Objectives: To find the role of Klotho as a regulatory factor for human hair growth

Methods: In this study, we examined the expression pattern of klotho in human scalp skin and its role in hair growth. Klotho was expressed in human scalp skin and HF both gene and protein levels.

Results: In human scalp skin, prominent klotho expression was observed in the epidermis. Klotho expression in the epidermis was increased with keratinization from basal layer to stratum coneum. In human anagen HFs, prominent klotho expression was observed in the epithelium. Klotho expression in the epithelium was increased with keratinization in Henry layer and hair cuticle. In human catagen HFs, klotho expression was observed in epithelial strand. Gene transfection of klotho siRNA was markedly inhibited the human hair growth and promoted apoptosis process in organ cultured human follicles.

Conclusion: Altogether, these results indicate that klotho might be an important regulatory factor for human hair growth and hair cycle change.

Keyword: Klotho, Human hair follicle, Regulatory factor

Results: The result is a relatively clinical improvement in hair count and hair thickness was demonstrated in all the patients. There were no significant side effects except mild pain, transient bleeding at injection or microneedling site. In vitro study, PRP showed anti-apoptotic effects through up-regulation of BCI-2 expressions in cultured dermal papilla cells.

Conclusion: Taken together, the treatment of various alopecia using sequential treatment, platelet rich plasma injection, followed by mesotherapy promote hair growth.

Keyword: Alopecia, Platelet rich plasma, Mesotherapy

Home-use microneedle in the treatment of pattern hair loss: efficacy and safety
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Background: Microneedle devices have been useful tools to reduce scarring and wrinkling. In addition, microneedle devices have been used in the treatment of pattern hair loss.

Objectives: To investigate the efficacy and safety of home-use microneedle for the treatment of pattern hair loss.

Methods: A total of 29 patients were enrolled. They were randomized into 3 groups; 5% minoxidil group, home-use microneedle group and their combination group. They were used twice a week. This study was evaluated through macrophotographic hair count, folliscope hair count, investigator’s global assessment (IGA), subject satisfaction score (SSS) and side effects at 0, 1, 3 and 6 months.

Results: In all groups, a significant improvement was not shown in macrophotographic hair count (p>0.05) but in folliscope hair count (p<0.05). There was no statistically significant difference in hair count among the three groups (p>0.05). IGA was increased in three groups and 5% minoxidil group showed a statistically significant increase in IGA (p<0.05). SSS showed an improvement in a combination group. Mild and transient pruritus occurred in one patient of home-use microneedle group.

Conclusion: Our study showed that a combination of home-use microneedle and 5% minoxidil is not inferior to 5% minoxidil. Home-use microneedle twice weekly is considered...