

Scalp threading - new treatment option for Androgenetic Alopecia

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ABSTRACT

Background: Patients nowadays seek treatment, not only to prevent the existing hair loss but more so to regain new hair with good thickness and density. Cochrane review reports that the efficacy of finasteride and minoxidil for AGA varies between 40% and 60%, which implies that a significant number of patients go bald despite therapy. New treatment modalities, like Scalp Threading, Autologous stem cells, Cu-peptides, have beneficial role in hair regrowth. **Observation:** The dialog between mesenchymal and epithelial compartment of the hair follicle is essential for maintaining the normal hair growth, and is performed through signaling pathways and molecules. The Wnt pathway is considered to be the master regulator of hair growth and hair follicle cycling. In AGA, DHT inhibits hair growth by interfering with the Wnt pathway which results in arrest of the cells proliferation and differentiations, and seize of hair growth. **Key Message:** Scalp Threading is the novel treatment that stimulates the hair follicle cells proliferation, extends the anagen phase of hair growth and upregulates the growth factors. A single application of threads results in hair growth comparable to that achieved with consecutive applications of minoxidil. Considering its long-lasting and proliferating potentials, Scalp Threading can be considered a good treatment option for patients with AGA.

Keywords: scalpthreading, threads, hairgrowth treatments, hair regrowth, pdocscalpthreading, wnt pathway, aga, alopecia androgenetica.

1 THE IMPORTANCE OF HAIR

Hair plays a very important role in person's identification and acts as style item, and a reference of beauty. For the ancient Romans hair was not only a question of fashion but was used as a symbol of beauty, virility, class and intellect. In modern culture, voluminous hair is often associated with desirable qualities such as youthfulness and vitality. (1)

Our hair is a statement of style, a reference of beauty, an expression of self-love.

2 THE PSYCHOSOCIAL IMPACT OF HAIR LOSS

Few dermatologic problems carry as much emotional overtones as hair loss, both in men and women.(2). Hair loss adversely affects psychosocial status and quality of life. That is why there is a

growing demand among the patients to seek treatment, not only to prevent the existing hair loss but more so to regain new hair with good thickness and density.

3 MINOXIDIL AND FINASTERIDE – THE CONVENTIONAL TREATMENT OPTION

Cochrane review reports that the efficacy of finasteride and minoxidil for AGA varies between 40% and 60%, which implies that a significant number of patients go bald despite therapy. (3) The treatment response to topical minoxidil in AGA patients can be predicted by measuring sulfotransferase activity in plucked hair follicles (4). The efficacy of the conventional therapies with respect to new hair growth is unsatisfactory.

4 NEW TREATMENT OPTIONS

Scalp threading, autologous micrografts with mesenchymal stem cells, exosomes, growth factors, PRP etc. that act on stem cells and signaling pathways and regenerate and reactivate the hair follicle are the future in hair regrowth strategies.

5 SCALP THREADING

Scalp threading is a type of dermal needle therapy, and is defined as inserting thread into skin of the head, for the purpose of prolonged therapeutic stimulation. This treatment is also known as Thread-Embedding Therapy and it is not something new. (4)

What are threads ?

Threads are surgical sutures made of materials used in surgery to close wounds.

Threads are attached to needles with different dimensions that allow for that insertion of the thread.

After the insertion, the threads stay in situ in the skin and the needles is withdrawn.

Mechanism of action

Scalp threading enhances anagen induction in the HF by upregulating hair follicular cell proliferation and controlling the expressions of FGF-7 and FGF-5, which are involved in anagen induction and cessation, respectively. (5)

Hair count increases from average number of 65 hair follicular units to 93 hair follicular units per cm². (6)

Interestingly, a single application of threads, results in hair growth comparable to that achieved with consecutive applications of minoxidil.

6 CASE REPORT

Female patient, 38 years old. Hair loss started in March 2020 when she stopped breastfeeding after the pregnancy in 2019. Signs of post-partum depression, no history of hair loss. The laboratory analysis showed low levels of estrogen, and high levels of Androstenedione. USG showed signs of PCOS. Thyroid hormones also showed a trend of decreasing. Normal ferritin and iron, B12, but low vitamin D.

Hair pull test was normal, but her wash test was slightly increased.

