

## CASE REPORT

## Contact Dermatitis Following Use of Tropical Traditional Medicine

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### ABSTRAK

*Perubatan tradisional atau herba secara umumnya dianggap sebagai selamat kerana ia diperolehi dari sumber asli atau tumbuhan. Kebelakangan ini, terdapat peningkatan bilangan laporan kes alahan akibat penggunaan perubatan tradisional termasuk tindak balas pada kulit. Reaksi alahan pada kulit, lazimnya akan merangkumi kawasan kulit yang bersentuhan dengan ubat. Kami melaporkan kes seorang wanita berumur 65 tahun yang mengalami kemerahan, rasa terbakar dan bengkak selepas menggunakan minyak tradisional Cina. Laporan ini adalah sebagai garis panduan untuk mengenalpasti dan mengurus masalah alahan ubat sapu pada kulit. Adalah diharapkan kes ini memberi kesedaran bahawa perubatan tradisional tidak bebas dari reaksi alahan. Para doktor perlu arif tentang kesan alahan terhadap perubatan tradisional dan perlu mengambil langkah berjaga-jaga, sama seperti yang diamalkan untuk rawatan konvensional.*

*Kata kunci: Cina, sentuh, tradisional, dermatitis, perubatan*

### ABSTRACT

Traditional or herbal medications are generally perceived as safe since it is derived from natural or plant sources. A rise in number of adverse reactions are being reported with the use of traditional medications including localized cutaneous reactions. The diagnosis of contact dermatitis is often quite straight forward based on its appearance, pattern, site and distribution of the lesion which usually corresponds to the area of contact. We report the case of a 65-year-old woman who presented with redness, burning sensation and swelling of her hand after applying topical Chinese traditional medication. This report aims to outline simple measures to identify and manage contact dermatitis secondary to topical medication. The present case creates awareness that topical traditional medications are not as

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harmless as previously thought to be. Precautions regarding adverse reactions are required, as those with conventional medications.

Keywords: Chinese, contact, traditional, dermatitis, medicine

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## INTRODUCTION

Traditional medication has a vital role in every Asian household. It is widely used due to the false perception of its safety profile as it is from herbal origin. It is also easily available over the counter in this region from pharmacies, Chinese medical shops and convenient stores, without doctor's consultation or prescription. In Malaysia, there is a high prevalence (about 70%) of traditional and complementary medication usage to treat illnesses and maintain general well-being (Siti et al. 2009). Traditional Chinese medications have been identified to cause both systemic and localized adverse reaction (Papafragkakis et al. 2016 & Sen et al. 2010). Although localized reactions are generally mild, rarely, severe reactions warranting hospital admission have been also been reported (Niggemann & Gruber 2003). We present a case report on a patient who developed contact dermatitis after applying Chinese traditional ointment as a remedy for joint pain.

## CASE REPORT

A 65-year-old Chinese woman presented with sudden onset swelling at the dorsal aspect of her right hand, area below the thumb, associated with pruritus and burning sensation. One day earlier, she had applied traditional Chinese ointment under occlusion to

ease the joint pain at the base of her thumb. After 12 hours, she experienced redness and burning sensation at the site of application of the ointment. The following day, the redness worsened and multiple vesicles of different sizes were noted. A milder reaction had occurred a few years back when she applied the same ointment on the dorsum of her right feet. At that time she experienced minimal erythema which improved spontaneously after a few days. She had no personal or family history of atopy or any other dermatological disorders. She did not have any other medical problems except for hypertension, which was well controlled with medication. Other topical ointments and liniment methyl salicylate were not reported to cause any untoward reactions in the past.

Examination revealed a 4 x 5 cm, well defined erythematous patch with localized oedema limited to the area of contact with the ointment. A few vesicles and bullae were seen on the medial border of the lesion (Figure 1). Joint movements of the hand were unaffected.

