Author/s:
Wong, GN;Shen, S;Nixon, R

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Wong Gwyneth (Orcid ID: 0000-0002-9167-3168)

Case report: Severe allergic contact dermatitis to topical bufexamac requiring hospitalization

Gwyneth N. Wong[1], Sarah Shen[1], Rosemary Nixon[2]

[1]Department of Dermatology, St Vincent's Hospital, Fitzroy, VIC, Australia

[2]Skin and Cancer Foundation Inc, Carlton, VIC, Australia

Correspondence:
St Vincent's Hospital Melbourne - Dermatology
41 Victoria Parade, Fitzroy Melbourne 3065
Australia
g.natalie.wong@gmail.com

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Bufexamac is a topical non-steroidal anti-inflammatory drug (NSAID) used as a local treatment for various dermatoses despite a propensity to cause severe allergic contact dermatitis (ACD) and a reported lack of efficacy. Bufexamac is still included in medicaments in countries such as Australia and Switzerland despite being banned in the European Union, the United States, New Zealand and Japan.

CASE REPORT

A 41-year-old administrative worker developed facial oedema and a widespread polymorphic eruption within two hours of applying Apohealth First Aid Cream (Apohealth) containing bufexamac (5%), lignocaine (1%) and chlorhexidine (0.1%) to a superficial abrasion on her right foot (only). The eruption first appeared as erythematous papules and plaques at the site of application, followed by painful facial erythema and oedema that was exacerbated by sun exposure. Associated symptoms

included pruritus and a burning sensation of involved skin. The patient was otherwise well; she had a history of atopy and recurrent vesicular hand eczema. Skin biopsies performed 3 days after the eruption showed moderate spongiosis, superficial perivascular lymphocytic inflammation and moderate numbers of interstitial eosinophils. Direct immunofluorescence was negative. There was a mild peripheral eosinophilia of 0.5.

Despite commencing on a slow weaning course of prednisolone and topical mometasone 0.1% cream, her symptoms worsened and the eruption extended to include a well-demarcated violaceous erythema on her lower limbs and urticarial papules coalescing into plaques on her torso (*Figure 1)*. The patient was admitted for inpatient care 7 days after the eruption begun and improved after 5 days of regular wet dressings and topical betamethasone dipropionate 0.05% ointment to her body and methylprednisolone aceponate 0.1% ointment to her face. Anti-H1 antihistamines were given as adjuvant therapy.

Once the eruption had settled, the patient was patch tested to the Australian baseline series and bufexamac, chlorhexidine and lignocaine. She developed a +++ reaction to bufexamac 5.0% pet. confirming the diagnosis of ACD. She also developed a ++ reaction to *Myroxylon pereriae*, + to fragrance mix I, hydroperoxides of linalool 1.0% pet. and hydroperoxides of limonene 0.3% pet. , methylchloroisothiazolinone and methylisothiazolinone (MCI/MI) and Amerchol L101 50.0% pet. These other reactions were not thought to be relevant to her current presentation. The patient was advised to avoid any further contact with products containing bufexamac.

DISCUSSION

Bufexamac is an NSAID used for the local treatment of various dermatoses despite its lack of efficacy [1]. It has never been approved for use in the USA and UK and in 2010 the European Medicines Agency Committee recommended that marketing authorisation for

medicines containing bufexamac be revoked throughout the European Union [2]. However, in some countries such as Australia and Switzerland, bufexamac is still readily available for purchase in pharmacies, most commonly as an ingredient in 'first aid creams'.

There have been numerous reports of ACD caused by bufexamac, with some patients not recalling prior exposure[3]. Gniazdowska et al reported 3.2% of patients exhibiting sensitivity to bufexamac [4]. ACD to bufexamac has a variable clinical presentation mimicking other dermatoses, often with erythema multiforme, purpuric and photosensitive elements. It is often misdiagnosed as erysipelas or cellulitis [3]. Interestingly, the eruption often worsens and spreads even following cessation of bufexamac use.

This case highlights that there is no reason to justify the continued use of topical bufexamac, given its propensity to cause severe ACD and lack of efficacy. We caution clinicians to be aware of the variable presentation of ACD to bufexamac and recommend that regulatory bodies in countries such as Australia and Switzerland reconsider its registration for use.

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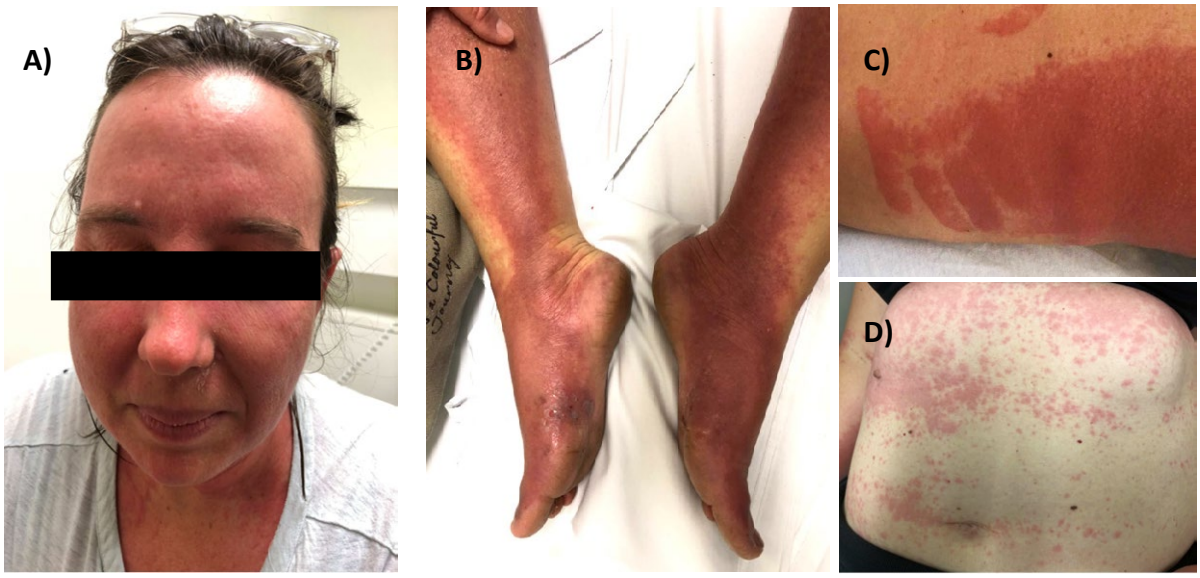

Figure 1. A polymorphous eruption
a) Widespread facial erythema and oedema, exacerbated by photo-exposure
b) Well-demarcated violaceous erythema appearing symmetrically on both lower limbs. A similar eruption appeared on the upper extremities (not shown)
c) The dermographic nature of the lesions was demonstrated on the left thigh, with oedematous erythema corresponding to the imprint of the patient's hand after pressure
d) Urticarial papules coalescing into plaques on the torso