AN UNUSUAL BURN CAUSED BY HOT ARGY WORMWOOD LEAF WATER

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SUMMARY. An unusual burn case caused by hot wormwood leaf water is discussed. A 29-yr-old woman sustained a 7% second-degree burn on both buttocks and the left thigh. This case report highlights a rare cause of chemical burn that may become more common with increasing use of this method of traditional Chinese medicine. Measures for preventing this type of burn injury are also presented.

Keywords: argy wormwood leaf, burns, hot water

Introduction

Argy wormwood leaf, called Ai-Ye in Chinese, is a widely used traditional Chinese medicine. This medicinal material (Fig. 1), which is produced in all parts of China, is collected in summer before flowering. Foreign matter is removed and it is dried in the sun or in the shade before use. Because of its special medical effectiveness, many Chinese people like a bath with argy wormwood leaf water to relieve skin itching or to keep out the cold.

This paper presents a report on an accidental chemical burn that affected 7% of the patient’s total body surface area caused by hot wormwood leaf water when the patient was having a bath. The case’s unusual circumstances are also discussed.

Case report

After 40 weeks’ pregnancy a 29-yr-old woman delivered her baby in the natural way. It is a traditional custom in China that a puerpera should have a steam bath 3-15 days after delivery. Sauna equipment is always expensive and cannot be afforded by most Chinese people and it is inconvenient for a puerpera to go to a public sauna bathroom in the street. Puerperae therefore usually take their steam bath using a simple household device, as shown in Fig. 2. A bathtub is set inside a vapour hood and boiling water is poured into it. The person then sits on a stool above the bathtub and has a bath. Making use of the effect of haemostasis and the dispersion of cold, argy wormwood leaf is continuously added to the boiling water to produce steam.

The patient was the victim of an accident in the bath on day 13 after delivery. The patient’s mother had placed a plastic stool above the bathtub. However, the plastic became soft and weak when it came into contact with the hot water and steam, and in a moment of carelessness the woman fell off the stool into the hot water containing the argy wormwood leaf, sustaining burns caused by the hot argy wormwood leaf water. The lesions were cleansed and...
Topical MEBO® (moist exposed burn ointment) was applied at a small community medical unit. After a period of 3 h, the patient was transferred to our burn centre.

At admission, the patient presented superficial partial-thickness burn areas on both buttocks and the left thigh (Fig. 3). The burn area covered 7% of her total body surface area. Conservative treatment with Ji’anshuneng® (a kind of chitosan) was performed on the wounds. Epithelialization began around day 14, when the patient was discharged, the process being almost complete on day 20.

**Discussion**

Argy wormwood leaf is a perennial plant of the Asteraceae family. Its stem and leaves have a unique scent and taste a little bitter. In Chinese traditional medicine, argy wormwood leaf has two main actions. First, it can dispel cold and arrest bleeding. Besides topical use, the drug can be made into a kind of wool, applied on acupoints, and ignited to treat arthralgia due to the cold. It can also be used to treat conditions such as metrorrhagia, irregular menstruation, etc., which according to Chinese medical science are of cold deficiency type. Secondly, it has an anti-infection effect and can relieve itching. According to modern pharmacology, argy wormwood leaf has multiple anti-bacterial and anti-viral properties. It can suppress and kill a wide range of bacteria and viruses. It has a good disinfecting effect, and a bath in argy wormwood leaf water or its topical use can relieve skin itching. The drug can be fumigated for air disinfection. Colporrhagia and cutaneous pruritus are common complications in women after delivery and many Chinese puerperae customarily take a steam bath in hot argy wormwood leaf water. To our knowledge, this is the first reported individual case of burns caused by hot argy wormwood leaf water.

In our case, a 7% second-degree burn was found on both buttocks and the left thigh. Chemical analysis showed that the main pharmacological ingredients of argy wormwood leaf were eupatilin, jaceosidin, 2-hydrobenzoic acid, octacoanic acid, and linarin. Owing to its acid component, the pH of argy wormwood leaf extract ranges from 4.5 to 6.5. The hot argy wormwood leaf water that was the cause of thermal injury in this case was of weak acidity. Consequently the burn wound, as invariably occurs in such cases, was deeper than at first appearance, and the healing process was slightly delayed, until day 20 post-burn, when the superficial partial-thickness burn epithelialization process was complete.

**Conclusions**

We believe the following methods could significantly reduce the incidence of this type of burn injury. First and
foremost, the plastic stool should be replaced by one made of wood or metal that does not become soft and deform when in contact with heat. Second, people having a simple household steam bath should take care not to overturn the bathtub. Third, another factor of some significance for reducing the incidence of serious burns is to lower the bath water temperature. Early, copious lavage is important to reduce the extent and depth of chemical burn wounds - in such patients first aid requires wound irrigation with large volumes of water.

RÉSUMÉ. Les Auteurs présentent un cas inhabituel de brûlure causée par l’eau chaude des feuilles d’absinthe. Une femme de 29 ans a subi des brûlures de deuxième degré dans 7% de la surface corporelle aux fesses et à la cuisse gauche. Ce rapport met en évidence une cause rare de brûlure chimique qui pourrait devenir plus fréquente avec la diffusion de l’utilisation de cette méthode de la médecine traditionnelle chinoise. Les Auteurs concluent avec des considérations sur les mesures pour prévenir ce type de brûlure.

Mots-clés: feuilles d’absinthe argy, brûlures, eau chaude

BIBLIOGRAPHY


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