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Topical Compounded Formulation for Androgenetic Alopecia

Androgenetic alopecia, the most common form of hair loss, affects both men and women and can lead to significant psychological distress and reduced quality of life. This study aimed to evaluate the clinical efficacy and patient satisfaction with a topical compounded formulation containing minoxidil 10%, finasteride 0.1%, biotin 0.2%, and caffeine citrate 0.05% in male patients with androgenetic alopecia (AGA).

The study involved five male patients. Each patient applied a 1-mL dose of the topical solution to their frontal, parietal, and occipital scalp areas twice daily for six months. Clinical evaluations, photographic assessments, and patient satisfaction were measured at intervals of 90, 120, and 180 days.

By the end of the 180-day study period, the treatment was deemed successful for all five patients. The clinical improvements, although moderate, were visually noticeable, with patients showing thicker, more voluminous hair, better scalp coverage, and an overall improved hair appearance. These findings were supported by photographic assessments, which showed an average increase of +1.05 in hair density across the patients.

Patient self-assessments indicated that the topical formulation was effective after three and six months of continuous use. However, satisfaction levels were neutral or negative at 120 days, likely due to minimal visible changes between the 90-day and 120-day marks.

Overall, the study suggests that this compounded topical formulation may be a helpful treatment option for male patients with androgenetic alopecia.

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Topical Combination of 0.25% Finasteride and 3% Minoxidil Versus Minoxidil Alone in Female Pattern Hair Loss

While androgenetic alopecia (AA) or female pattern hair loss (FPHL) can be seen in women with medical conditions such as PCOS that produce high androgen levels in the body, AA/FPHL is actually more common in postmenopausal women. So it's likely that the development of female pattern hair loss involves a complex hormonal interplay including both androgens and estrogens.

Finasteride, a 5α-reductase inhibitor prescribed to treat benign prostatic hypertrophy, is often used off-label for hair loss in women. It works by preventing testosterone from binding to receptors on hair follicles. Use of a topical formulation has been proposed to minimize unwanted effects. The efficacy and safety of topical 0.25% finasteride combined with 3% minoxidil solution versus 3% minoxidil solution as monotherapy were compared in a prospective, randomized, double-blind study in 30 postmenopausal women with FPHL who received one of the therapies for 24 weeks. To determine efficacy, the hair density and diameter was measured and global photographic assessment was conducted at baseline and 8, 16, and 24 weeks. Side effects and serum dihydro-testosterone levels were also evaluated. By 24 weeks, hair density and diameter had increased in both groups, but finasteride/minoxidil was significantly superior to minoxidil solution in terms of hair diameter. No systemic side effects were reported.

NOTE: It's absolutely essential to avoid pregnancy when taking finasteride. Because this topical therapy may be absorbed percutaneously, it should be reserved for postmenopausal women or those using effective birth control.

Am J Clin Dermatol. 2019 Feb;20(1):147-153.