

In view of the above it is possible to posit that our patient was simply experiencing an exceptional manifestation of familial psoriasis.

The patient reported that private phototherapy sessions several years ago had led to apparent improvements in the lesion, although they had later reappeared. We initially administered broad-band UVB phototherapy with no response. We then proposed PUVA treatment, but the patient has so far refused any further treatment.

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#### Conflicts of Interest

The authors declare no conflicts of interest.

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## Allergic Contact Dermatitis to Hydrocortisone as a Complication of Tattoo Care

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#### To the Editor:

Many complications have been described in the context of tattooing, including various types of infection, the appearance of tumors, granulomatous reactions, and contact allergy.<sup>1</sup> Allergic contact dermatitis (ACD) has been described in these cases in relation to some of the pigments used, especially the red color. However, the person with the tattoo may also use many products to care for the tattoo—corticosteroids, antibiotics, healing or antiseptic ointments—that may provoke ACD. We describe 2 cases of ACD from hydrocortisone use in patients who applied an ointment containing hydrocortisone recommended by the tattooist for the localized care of their tattoos.

The first patient was a 21-year-old man who attended the emergency department with severe eczema on the left leg. The lesions were located around a permanent black tattoo created 10 days previously. The patient stated the

tattoo was to be completed in 2 sessions and that the upper part was incomplete (Figure 1A). He applied Terra Cortril ointment (hydrocortisone and oxytetracycline in petroleum jelly as excipient; Farmasierra Laboratorios) as recommended by the tattooist following the tattoo session, and the skin lesions appeared a week later. The emergency department prescribed Diprogenta cream (betamethasone and gentamicin; Shering Plough) and Dexa Tavegil (dexamethasone and clemastine; Novartis Consumer Health) and the lesions healed. Despite the recommendations, 2 months later the patient decided to complete the tattoo and apply Terra Cortril ointment, causing the skin lesions to return 2 days later (Figure 1B). Treatment with Diprogenta once more produced a good clinical response. Patch testing for contact dermatitis was performed with the Spanish Group for Research Into Dermatitis and Skin Allergies (GEIDAC) standard battery—showing a



**Figure 1.** A. Eczema surrounding a tattoo located on the left calf. The lesions appeared after the application of Terra Cortril ointment for a week. B. Eczema following completion of the tattoo. Symptoms recurred 2 days after application of the ointment. C. Positive reactions to patch tests for tixocortol pivalate, hydrocortisone, and hydrocortisone 17-butyrate.

positive reaction to tixocortol pivalate (+++D2, +++D4, +++D7); our series of corticosteroids (Table)—testing positive for 2.5 alcohol excipient (++D2, +++D4, +++D7) and hydrocortisone 17-butyrate (++D2, +++D4, +++D7) (Figure 1C); and a patch with 5% tetracycline in petroleum jelly—which showed no reaction.

The second patient was a 19-year-old woman who attended the Emergency department with eczematous lesions in the lumbosacral region, at the site of a tattoo completed 3 days previously (Figure 2). The patient related the inflammation to the application of the Terra Cortril ointment recommended by the tattooist. Dexta Tavegil and Diprogenta were prescribed with good clinical response, and patch tests were performed with the standard battery, corticosteroids and 5% tetracycline in petroleum jelly,

**Table 1.** Battery of Corticosteroids Used in the Skin Allergy Section of the Consorcio Hospital General Universitario de Valencia, Spain

1	Betamethasone dipropionate 0.5% pj
2	Clobetasol 17-propionate 1% pj
3	Betamethasone 17-valerate 1% pj
4	Triamcinolone acetonide 1% pj
5	Hydrocortisone 17-butyrate 1% alc
6	Alclometasone 17.21-dipropionate 1% pj
7	Dexamethasone 21-phosphate 1% pj
8	Prednicarbate 1% pj
9	Prednisolone 5% pj
10	Dexamethasone 21-acetate 1% pj
11	Fluocinolone 0.25% pj
12	Betamethasone base 1% pj
13	Dexamethasone base 1% pj
14	Hydrocortisone acetate 25% pj
15	Hydrocortisone 2.5% alc
16	Hydrocortisone base 25% pj
17	Triamcinolone acetonide 5% pj
18	Betamethasone 17-valerate 5% pj

Abbreviations: alc: alcohol; pj: petroleum jelly.



**Figure 2.** Eczema in the lumbo-sacral region that appeared several days after application of Terra Cortril.

with results identical to the first case: tixocortol pivalate (+ day 2 [D2], ++ day 4 [D4], ++ day 7 [D7]) hydrocortisone 2.5 alcohol excipient (+D2, ++D4, ++D7) and hydrocortisone 17-butyrate (+/-D2, +D4, +D7).

Although the use of topical corticosteroids is extremely common, it is rare to find positive patch tests for these.<sup>2</sup> In Spain, incidence of sensitivity to corticosteroids is less than 1%.

Hydrocortisone belongs to group A of the Coopman classification.<sup>4</sup> This system is based on different substitutions on the D ring or in the C20-C21 position of the lateral chain of the steroid molecule, and attempts to explain cross-reactions between corticosteroids. Three corticosteroids have been described as contact allergy markers: tixocortol pivalate—as a group A marker; budesonide—as a group B marker; and hydrocortisone 17-butyrate—as a group D marker. Allergic reactions to group C corticosteroids are extremely uncommon. Most cross-reactions occur between corticosteroids in the same group, and also between group A and D. In our cases cross-reaction was observed between hydrocortisone (group A) and hydrocortisone 17-butyrate (group D), however, betamethasone and dexamethasone—both from group C—were well tolerated by both patients.

When a corticosteroid responsible for a contact allergy is administered orally, dermatitis is reactivated in the affected locations. Immediate reactions such as urticaria and anaphylaxis have been described, but these are uncommon.

Contact allergy to corticosteroids must be suspected when there is no improvement in chronic dermatitis. The existence of ulcers on the legs, stasis dermatitis, chronic dermatitis, and multiple drug sensitivity are considered risk factors in developing a contact allergy to corticosteroids.<sup>5</sup> In our experience many patients use creams contain-

ing corticosteroids in caring for damaged skin following the tattooing process. In conclusion, on the basis of our observations, we suggest tattoos be considered among the group of risk factors for developing contact sensitivity to corticosteroids, in this particular case, to hydrocortisone.

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#### Conflicts of Interest

The authors declare no conflicts of interest.

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