

CASE REPORT

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Immune thrombocytopenia after bee venom therapy: a case report

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Abstract

Background: Immune thrombocytopenia (ITP) is a hematological disorder with an isolated decrease in number of circulating platelets. Bee venom therapy (BVT) is a form of alternative medicine. It is still being practiced in the Middle East and other parts of Asia. In BVT, acupuncture points are used to inject diluted bee venom into the body. The pharmacological basis behind BVT is not fully understood. However, it has been used to treat various medical conditions such as arthritis and low back pain. On the other hand there have been a number of reported complications of BVT use such as ITP. We present a case report on ITP after BVT.

Case presentation: A 61 year old lady presented with gum bleeding and ecchymosis and found to have isolated thrombocytopenia (platelet count of $9 \times 10^9/L$) after receiving four direct bee sting sessions. There was no evidence of any other risk factors of ITP.

Conclusion: Bee venom components and toxicity may be associated with thrombocytopenia as a complication. Further research is needed to postulate guidelines and protocol for BVT. In the meantime, monitoring of the practice of BVT should be made, with an emphasis on patient education regarding the safety profile and associated risks compared to the gained benefits.

Keywords: Immune, Thrombocytopenia, Bee, Venom, Therapy, Hematology, Complication, Acupuncture, PLA2

Background

Immune thrombocytopenia (ITP) is a hematological disorder in which there is an isolated decrease in number of circulating platelets [1]. In either primary ITP or secondary ITP, it is thought to be an immune mediated process [2, 3]. The disease may manifest from simple bruising to overt bleeding with an incidence in adults ranging from approximately 1.6 to 3.9 per 100,000 persons per year with a higher incidence in women than men [4–6]. Most adult patients presenting with acute ITP recover within weeks however some may progress to a chronic form of the disease [3].

Bee Venom therapy (BVT) is a well-known form of alternative and complementary medicine. There is a belief that ancient Egypt, Greece and China had applied BVT for patients suffering from rheumatism [7]. It is still being practiced in the Middle East as well as other parts in Asia. BVT is where acupuncture points are used to

inject bee venom into the body either by direct sting or diluted injection [7].

There is no significant evidence supporting the effectiveness of BVT, but several trials have been and are currently conducted to support the use of BVT. There have been many reported complications of bee stings in the literature. These are mainly thought to be induced by the active components of bee venom. We may group these complications according to system affection; hematological, renal, liver, cardiovascular, musculoskeletal, central nervous system and multi-organ failure [8–16]. The most striking of these are potential anaphylactic reactions which may be life threatening [7]. These complications include three case reports of thrombocytopenia. In this report we describe a case of adult onset ITP following BVT without evidence of a known secondary cause of ITP. We aim to raise awareness of a possible complication of BVT.

Case presentation

A 61 year old lady presented to the emergency department with 1 day history of bleeding from her gums. She

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