Research Article

Evaluation of the Microneedling in Treatment of Alopecia Aerata.

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Abstract
Background: Alopecia areata (AA) is a chronic, organspecific autoimmune disease, probably mediated by autoreactive 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. **Objectives**: This work aims to evaluate the role of microneedling in treatment of alopecia aerate. **Methods**: The study was conducted on 20 patients with alopecia aerata The age of patients ranged from 10 to 40 years. **Results**: Clinical improvement in most of cases which was in the form of increase in hair growth and density within affected areas. It started at about one month and complete about 3 months. Conclusion: microneedling is a good alternative for treating alopecia aerate.
Keywords : Alopecia aerata, Treatement

Introduction
AA is hypothesized to be an organ specific autoimmune disease mediated by T lymphocytes directed to the hair follicles (Jackow et al., 1998) although genetic predispositions and environmental factors may trigger the initiation of the disease, the exact cause is still unknown (Tosti et al., 2003).

The peribulbar and lower one third of the follicle show a lymphocytic infiltrate ('swarm of bees') appearance. There is no scarring at any stage which is a characteristic finding. Fifty percent will regrow their hair entirely within a year without treatment; however 7-10% eventually ends up with severe chronic form of the condition (AlKhalifah et al., 2012).

Abundance of therapeutic modalities reflects the lack of any one safe and consistently effective approach. Nevertheless, cortico-steroids; (topical, intralesional and systemic) topical irritants, topical immunotherapy therapy, systemic immunotherapy, minoxidil, cyclosporine, isoprinosine, azathioprine, sulfa-salazine, prostaglandin analogues and combination therapies which takes up the best of each modality are used to treat alopecia areata (Coronel-Perez et al., 2010).

The aim of work
To evaluate the role of micro needling in treatment of alopecia aerata.

Subjects and Methods
The present study has been conducted on 20 patients with alopecia aerata attending the outpatient clinic of the Department of Dermatology, STDs and Andrology, Minia University Hospital. The age of patients ranged from 10 to 40 years. They were attending the Dermatology outpatient clinic of Minia University Hospital in the period from January 2018 to June 2019.

All patients were subjected to full history taking, scalp examination, photography and dermscopic examination d after treatment. Patients were treated with microneedling for 6 months.

Statistical analysis
Data were statistically analyzed using SPSS program. The statistical difference between groups was expressed in *p value* which was considered significant when it was < 0.05.

Results
We noticed clinical improvement in most of cases which was in the form of increase in hair

growth and density within affected areas. It started at about 1 months and completed by 3months of treatment.

Discussion

Microneedling therapy is becoming popular in management of acne scars and also for facial rejuvenations (Majid et al., 2009). 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 (Jeong et al., 2012), microneedling also increases the blood supply to the hair follicles. It has also been hypothesized that the microinjury produced by micro needling helps in recruiting growth factors and inducing hair growth. Recently, it has been shown to be effective in AA (Our results show that micro-needling is a safe and a promising tool in hair stimulation and for faster re-growth of hair in AA) .

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