

The positive test result produced by copper sulphate, even at a concentration of 0.1 %, and the late development of the reaction indicate that it was allergic in nature. Recently, a positive test result with 0.1 % copper sulphate has been obtained also in a case of allergic reaction to Copper T (Forck et al. 1977). A similar case after internal exposure to copper has been described previously (Barranco 1972), but patch testing was done with a 5 % solution of copper sulphate only.

References

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Dermatitis from *Arnica montana*

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A housewife, aged 72, applied an infusion of *Flores arnicae* to an abrasion of the left leg in June 1969. This is a popular drug used in folk medicine in Poland; it is prepared from *Arnica montana* (Compositae). After 1 week's application, a dermatitis appeared on the treated area and spread to the neck and face. The lesions persisted for several weeks.

In 1971 her husband planted some flowers in the garden not knowing that they were *Arnica montana*. When the patient weeded the flower bed containing the plants and transplanted them, dermatitis appeared on her hand and the left cheek which she had touched with her hand after working in the garden. In the

course of 24 h the changes in the skin became more intense and they persisted for about 2 weeks. The patient was tested with a standard series of contact allergens and was positive only to turpentine. Her husband destroyed and removed the *Arnica* plants from the garden.

Toward the end of April 1976 she had dermatitis around the orbits for several days. She believed it was connected with the flowering of *Arnica* plants in a neighbour's garden. The latter had been cultivating this plant received from the patient 4 years earlier.

In April 1977 she had pain in her back which she rubbed with a mixture of turpentine

and alcohol. After 10 h, dermatitis appeared at the treated site and on the left hand with which she rubbed it in. The dermatitis cleared in 2 weeks.

The patient was patch test negative to 35 essential oils, but positive to vetiveril acetate (a synthetic flavouring agent) 2 % pet. She was also very positive to the fluid pressed from Arnica stems. For fear of inducing active sensitization, control subjects were not tested

with the plant fluid. Application of a whole *Arnica montana* plant to the forearm for 20 min did not evoke any skin change in the patient. She did not consent to application of the plant for a longer time.

The *Arnica montana* was probably the primary allergen in this case, and the turpentine a secondary allergen due to cross or pseudo-cross reaction.

Dermatitis from butylated hydroxy anisole

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A 52-year-old woman presented with contact dermatitis of the face. The ICDRG patch test battery was applied and positives were found to balsam of Peru and to a tinted foundation cream and liquid cosmetic used by the patient. The cosmetic company provided the individual ingredients (Table 1) and the allergen was identified as butylated hydroxy anisole. The patch test concentration of this agent was 0.1 % in white soft paraffin and the commercial product contains a concentration of 0.005 %. Since avoiding the cosmetics the patient has had no trouble.

This antioxidant has previously been reported as a cause of cosmetic dermatitis (Fisher 1976).

In Australia most cosmetic companies are helpful when approached and supply itemized lists of the contents of cosmetics along with samples. It is uncommon, however, to find specific chemicals other than perfumes as causes of contact dermatitis. This may be because of difficulty in determining the concentrations suitable for patch testing.

Reference

Fisher, A. A. (1976) Reactions to antioxidants in cosmetics and foods. *Cutis* 17, 21-28.

Table 1.

Red C33 705	Carboxylic polyelectrolyte	Nipastat
Red 300 404	Sodium carboxymethyl cellulose	Bentonite
Umbre 300 435	Butylated hydroxy anisole	Tioxide RCR2
Yellow 300 437	Alkyl myristate	Viscarine - seaweed extract
Sienna 300 414	Irgasan DP 300	Silicone fluid