Topical Therapy Primer for Nondermatologists

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KEYWORDS

• Topical therapies • Corticosteroids • Antimicrobials • Retinoids
• Nondermatologist providers

KEY POINTS

- Many dermatologic conditions are effectively managed with topical therapies, including topical steroids, antimicrobials, retinoids, keratolytics, and antineoplastics.
- The proper active ingredient, potency, vehicle, quantity of medication, and patient instructions are critical when prescribing topical therapies.
- If a topical therapy is ineffective, clinicians should consider whether the medication is being used properly, whether the diagnosis is correct, and whether the topical may be contributing to the problem.

INTRODUCTION

Topical therapy is critical in the care of patients with cutaneous disease. This article offers a concise catalog of commonly used topical therapies and the included tables and cited publications serve as a toolkit for quick reference. Clinical vignettes are provided to reinforce the basic tenets of topical therapy and highlight basic guidelines for primary care providers.

PART I: TOPICAL MEDICATIONS

Topical Steroids

Regarded as the crux of dermatologic therapy, topical corticosteroids (TCS) are prescribed in up to 21% of dermatology office visits for atopic dermatitis, contact dermatitis, hand dermatitis, and many other cutaneous inflammatory conditions.[1] The proper use of TCS requires consideration of steroid potency, vehicle, and quantity of

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medication. Despite standard Stoughton Vasoconstriction Assay–based potency classification, dermatologists often categorize prescription steroids as high, mid, or low potency.[2] TCS are pregnancy category C, thus low-potency steroids are reserved for severe dermatoses during pregnancy. **Table 1** highlights the topical steroids commonly prescribed by dermatologists.

TCS are generally well tolerated; however, side effect frequency and severity increase with prolonged use and steroid potency. Epidermal atrophy, folliculitis or steroid acne, perioral dermatitis, delayed wound healing, steroid rebound, tachyphylaxis, glaucoma, cataracts, and contact dermatitis are all reversible TCS side effects.[3] Striae development is irreversible, thus the risk of this specific adverse event should always be discussed with patients. Systemic side effects, such as hypothalamic-pituitary-adrenal axis suppression, iatrogenic Cushing syndrome, and growth retardation in children, can occur if TCS are used improperly.

Topical Antimicrobials

Acne, rosacea, periorificial dermatitis, tinea, candidal intertrigo, and scabies are frequently treated with topical antimicrobials. Most of the medications discussed here are available in generic formulations and some are available over the counter (OTC), as indicated in **Table 2**. When recommending an OTC medication, instruct patients to check ingredient lists because some brands manufacture similarly named products with different active ingredients.

Topical antimicrobials are often used for basic wound care; however, dermatologists generally recommend petrolatum use to maintain a moist wound-healing environment. A frequently cited randomized controlled trial from 1996 showed the absence of a statistically significant difference in infection rate when petrolatum versus bacitracin was used postoperatively. Further, petrolatum is cheaper than commercially available antibacterial ointments.[4] If an antibacterial ointment is indicated for a superficial skin infection, mupirocin is preferred because of lower risk of allergic contact dermatitis.

Topical Acne, Rosacea, and Psoriasis Medications

Mild to moderate comedonal and inflammatory acne can be effectively treated with topical medications. Many of the topicals listed in **Table 3** are used in conjunction with antimicrobials to improve efficacy and patient adherence. It should be emphasized that these treatments prevent new lesions from forming and thus need to be used on a regular basis for 6 to 8 weeks before efficacy can be assessed. Similarly, acne medications control acne and patients should be warned that their acne may flare if topicals are discontinued. Oral antibiotics and isotretinoin are typically reserved for severe nodulocystic acne with scarring or chest and back involvement. Treating pregnancy-related acne can be challenging because there are few pregnancy category B therapeutics, with the exception of azelaic acid, topical clindamycin, and topical erythromycin. Pregnant patients should be informed that OTC benzoyl peroxide and salicylic acid face washes are technically pregnancy category C.

It can be difficult to distinguish acne from rosacea in some patients. Dermatologists rely on the presence of comedones to suggest the diagnosis of acne rather than rosacea, and patients with rosacea tend to have more sensitive skin. Erythematotelangiectatic rosacea responds best to pulsed dye laser but some patients report significant improvement in flushing with topical brimonidine gel use.[8] Papulopustular rosacea responds well to topical metronidazole, azelaic acid, and newly available topical ivermectin. Ocular rosacea and severe inflammatory rosacea require oral