

An unusual burn caused by hot argy wormwood leaf water

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Abstract

An unusual burn case caused by hot wormwood leaf water was discussed. A 29-year-old woman sustained a 7% second-degree burn on both buttocks and left thigh. This case report highlights a rare cause of a chemical burn that may become more common with increasing use of this Chinese traditional medicine. The prevention measures of this burn injury were also presented.

Introduction

Argy wormwood leaf¹, named Ai-Ye in Chinese, is a traditional and widely-used Chinese medicine.² This medicinal material, as shown in Figure 1, is produced in all parts of China, collected in summer before flowering, foreign matter removed, and dried in the sun or in the shade before use.³ As its special medical effectiveness, many Chinese people like bath with argy wormwood leaf water to relieve skin itching or expel cold.

In this paper, we report an accidental chemical burn affecting 7% of her total body surface area resulted from hot wormwood leaf water when bathing. The unusual circumstances of this case are also discussed.

Case Report

By pregnancy at 40 weeks, a 29-year-old woman delivered her baby under natural mode. It is a traditional custom in China that a puerpera should have a steam bath 3-15 days after delivery. Sauna equipments are always expensive and unaffordable to most of Chinese people and it is inconvenient for a puerpera to go to a public sauna bathroom in the street. Therefore, the puerperae always take steam bath by using a simple household device, as shown in Figure 2. A bathtub is set inside a vapour hood and the boiled water is poured into it. Then, the woman sits on a stool above the bathtub for bath. Due to the effect of haemostasis and cold-dispersion, the argy

wormwood leaf is always added into the water for boiling to produce steam.

The patient was victim of an accident that occurred at the bath on the 13th day after delivery. Her mother put a plastic stool above the bathtub. However, the plastic stool became soft and weak when it met hot water and steam. When sitting on the stool, she fell into the boiled water with argy wormwood leaf inside due to the negligence. The patient sustained burns by hot argy wormwood leaf water. Cleansing of the lesions and topical MEBO® (moist exposed burn ointment) application were carried out at a small community medical unit. After a period of 3 h, the patient was transferred to our burn centre.

At admission, there were superficial partial-thickness burned areas on both buttocks and left thigh (Figure 3). The burned area was 7 percent of her total body surface. Conservative treatment with Ji'an shuneng® (a kind of chitosan) was performed on the wounds. Around the 14th day, epithelialization began when the patient was discharged and the process was almost complete on the 20th day.

Discussion

Argy wormwood leaf is a perennial plant from the asteraceae family. Its stem and leaves have a unique scent and taste a little bitter. In Chinese traditional medicine, the argy wormwood leaf has two main actions.⁴ First, it can dispel cold and arrest bleeding.⁵ Besides topical use, the drug can be made into wool, put on the acupoints and ignited to treat arthralgia due to cold. It can also be used to treat metrorrhagia, irregular menstruation, etc, which are of cold deficiency type in Chinese medical science. Second, it has anti-infection effect and can relieve itch. According to the results of modern pharmacology, argy wormwood leaf has multiple anti-bacteria and anti-viral properties.⁶ It can suppress and kill a wide range of bacteria and viruses. It has good effect in disinfecting and relieving itching. The drug can be



Figure 1. The Argy wormwood leaf.

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fumigated for air disinfection. Bath or topical use of argy wormwood leaf water can relieve skin itch. Colporrhagia and pruritus cutanea are the common complications of women after

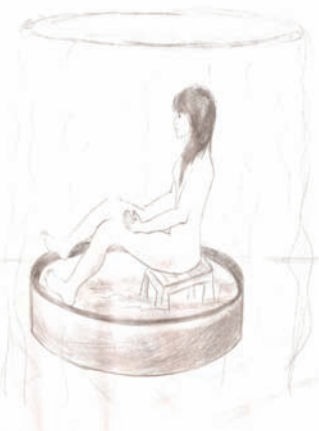


Figure 2. Diagram of simple household steam bath. A bathtub was put inside a vapour hood. After the boiled water was poured into the bathtub, people sat on a stool to undergo steam bath.



Figure 3. At admission. Superficial partial-thickness burn was found on both buttocks and left thigh.

delivery. Therefore, many Chinese puerperae are accustomed to taking steam bath with hot argy wormwood leaf water. To our knowledge, this is the first reported individual case of burn by hot argy wormwood leaf water.

In our case, a 7% second-degree burn was recognized on both buttocks and left thigh. Chemical analysis study showed that the main pharmacological ingredients of argy wormwood leaf were eupatilin, jaceosidin, 2-hydrobenzoic acid, octacoanic acid, linarin, and so on.⁷ Due to its acid component, the pH of argy wormwood leaf extract ranges from 3.5 to 4.5. The hot argy wormwood leaf water, the cause of thermal injury in this case, was in weak acidity. Accordingly, this kind of burn wound was invariably deeper than first appearance and the healing process was slightly delayed. The wound healing was delayed. Until the 20th day postburn, the epithelialization process of superficial partial thickness burn was just complete.

With the increasing use of this Chinese traditional medicine, this case highlights potential thermal injury danger of the people under-

went household steam bath with hot wormwood leaf water. The main cause of this accident was the use of plastic stool. The following methods, we think, can bring down the incidence of this burn injury significantly. First, also the most important, the plastic stool should be replaced by a wooden or metal one, which does not become soft and deform when meets heat. Second, people who undergo the simple household steam bath should take care not to overturn the bathtub. Third, another factor of some significance to lessen the incidence is to lower the temperature of bath water. Early, copious lavage is important to reduce the extent and depth of chemical burn wound. First aid of this patient requires wound irrigation with large volume water.

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