

Allergic contact dermatitis to a surgical varnish

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Surgical varnishes used in orthopaedic surgery permit adhesion between the skin and its sterile cover, allowing the incision to be made without skin contact.

We reported a new case of allergic contact dermatitis to a surgical varnish. The particularity of this observation was the probable primary sensitization because the patient did not have any previous history of allergic contact dermatitis especially to adhesive tapes unlike the other case reports.

A 27-year-old man had acute vesicular and bullous dermatitis 2 days after arthroscopy for a ligamentoplasty of the left knee.

Skin lesions were first localized around the surgical incisions but spread rapidly over the whole lower limb.

The patient had never had any post-operative complications and no previous history of contact allergy.

Dermatitis improved after a treatment with topical corticosteroids.

A few weeks later, patch testing was performed with the European standard

series. Only colophonium gave positive reactions at D2 and D3 (+++).

Patch testing with BetadineTM solution (as is) used during the surgical operation was negative. Abietic acid and abitol, oxidized fractions of colophonium were positive (++) at D2 and D3.

Surgical varnish (ErciplexTM) was tested as is and was very positive (+++) at D2 and D3.

Then, a second patch testing with the different ingredients of the varnish obtained by the manufacturer was carried out.

Alphacopal elicited a strong reaction (+++) at different concentrations (0.1% up to 10% in water and in vaseline) at D2 and D3 whereas the other ingredient, methylal, was negative.

We did not retest colophonium.

Contact dermatitis to surgical varnishes has been already reported (1, 2).

The commonest allergen is colophonium. Another substance incriminated is alphacopal as in our case. It is a Manilla resin which is a natural oleoresin from the sap of a tree, *Agathis alba*, present in Indonesia and Philippines. Allergic contact dermatitis from copal in a dental root canal filling has been already reported (3). Contact sensitivity to copal is seen in workers during its production (4).

Jost et al. (1) discussed 16 cases of allergic contact dermatitis from alphacopal used in a surgical adhesive. Thirteen of the 16 reacted also to colophonium (20% pet) as did our patient suggesting cross-sensitization. More recently, Barbaud et al. reported four new cases of allergic contact dermatitis to surgical paints (2). It was ErciplexTM varnish in two cases and BraunTM varnish in the two others. Patch testing were positive to colophonium and alphacopal. Components of ErciplexTM surgical varnish have been modified since this report in 2001: castor oil, thymol and ethanol have been

deleted. Unlike the series of Barbaud et al., our patient had no previous history of allergy to surgical adhesives or to products containing colophonium, suggesting a primary sensitization. In all cases as in our case, the eruption was extremely acute and severe with blisters and extension to the whole limb.

Risk of severe allergic contact dermatitis to surgical varnishes must be taken in consideration by orthopaedic surgeons, especially (but non only) in patients with past history of allergy to surgical tapes.

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References

1. Jost T, Sell Y, Foussereau J. Contact allergy to Manilla resin. Nomenclature and physico-chemistry of Manilla, kauri, damar and copal resins. *Contact Dermatitis* 1989;**21**:228–238.
2. Reichert-Penetrat S, Barbaud A, Penetrat E, Granel F, Schmutz JL. Allergic contact dermatitis from surgical paints. *Contact Dermatitis* 2001;**45**: 116–117.
3. Kimura M, Miura S, Ozawa S, Kawada A. Allergic contact stomatitis from formaldehyde and copal in a dental root canal filling. *Contact Dermatitis* 2003;**49**:164.
4. Rietschel RL, Fowler JF Jr (eds). Allergy to gums, rosin, and natural resins. In: *Fisher's contact dermatitis*, 5th edn. Philadelphia: Lippincott Williams & Wilkins, 2001:561–570.