Case Report

Bee venom: a case of effectiveness on skin varicosities veins with review of its dermatological benefits

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Abstract

Bee venom is a very rich and varied biochemical complex, which explains the multitude of its physiological effects as well as its medical indications. In dermatology, apart from psoriasis, few studies have been conducted concerning its interest and effectiveness; however the preliminary results remain so promising and encouraging. We present a clinical case illustrating the efficacy of bee venom in cutaneous varicosities, with a review of the literature of its main dermatological indications.

Background

Bee venom has been known for long time for its therapeutic virtues and its indications are constantly expanding in various fields, particularly in dermatology and aesthetic medicine, as this clinical case shows.

Case report

33 year old young woman, teacher by profession, married and mother of 3 children, followed in our department for androgenetic alopecia under platelet rich plasma sessions. The patient also presents varicosities of both thighs for which she tried herself bee stings first on the left thigh with respect for the right thigh. The technique she used is to stock up on bee in a beekeeper, to be stung by 3 bees, 3 bites of 30 seconds, 3 cm apart on the varicose veins and repeated every 15 days with 3 sessions in total. The result obtained was clearly significant with acceptable tolerance and satisfaction (Figures 1,2).

Discussion

The use of bee products for therapeutic purposes has been known since antiquity as shown by historical and prehistoric evidence [1]. The venom of the bee and thanks to its composition so rich and varied has several physiological effects: antiaggregant, antihypertensive, tonicardiaque, analgesic, antipyretic, anti-infectious, immunostimulant, anti-inflammatory, anti-radical, anti-cancer and stimulates the general tone [2]. From these effects flow its main indications in several disciplines, particularly in rheumatology in neurology and cardiology [3].
In dermatology few studies have been conducted with a relative frequency of sporadic and anecdotal cases. Of which the main ones showed the effectiveness of acupuncture alone or associated with apitherapy (propolis) in psoriasis with a decrease in the PASI score and a decrease in serum levels of TNF-α [4-6].

Varicose veins and cutaneous varicosities are a frequent reason for consultation in dermatology and cosmetology. In addition to vascular lasers, sclerotherapy is a therapeutic means with its advantages and limits. Few publications have highlighted the interest of venoms as sclerosing products, in particular spiders and bees venoms. The mechanism of action in this indication is not fully known but thanks to its rich composition bee venom accelerated blood flow velocity, removes spasms in peripheral vessels, decreases blood clotting and observed the removal of pain.

Concerning the pigment disorders, the bee venom seems to intervene as well in the negative and positive regulation of the melanogenesis, thus according to certain authors and in addition to its anti-aging and brightening effect, the venom of bee inhibits the enzymes of melanogenesis including tyrosinase and tyrosinase-related protein 1 and 2 (TRP-1 and TRP-2) and inhibit the effect of alpha MSH on melanoma B16F1 cells [7-20], and according to other authors, bee venom stimulates proliferation of human melanocytes, melanogenesis, proliferation of dendrites and migration and transfer of melanosomes [8].

Other studies highlight the interest of bee venom in the treatment and prevention of eczema and atopic dermatitis and the interest of emollient containing bee venom in the maintenance of remissions [9,10,17-19].

Sporadic studies show the interest of bee venom in the improvement of acne lesions, in the treatment of onychomycosis and in the regulation of the immune system in general [11-13].

Thanks to its anti-inflammatory and anti-fibrotic effect, bee venom can be tested in dermatoses with fibrosating properties, especially in morphs and cheloids [14,20].

While the indications of bee venom in cancerology are limited and controversial, cases of cure of some benign skin tumors leave hope with prospects in the future [15].

The interest of skin venom in skin rejuvenation finds its place in the field of explosion of aesthetic and anti-aging medicine with the placing on the market of multiple products and processes based on bee venom [16].

**Conclusion**

Bee venom is a very rich biochemical complex with multiple effects and indications. In dermatology, this therapeutic field remains so little explored that very promising.

**Statement of ethics**

The examination of the patient was conducted according to the Declaration of Helsinki principles. The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

**References**

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