

CONTACT DERMATITIS TO MYRRH: A HERBAL MEDICINE USED TOPICALLY TO PROMOTE WOUND HEALING

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ABSTRACT

Myrrh (resin of *Commiphora* species) has been used not uncommonly by people in the eastern continent and considered as a popular herbal medicine. Traditionally, many applications for Myrrh have been addressed. Here we report a patient who developed a cutaneous reaction after the second application of Myrrh which most probably represent an allergic contact dermatitis. To our Knowledge, this is the first report of such reaction to Myrrh in our area which will add to the very few cases reported worldwide.

INTRODUCTION

Myrrh is an oleo gum resin obtained from the stem of *Commiphora molmol* and possibly other species of *Commiphora* (family Bursaceae), the bushy shrubs of which grow in Arabia and Somalia. Myrrh has been regarded as one of the treasures of the East. In folk tradition, it has been used for muscular pains and in rheumatic plasters. Called mo yao in China, it has been used there primarily as a wound herb and blood stimulant.

The resin is obtained by cutting the stem, which exude a thick yellow liquid. As it dries, it hardens to a reddish-brown solid⁽¹⁾. The resin has been used extensively for wounds and also for sore throats and mouth ulcers. The essential oil that can be distilled from the resin has been used for ancient times to heal wounds, and also in chest rubs for bronchitis and catarrhal colds⁽²⁾.

For several millenia myrrh has been employed in a number of medical contexts, as well as the perfume and incense industries. Myrrh has found recent pharmacological application

in the reduction of cholesterol and triglycerides, as predicted by several traditional therapies⁽³⁾. T-cadinol(a pharmacologically active constituent of scented myrrh) was shown to have a concentration-dependent smooth muscle relaxing effect on the isolated guinea pig ileum and a dose-dependent inhibitory effect on cholera toxin-induced intestinal hypersecretion in mice⁽⁴⁾. Extracts of myrrh effectively increased glucose tolerance in both normal and diabetic rats⁽⁵⁾.

Lee and Lam⁽⁶⁾ reported myrrh as the putative allergen in bonesetter's herbs dermatitis. Another report demomsrated positive testing to myrrh in two Chinese herbal medicines⁽⁷⁾.

CASE REPORT

A 36 year-old man underwent left inguinal hernial repair. A few days after discharge, he applied myrrh (fig.1) to the surgical



Fig. 1: The raw solid myrrh



Fig. 2: Patch testing with European Standard series and the myrrh extracts demonstrating the strong positive reactions to both the powder and solution forms of myrrh (Rt lower side)

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wound to promote healing. Subsequently, erythema and itching developed over the operation site, and extended to involve the whole lower abdomen. 3 years previously, the patient had been subjected to surgical repair of an atrial septal defect, when he had applied the same material to the surgical wound without complications.

Patch testing (fig.2) with European standard series and the myrrh extract (48 hours and 72 hours readings) was positive to cobalt (+), balsam of pero (+), Colophony (++), fragrance mix (++), myrrh Powder (+++) and myrrh solution (+++). The patient showed a dramatic response to topical corticosteroids, the lesions resolving completely in two weeks.

DISCUSSION

We present in this report a case of severe allergic contact dermatitis to myrrh, a herbal medicine applied topically to promote healing of a surgical wound. The diagnosis of the case was confirmed by history, clinical examination and patch testing. It is relevant to mention that the patient reacted to both the powder and solution forms of myrrh by a 3+ grade. It is recommended that with allergens of unknown concentrations an open patch test be performed initially. Since the use of herbal medicines is common in the Middle East, we propose that materials for patch testing be available for routine screening when the history is suggestive. A small panel for the most commonly used herbs would be a useful addition to the European standard series. In some circumstances the history may not be clear or the material could be disguised in a form of a mixture with other herbs.

Tian and Shi (8) analyzed the constituents of essential oil in two kinds of myrrh and they found that furanoeudesma-1,3 diene is the main constituent. However, reports of myrrh as a contact sensitizer are increasing and further studies that aim at

analyzing the chemical nature of the herb and determining the allergic component are warranted. The prevalence of contact dermatitis to myrrh is another relevant information that we intend to study.

In conclusion, we suggest while taking the medical history of patients suspected of having contact dermatitis, particularly in our region, to address questions inquiring about the possible use of herbs. The availability of allergens, from the commonly used herbs, could be a useful addition to the European standard panel for screening patients with suspected contact dermatitis.

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