

## Review of: "An Analysis of Literature on Topical Steroid Withdrawal in Dermatology"

Lyn Guenther<sup>1</sup>

1 The University of Western Ontario

Potential competing interests: None

Topical steroids are relatively inexpensive, widely available in many different formulations and the most commonly prescribed topical treatments for inflammatory dermatoses, several which are listed in the background section of this paper. Scabies which is on the list is usually treated with an anti-scabetic to eradicate the parasite and if needed, the nodules with topical steroids. Steroid phobia is far more common than topical steroid withdrawal. Steroid phobia and poor adherence, especially over time, often result in inadequate treatment and improvement, of the disease to be treated. That being said, topical steroid withdrawal is a real entity and unfortunately often results in patients using more potent steroids to try to calm down their symptoms. It was first described in 1968 by Sneddon.[Sneddon I 1968] In July 2022, the Government of Canada issued an InfoWatch article about topical steroid withdrawal syndrome to help educate physicians.

Topical steroid withdrawal may be prevented in part by an initial discussion with patients about when, where on the body, how much and how long the steroids should be applied, as well as limiting the amount prescribed and renewals. When prescribing a potent or super potent topical steroid for a hand or foot eruption for example, I tell patients that although they currently don't have the eruption on their face, genitals or folds, that this treatment is too strong for those areas and should never be used in those areas. In addition, their prescriptions should not be shared with others. Although most patients on topical steroids do not need to be "monitored carefully", patients who have chronic skin diseases especially if they are widespread, will need to be monitored for not only adverse events, but also efficacy. Twice weekly application of topical therapies including topical steroids will often safely maintain improvement in patients who relapse quickly. [Lynde CW et al 2019] Since topical steroids are often much less costly than alternatives, they are often the only anti-inflammatory treatment that those with lesser means can afford. Topical moisturizers and emollients may decrease the need for topical steroids and should be considered. [Msika P et al 2008]

In the background section of their paper, the authors discuss the different classes of steroids. There are different ways to categorize potency including the one listed in this paper in which class 1 is the most potent class while other classifications have it as the least potent class. A further confounder is that different steroids are listed as having different potencies in different classifications. The determination of a safe duration of treatment for steroids is arbitrary such as the 12 weeks stated in this paper. It depends on the relative steroid potency, quantity used, where the steroids are applied, if the steroids are used on the same area for the entire duration of treatment or on different areas of and on, and likely also on individual patient factors. Topical steroid addiction does not appear to occur in all patients including even those who have used topical steroids for several years.

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The authors state that the "most common first set in treatment in documented cases is to stop using TCS," however in many if not most cases, abrupt discontinuation will precipitate topical steroid withdrawal with redness, edema, burning, stinging, itching, scaling +/- pustules. In suspected cases, it is probably better to slowly taper the steroids (frequency and/or steroid potency) and adding a non-steroidal treatment if needed. It can sometimes take several months to wean a patient off topical steroids. Fortunately we now have a number of non-steroidal alternatives including calcineurin inhibitors (which are useful for all variants and not only the papulopustular type of topical steroid withdrawal as the paper suggests), phosphodiesterase-4 inhibitors, topical JAK inhibitors and an aryl hydrocarbon receptor (AhR)-modulating agent.

Sometimes additional treatment such as phototherapy or systemic agents may be necessary. As the authors state, topical tetracycline antibiotics may be useful in patients with the papulopustular variant.

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