming popular in management of acne scars and also for facial rejuvenations.^[1] Recently it has been shown to stimulate hair growth. The proposed mechanism of action is thought to be stimulation of dermal papilla and stem cells.^[2,3] Microneedling also increases the blood supply to the hair follicles. It has also been hypothesized that the microinjury produced by microneedling helps in recruiting growth factors and inducing hair growth. Recently, it has been shown to be effective in AA.^[4]

Combining microneedling with triamcinolone acetonide

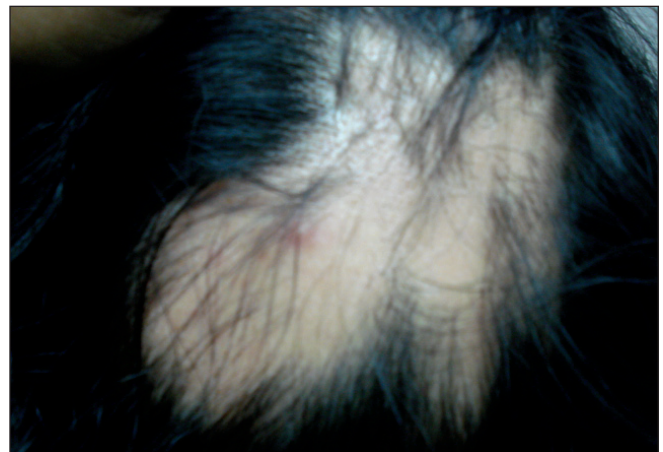


Figure 2: Clinical picture of the female patient showing multiple smooth surfaced alopecic patches all over the scalp



Figure 1: (a-c) Clinical picture of male patient showing multiple alopecic patches all over the scalp



Figure 3: (a-b) Showing excellent hair growth after three sessions

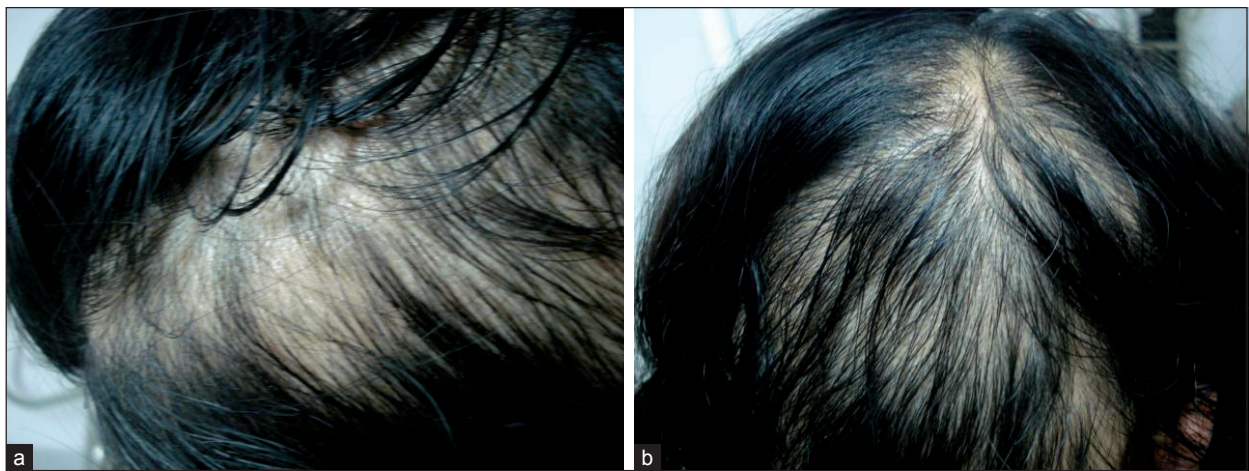


Figure 4: (a) Female patient after 1 session; (b) Female patient after 2nd session

application facilitates absorption of the drug with its known immunomodulatory effects. Further steroid administration after microneedling helps in uniform and relatively painless absorption. As can be seen from the photos, the results were satisfactory. One more advantage of the combination of microneedling with triamcinolone could be that the collagen induction by microneedling may counter the possible atrophy caused by triamcinolone.

Thus, our results show that microneedling in combination of triamcinolone is a safe and a promising tool in hair stimulation and for faster re-growth of hair in AA. This is the first study of use of microneedling combined with topical triamcinolone acetonide for AA. However, we are looking forward for proper standardization regarding the interval between subsequent sessions, end point and duration for this procedure by further studies.

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