Dermoscopy showed miniaturization of the hair follicles and hair diameter diversity >20% and decreased number of hairs and empty follicles and yellow dots (AGA + CTE).

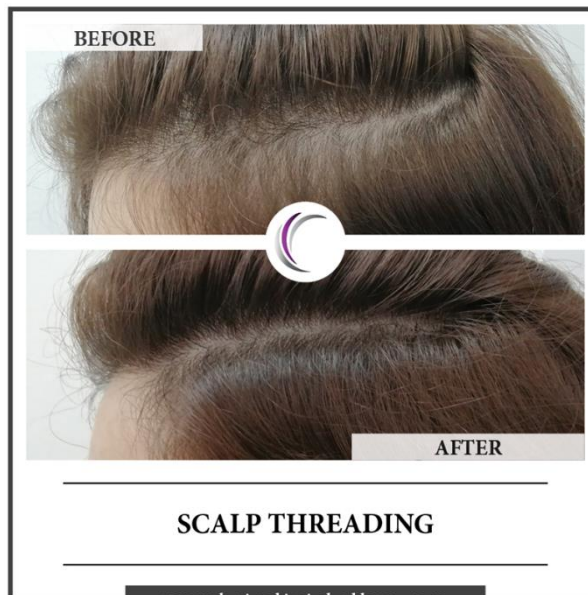
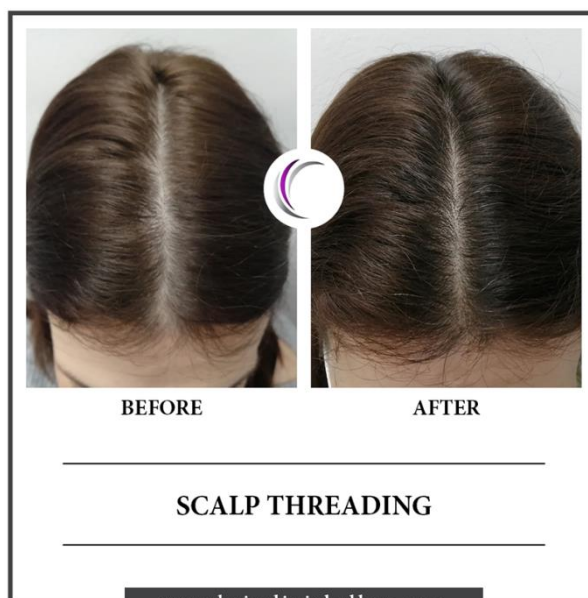
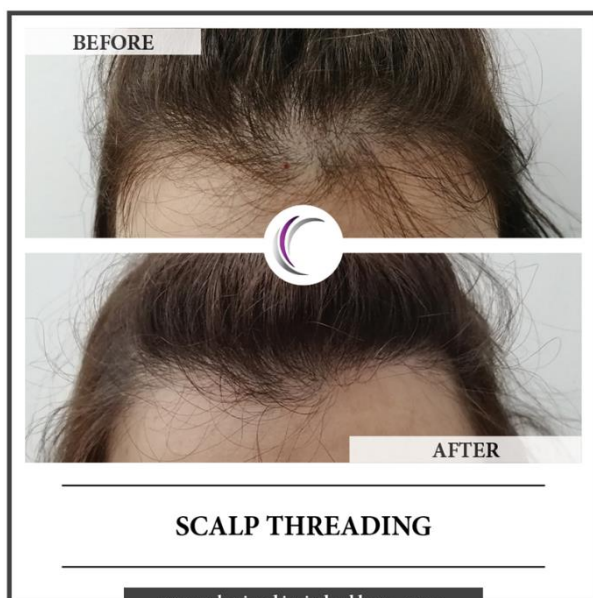


TREATMENT PLAN : Supplementation for vitamin D. Correction of estrogen and androstenedione levels with Myo-Inositol, Golden Maca, and Proxeed supplements. Scalp threading with combination of PDO threads, with different structure and dimensions. Minoxidil 5% and later 8%. After 3 months, the hair loss stopped completely and the hair growth started.

7 SCALP THREADING



8 MY RESULTS WITH SCALP THREADING



9 CONCLUSION

Considering its long-lasting and proliferating potentials and results achieved, scalp threading can be considered to be a good alternative therapeutic for the treatment of patients with alopecia. (5)

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