

BEE-KEEPERS' DERMATITIS-SENSITIVITY TO PROPOLIS

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A patient working in the bee-keeping department, developed contact dermatitis on the face and hands after working with an Italian species of bees *Apis mellifera*. Patch test showed sensitivity to the bee-glue (propolis).

Key words : Bee-keepers' dermatitis, Propolis, Bee-glue.

Bee-glue (propolis) is an adhesive resin derived from the trees like poplar, fir, willow, horsechestnut, alder etc. The honey bees mix this with wax to form a cementing substance in their hives.¹ Of the four species of honey bees present in this region : *Apis indica*, *Apis dorsetta*, *Apis trigona* and *Apis mellifera*; the first three are of Indian origin and the fourth one is an imported Italian species. Only the Italian species uses this resin in their hives.

Bees-wax^{2,3} and bee-glue^{1,4-6} are potential sensitizers in bee-keepers. However, propolis appears to be the more common cause of contact dermatitis. Bees-wax present in some cosmetics may rarely sensitize⁷ an individual.

We are reporting a patient who developed acute peri-orbital dermatitis and oedema after working with *Apis mellifera* species. He was found to be sensitive to propolis.

Case Report

A 50-year-old man involved in bee keeping developmental activities presented with acute peri-orbital dermatitis and severe oedema, and a few patchy areas of dermatitis on the face and hands. History revealed that whenever he handled the bee-boxes of *Apis mellifera* species, he used to develop itching on the face, the next day. He had noticed this association at least on five occasions. The present attack was severe, and he had handled bee-boxes of this

particular species on the previous day. The patient had himself suspected propolis to be the causative factor.

Patch tests were performed with propolis and bees-wax; both applied as such. A strong reaction was seen with propolis. Bees-wax did not show any reaction.

Comments

Bee-keepers' dermatitis is a well recognised but rarely reported entity. A search of the Indian literature did not reveal any previous report.

Propolis is found in the bee-hives of only *Apis mellifera* species. This particular species has been recently imported in this region. The patient is involved in bee-keeping developmental activities for the last 15 years but never had any problem. Only recently, he started having itching and dermatitis on the face specially around the eyes, and correlated this to contact with propolis. After the association was confirmed by patch tests, further enquiry revealed that some of his other co-professionals had also noticed similar symptoms following handling of this particular species.

Propolis sensitivity must be considered as one of the causes of peri-orbital dermatitis in patients working with bees.

Rothenborg⁵ also found positive patch tests to poplar leaves and buds in his patient of propolis sensitivity. As poplar tree plantation is being introduced in our country on a large scale, propolis sensitivity is likely to become more frequent.

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