News from Good Life

At Good Life Pharmacies, we care about our patients and want to provide you with quality information about your health. If you ever have questions or would like more information, please feel free to ask. We look forward to caring for you and your family.

Sincerely,
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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.

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Topical Curcumin: A Review of Mechanisms and Uses in Dermatology

Curcumin is the active ingredient in the spice turmeric. While the effectiveness of oral curcumin is hindered by low bioavailability due to poor absorption by the oral route, this is not the case for topical curcumin.

Curcumin's anti-inflammatory and anti-apoptotic activity is based on its inhibition of the enzyme phosphorylase kinase. Phosphorylase kinase is released within 5 minutes after injury. By inhibiting phosphorylase kinase in the injury pathway, curcumin blocks the activation of NF-kB, the transcription activator responsible for activating genes related to proliferation of inflammatory cells (T cells and macrophages), cell migration, cell cycling, epidermal proliferation and fibroblast proliferation. The growth factor (TGFb1) secreted by macrophages is responsible for conversion of fibroblasts to myofibroblasts, which are responsible for hypertrophic scarring. Therefore, treatment with topical curcumin may reduce scarring and keloid formation. Curcumin-induced apoptosis may be responsible for the improvement observed following application of curcumin gel to sun-damaged skin. Apoptosis may allow more rapid replacement of the injured cells by normal healthy cells, and may assist with wound healing. Following treatment with topical curcumin, more rapid healing has been observed in traumatic wounds, burns, and sun-damaged skin.

Low aqueous solubility, poor tissue absorption, rapid metabolism and short plasma half-life have made oral curcumin unsuitable for systemic administration for wound healing. Therefore, the therapeutic potential of topical curcumin appears to be more promising than that of oral curcumin. Recently, various topical formulations of curcumin such as films, fibers, emulsion, hydrogels and different nanoformulations have been developed for targeted delivery of curcumin at wounded sites.

Topical curcumin has been shown to benefit a number of conditions associated with skin injury and inflammation, including surgical scars and psoriasis. Topical preparations can be formulated to increase penetration of the hydrophobic curcumin through the skin. Skin penetration of topical curcumin may also be enhanced in dermatologic disorders due to inflammation and loss of the normal skin barrier function.

Psoriasis is a genetic disease with lesions usually precipitated by injury (trauma, allergic contact allergens and bacterial superinfection). Psoriatic activity has been

associated with elevated levels of phosphorylase kinase. Suppression of phosphorylase kinase by topical curcumin has been shown to correlate with resolution of psoriasis. Heng et al. of the UCLA School of Medicine have developed a protocol aimed at inhibition of phosphorylase kinase activity by the use of topical curcumin, avoidance of contact allergens, treatment of bacterial infections and avoidance of lactose in the diet.

Other chronic inflammatory disorders – rosacea and acne – that involve inflammatory processes that lead to residual scarring also appear to respond well to topical curcumin. While there are other anti-inflammatory medications available, e.g. topical corticosteroids, the therapeutic benefit of topical curcumin lies in the general safety of the substance and the absence of observable side effects.

Ultraviolet light (both UVA and UVB) induces the formation of cyclobutane pyrimidine dimers (CPDs) which damage DNA. Topical curcumin, by inducing apoptosis, results in the rapid repair of sunburns, leaving space necessary for replacement by normal cells without malignant potential. This may prevent or potentially reduce future development of premalignant and malignant lesions.

A randomized double-blind placebo-controlled trial was performed in 63 breastfeeding women. Afshariani et al. found topical curcumin applied every 8 hours for 3 days was effective in decreasing the markers of lactational mastitis such as pain, breast tension and erythema within 72 hours of administration without side effects.

References:

Int J Dermatol Clin Res 2017; 3(1):010-017.
Drug Discov Today. 2017 Oct;22(10):1582-1592.
Oman Med J. 2014 Sep;29(5):330-4.

Drug Shortages: We Can Help

When medications are on back order or discontinued for reasons unrelated to safety, such as declining profitability, we can often obtain the active ingredient as a pure chemical and compound the needed preparation. Compounding also enables us to remove problematic excipients such as dyes, sugar and lactose, and to customize the dose or concentration of a medication. For these reason, patients and physicians may find that they prefer the compounded version.

The following medications are “Currently in Shortage”, according to the FDA and ASHP websites on November 27, 2018:

- Furosemide tablets
- Haloperidol tablets
- Ketoprofen capsules
- Liotrix (T3/T4)
- Lorazepam tablets
- Methocarbamol tablets
- Mupirocin cream/nasal ointment
- Spironolactone tablets

- Thioridazine tablets

Contact our compounding pharmacy if you need a medication that has been discontinued, is on back order, or otherwise is not commercially available.

More information and shortages can be found here:
https://www.accessdata.fda.gov/scripts/drugshortages/default.cfm
https://www.ashp.org/drug-shortages/current-shortages

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