

## Persistent Nodular Lesions Caused by “Bee-sting Therapy”

Sir,

“Bee-sting therapy” is an ancient therapeutic technique, having a presumed, but not demonstrated, anti-inflammatory and anti-dolorific action. Bee-sting therapy consists in allowing bees to sting in and around a painful area. We report the case of a man with arthrosis who developed numerous inflammatory nodular lesions localized to his lumbo-sacral region and manifesting exactly at the site of the bee stings.

### CASE REPORT

A 65-year-old man was admitted because of a nodular dermatitis localized to his lombo-sacral region. The patient stated that he had been suffering for many years from arthrosis of the spinal column. For this reason he had been treated with numerous non-steroidal anti-inflammatory drugs with short-term benefit. The patient therefore decided to undergo bee-sting therapy. However, this therapy was suspended one month later, both because it was ineffective and especially because of the appearance of inflammatory lesions manifesting exactly at the site of the stings.

Clinical examination showed the presence of numerous round erythematous-nodular lesions, less than 1 cm in diameter, of different colours (from pink to red to purple to brown), with a central depressed opening from which no material could be

squeezed. The lesions had a smooth surface, a hard-parenchymatous consistency and looked like prurigo nodularis lesions (Fig. 1). Nevertheless, no itch was present, the patient only complaining of moderate pain.

General physical examination did not show anything pathological, with the exception of the arthrosis of the lumbo-sacral spinal column, confirmed on radiological examination. Laboratory tests showed only a slight increase in inflammatory indices. Specific anti-bee venom IgE was positive by RAST. Prick and intracutaneous tests were not performed.

Histopathological examination revealed a pseudo-carcinomatous hyperplasia in the superficial dermis, a perivascular and periadnexal infiltrate of lymphocytes and histiocytes in the whole dermis, and a small focus of necrosis of the collagen in the middle dermis with neutrophils and nuclear fragments between collagen bundles.

The patient was treated with topical desoxymethasone (2 applications/day for 2 weeks, followed by 1 application/day for 2 weeks); only partial regression of the lesions was observed (follow-up: 1 year).

### DISCUSSION

Bee venom can cause reactions that may be classified as toxic and allergic from the etiopathogenetic point of view, and as



*Fig. 1.* Inflammatory nodular lesions localized to the lumbo-sacral region.

local and systemic from the clinical point of view. After a bee sting, one can observe reactions with a very wide clinical spectrum: from a moderate local reaction to a fatal anaphylactic reaction (1, 2). The reaction to a sting is determined by the direct pharmacological effect of the venom and by the degree of hypersensitivity acquired to antigenic substances (1, 3). Of great importance are systemic allergic reactions, which can involve the skin with urticaria and angioedema, the respiratory system with laryngeal edema and bronchospasm, and the cardiovascular

system with tachycardia, hypotension and shock. These manifestations may be associated or, more rarely, isolated and varying in severity (1, 2). Death due to direct toxicity requires hundreds of stings: almost all deaths occur after one or just a few stings. Therefore, an allergic reaction is by far the most frequent cause of death (2, 4).

As far as local reactions are concerned, the sting is followed by an instant sharp pain. A few minutes later erythema is seen followed by swelling. Edema may involve a wide area. It has a colour that varies from white to bright red and is of hard consistency; it is particularly marked in the event of stings around the eyes and the mouth. The formation of vesicles, bullae, pustules, ulcers and necrosis is a rare event (3).

The case we have described is an example (perhaps the first one reported in the literature) of a long-lasting subacute inflammatory reaction induced by bee-sting therapy. This therapy for the relief of pain in arthrosis and rheumatic diseases has been known for a long time but has now fallen into disuse almost everywhere (5). Apart from lacking in any demonstrable efficacy, it can provoke sensitization to bee venom, with serious risks to the patient in the event of a subsequent bee sting.

#### REFERENCES

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