CASE REPORT

Steroid-Induced Acne from Topical Treatment of Contact Dermatitis

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1 | CASE REPORT

A 57-year-old female presented with a facial rash and edema (Figure 1). The rash started on the cheeks and spread to her neck and upper chest over the course of three to four days. Her past medical history was significant for dry hands with scaling and cracking of the palms and fingers. She attributed the problem to contact dermatitis from frequent hand washing and the use of surgical gloves (non-latex) from her work as a physical therapist. She was seen by her physician and prescribed Clobetasol cream which she applied to her hands twice a day for the last two weeks. Her physical examination was remarkable for facial erythema, edema, and pustular lesions all at the same stage of development; some of the lesions had honey-crusted scaling. She returned to her physician and was diagnosed with steroid-induced acne and impetigo. She was advised to discontinue the Clobetasol and was started on a seven-day course of clindamycin for the impetigo.

Figure 1: Facial acne from topical application of Clobetasol.

2 | DISCUSSION

Hand eczema is an inflammation of the skin of the hands that runs a chronic, relapsing course. It is often associated with itching, social stigma, and impairment in employment. Topical steroids are commonly used to alleviate symptoms. However, their beneficial effects must be balanced with their side effect profile which varies with the duration of treatment, the chemical nature and strength of the medication, the vehicle, and the location of its application. Topical steroids are broken into seven classes based on potency from Class I (very high potency) to class VII (low potency) (Table 1) [1].

A recent Cochrane meta-analysis on hand eczema assessed various corticosteroid creams/ointments 15 days after the start of treatment. Results showed that Clobetasol propionate 0.05% foam improved participant-rated control of symptoms compared to vehicle (risk ratio (RR) 2.32, 95% confidence interval (CI) 1.38 to 3.91; number needed to treat for an additional beneficial outcome (NNTB) 3, 95% CI 2 to 8; 1 study, 125 participants). The effect of Clobetasol compared to vehicle for investigator-rated improvement was less clear (RR 1.43, 95% CI 0.86 to 2.40) [2]. On the other hand, the most frequent adverse effects of topical steroids include acne, atrophy, perioral dermatitis, purpura, rosacea, and striae. Those that occur with lower frequency include hypertrichosis, pigmentation alterations, delayed wound healing, and exacerbation of skin infections, both bacterial and fungal. Systemic reactions such as adrenal insufficiency, diabetes mellitus glucosuria, hip and vertebral fractures, hyperglycemia, and hypertension have also been reported with long-term topical use [3,4]. Acne is a known side effect of many medications, systemic and topical, including steroids. Drug-induced acne is defined as an eruption of inflammatory papules and papulopustules that occurs suddenly and often at an unusual age and can be associated with the initiation of a medication with this known side effect. Drug-related eruptions are characterized by rapid resolution after discontinuation of the medication [5].

Studies on steroid use for melasma also shed light on their adverse effects. A study of 60 patients with melasma who used a triple combination of 2% hydroquinone, 0.025% tretinoin, and 1% mometasone (mid-potency steroid) for at least three weeks found that 18% developed acneiform eruptions. Other cutaneous side effects included telangiectasia, skin atrophy, and hypertrichosis. However, none of the patients who had...
used the treatment for less than a month had an adverse effect on the face or skin [6]. Another study of 547 patients using topical steroids (89.6% using a Class I or very high potency steroid) as skin lightening agents for more than three weeks found 248 (45.3%) developed steroid-induced acne [4]. Other complications included widespread striae in 161 (28.3%), telangiectasia in 117 (21.3%), easy bruising in 95 (17.4%), and hypertrichosis in 73 (13.3%). Very high potency steroids were significantly associated with the development of diabetes mellitus in 11 (2.1%) and obesity in nine (1.6%) patients. The majority of patients (81.3%) applied the products all over the body while 18.7% applied then directly to only the face [4].

In conclusion, our patient’s acne and impetigo progressively resolved over the course of two weeks after discontinuing the cream and completing the course of antibiotics. Like the above mentioned studies, patients who use high potency topical steroids are at risk of steroid-induced acne. It is important to warn patients of the potential side effects of topical steroid use and to discourage their prolonged use, and to consider lower potency agents when possible.

### 3 REFERENCES


