

Colophony in topical traditional Chinese medicaments

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Key words: colophony; medicaments; herbal remedies; traditional Chinese medicine. © Munksgaard, 1997.

Traditional medicaments are still widely used in Asian populations. They are a known cause of irritant and al-

lergic contact dermatitis. One of the allergens is colophony, which is found in Chinese musk and Tiger bone plaster (1). In Singapore, the 10 most commonly used topical Chinese medicaments by patients attending the Contact and Occupational Dermatoses Clinic have been identified (2). These 10 medicaments, listed in Table 1, have yet to have their individual ingredients identified.

Dehydroabietic (DHAA) and abietic (AA) acids were quantified in 9 of the above topical medicaments, as well as 2 commonly used "Western" topical medicaments. The methodological details are described elsewhere (3). Detection limits of DHAA and AA using the method were 1 ng. The results are shown in Table 2.

Most of the commonly used Chinese topical medicaments in Singapore contain low levels of colophony. Only 1 topical Chinese medicament, Eagle brand medicated oil, contained more than 70 ppm of both allergens.

One Western topical ointment, Zam-Buk, contained 0.2% DHAA and 2.2% AA. The presence of colophony BP, at 2.5% w/w, was acknowledged in the list of labelled ingredients in this medicament.

The Tiger balm ointment which was tested did not contain any DHAA or AA. However, Fisher (4) had noted that while "Oriental" Tiger balm cross-reacts with balsam of Peru, "Bavarian" Tiger balm was shown to cross-react with rosin.

The findings of these analyses will be of interest to healthcare professionals who have colophony-sensitive patients under their care.

Table 1. 10 most commonly used topical Chinese medicaments

Topical medicament	Uses and main ingredients
<i>Herbal oils</i>	<i>General purpose oil</i>
1. Axe brand medicated oil	Used for headache,
2. Eagle brand medicated oil	abdominal colic and
3. Green grass oil	skin rashes
4. Tiger oil	
5. Tiger balm ointment	<i>Main ingredients</i>
6. White flower embrocation	Camphor and menthol
7. Wong cheung wah yu yee oil	(terpenes)
<i>Bone setters' herbal oils</i>	<i>Main uses</i>
8. Tjin koo lin oil	For muscle strains
9. Zheng gu shui	and sprains
<i>Antifungal ointment</i>	<i>Main ingredient</i>
10. Saw hong choon skin ointment	Salicylic acid

Table 2. Dehydroabietic acids (DHAA) and abietic acid (AA) in topical medicament samples

Topical medicament	DHAA (ppm)	AA (ppm)
<i>Herbal oils</i>		
1. Axe brand medicated oil	0.6	1.0
2. Eagle brand medicated oil	71.3	71.1
3. Green grass oil	1.8	3.5
4. Tiger oil	not detected	0.5
5. Tiger balm ointment	not detected	not detected
6. White flower embrocation	3.9	9.5
7. Wong cheung wah yu yee oil	not detected	1.8
<i>Bone setters' herbal oils</i>		
8. Tjin koo lin oil	2.9	6.8
9. Wheng gu shui	1.4	1.3
<i>Western topical medicaments</i>		
10. Vicks VapoRub*	1.8	1.7
11. Zam-Buk ointment ⁺	1,688	21,935

* Vicks VapoRub is commonly used as a chest rub for coughs and colds.

⁺ Zam-Buk ointment is usually applied to minor cuts and grazes, as well as insect bites.

References

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