The fluid from the bullae was drained using a sterile needle without removing the roof of the lesion. She was treated with oral prednisolone (20 mg) a day, which was tapered over the next 12 days. Good recovery was noted after a week and she was managed with topical emollient, moderate potency topical steroid of and oral



Figure 1: Right hand showing a well-defined erythematous patch with vesicles of varying sizes on the medial edge of the lesion.



Figure 2: Photograph showing right hand after 3 weeks of treatment. A small area of post-inflammatory hyperpigmentation WAS noted at the site of the previous lesion.

antihistamine. Lesion improved after with treatment and there was complete recovery after 3 weeks, leaving a mild post-inflammatory hyperpigmentation at the affected site (Figure 2).

## DISCUSSION

The traditional medication which was applied consisted of a brownish ointment which is easily available over the counter in most Chinese medical shops. The product information displayed a list of six different herbs, menthol and camphor as the ingredients. Menthol may cause contact allergy when in contact with skin or buccal mucosa presenting as cheilitis or localized irritation (Wilkinson & Beck 1994; Foti 2003). Rare incidents of allergic contact dermatitis to camphor in ear drops and topical ointments were reported in the past (Stevenson & Finch 2003; Noiles & Pratt 2010).

Topical traditional Chinese medications have been implicated to cause a variety of cutaneous reactions such as urticaria, allergic and irritant

contact dermatitis. (Wong 2002; Sen et al. 2010) Contact dermatitis is an inflammatory reaction of the skin due to contact with certain allergens which triggers a complicated pathway of inflammatory mediators. It is commonly classified as irritant and allergic contact dermatitis. Irritant contact dermatitis arises as a result of direct inflammation to chemical or physical stimuli while allergic contact dermatitis arises as a result delayed contact hypersensitivity reaction caused by allergens. Both these conditions are closely linked and clinical differentiation between irritant and allergic contact dermatitis is sometimes difficult as both may co-exist together. The morphology of this adverse reaction may vary from mild erythema, vesicles, bullae or erosions in severe cases. Factors affecting the severity of the lesions include the concentration of the product, extent of application, duration of exposure and host susceptibility. Personal or family history of atopy increases the risk of developing contact dermatitis due to

the presence of abnormal skin barrier function (Ale & Maibacht 2010).

In the present case, it was unknown whether the adverse reaction produced is due to the herbal, menthol or camphor component in the ointment as the patient refused further testing using patch test. Establishing the specific allergen responsible for the allergic reactions is challenging due to the possibility of content adulteration with prescription drugs, unintentional contamination or misidentification of herbs. Intentional contamination or nondisclosures of product contents by the manufacturers are the other hurdles in identify possible allergens. The possibility of new allergen formation as a result of interaction between the ingredients within the product cannot be ruled out either. A recent study in Singapore inferred that the presence of essential oils in topical traditional Chinese medications may be responsible for the adverse cutaneous reactions seen with the use of these products (Sen et al. 2010).

One of the important steps in managing contact dermatitis is to prevent recurrent episodes. This can be done by identifying and eliminating the involved allergen. Hence, patient education and advice on avoidance of triggers are appropriate preventive measures. Sensitivity or patch testing may be done for suspected cases as it is useful in differentiating contact dermatitis from other morphologically similar dermatological disorders. The mainstay of treatment for acute contact dermatitis is topical corticosteroids. More severe reactions may benefit from a short course of systemic corticosteroid.

Primary lesions complicated by secondary bacterial infection may require additional treatment with antimicrobials. Emollients and barrier creams applied to the affected skin may confer additional benefits and aid in the recovery process (Bourke 2001).

## CONCLUSION

Physicians and consumers should be aware that traditional medications can potentially cause adverse reactions. A detailed history of traditional medication use must be probed as this information may not be voluntarily given due to the misconception that these products are safe. Contact dermatitis secondary to traditional medication should be considered as a differential diagnosis in patients presenting with well defined eczematous lesions, involving skin overlying a joint or in poorly healing wounds. Physicians must also be aware of the possibility of cross sensitization resulting in a similar reaction with the use of other topical traditional medications. Identifying the specific triggers and future avoidance would help eliminate recurrent episodes.

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