Minoxidil Studies

Indian J Dermatol Venereol Leprol. 2009 Jan-Feb;75(1):47-51.
Comparing the therapeutic effects of finasteride gel and tablet in treatment of the androgenetic alopecia.
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Abstract BACKGROUND:
Finasteride, a type II-selective 5alpha-reductase inhibitor, as a causative agent of decreasing dihydroxy testosterone (DHT) level, is effective in the treatment of male androgenic alopecia.
AIM:
We compared the local and oral finasteride in the treatment of androgenic alopecia.
METHOD:
This is a double blind, randomized clinical trial study of 45 male patients, who were referred with alopecia to the private clinics and departments in Boo-Ali Sina Hospital, in Sari. Patients with male androgenic alopecia were selected according to the history and physical examinations. The patients were randomly divided into two: topical finasteride (A) and oral finasteride (B) groups. Topical finasteride group (A) received a topical gel of 1% finasteride and placebo tablets, while the oral finasteride group (B) received finasteride tablets (1 mg) and gel base (without drug) as placebo for 6 months. The patients were followed by clinical observation and recording of side effects prior to the treatment and at the end of first week, and then by a monthly follow-up. The size of bald area, total hair count, and terminal hair were studied. Data were analyzed by descriptive and Chi-square statistical test.
RESULTS:
The mean duration of hair loss was 18.8+/-23.10 months. Each month the terminal hair, size of bald area and hair count between the two groups were compared. There were no significant differences between the two groups as a viewpoint of hair thickness, hair counts and the size of bald area. Serial measurements indicated a significant increase in hair counts and terminal hair counts between the two groups.
CONCLUSIONS:
The results of this study showed that the therapeutic effects of both finasteride gel and finasteride tablet were relatively similar to each other.

J Med Assoc Thai. 2012 Oct;95(10):1312-6.
Efficacy and safety of 3% minoxidil versus combined 3% minoxidil / 0.1% finasteride in male pattern hair loss: a randomized, double-blind, comparative study.
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Abstract BACKGROUND:
Topical minoxidil and oral finasteride have been used to treat men with androgenetic alopecia (AGA). There are concerns about side effects of oral finasteride especially erectile dysfunction.
OBJECTIVE:
To compare the efficacy and safety of the 24 weeks application of 3% minoxidil lotion (MNX) versus combined 3% minoxidil and 0.1% finasteride lotion (MFX) in men with AGA.
MATERIAL AND METHOD:
Forty men with AGA were randomized treated with MNX or MFX. Efficacy was evaluated by hair counts and global photographic assessment. Safety assessment was performed by history and physical examination.
RESULTS:

At week 24, hair counts were increased from baseline in both groups. However paired t-test revealed statistical difference only in MFX group (p = 0.044). Unpaired t-test revealed no statistical difference between two groups with respect to change of hair counts at 24 weeks from baseline (p = 0.503). MFX showed significantly higher efficacy than MNX by global photographic assessment (p = 0.003). There was no significant difference in side effects between both groups.
CONCLUSION:
Although change of hair counts was not statistically different between two groups, global photographic assessment showed significantly greater improvement in the MFX group than the MNX group. There was no sexual side effect. MFX may be a safe and effective treatment option.

Pharmacodynamic of P-3074 (finasteride 0.25% topical solution) in subjects with androgenetic alopecia
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In the 7th World Congress on Hair Research, a Dutch research group reported the effect of topical and oral administration of finasteride on DHT levels in scalp and serum. The results are shown in the Table below. It shows that when 1 mg of topical finasteride (once a day) controls DHT level in scalp more effectively than 1 ml of oral finasteride. It reduces DHT level in scalp by 71% while the oral finasteride only decreases by 51%. Meanwhile, both administrations decrease DHT level in serum by almost the same degree (~70%). This is understandable, as the topical finasteride is applied to scalp directly and finasteride concentration in scalp is expected to be higher than when the same amount of finasteride is administrated orally. This study also suggests if you get side effect from oral finasteride, you will most likely get side effect from topical finasteride.

		DHT level Change in Scalp (decreased by)	DHT level Change in serum (decreased by)
1 mg topical Finasteride	Once a day (q.d) (N=6)	71%	69.3–74.0%
	Twice a day (b.i.d) (each time is 0.5mg) (N=6)	47%	67.6–80.4%
Finasteride oral Pill	Once a day (N=6)	51%	69.7–76.1%