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## Bee venom therapy in case of rheumatoid arthritis with back pain: A randomized and controlled trial

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**Background:** Bee venom (BV) has been used in the treatment of musclo-skeletal and rheumatic problems in the clinical field. The use of honey and other bee products in human treatments traced back thousands of years and healing properties are included in religious texts. Apitherapy is the use of honey bee products for medical purposes, this include bee venom, raw honey, royal jelly, pollen, propolis and bee-wax. Whereas bee venom therapy is the use of live bee stings (or injectable venom solutions with different degrees of dilutions) to treat various diseases such as arthritis, rheumatoid arthritis, multiple sclerosis (MS), lupus, sciatica, low back pain and tennis elbow.

**Objectives:** To assess the clinical evidence for Bee Venom Therapy (BVT) with or without physiotherapy modalities in cases with rheumatoid arthritis.

**Materials & Methods:** Setting: Dar Elshefaa Medical center for Physiotherapy in Damas, Meet Ghamr, Dakahlia. Time: 3 months from 3 Jan, 2015 to 5 April, 2015. Participants: Patients with rheumatoid arthritis and those suffering from back pain, a total of 38 patients had been enrolled in the previous study and 8 of these were excluded from the current study. Thirty patients who had been treated, were divided randomly into two groups, Group (A) with combined BVA and physiotherapy, group (B) treated by physiotherapy with injection of normal saline NaCl and considered as a control group. Intervention: Physiotherapy program with or without using bee venom therapy (BVT). Physiotherapy program involved (Infrared, Wax, ultrasound, Tens & Therapeutic exercises). BVT involved injecting purified and graduated diluted BV (1gm-500 ml normal serum saline concentration which was doubled every month at 3 months therapy).

**Main Outcome Measures:** Four outcomes assessed at baseline for three months intervention to measure pain and patient satisfaction. Lumbar range of motion was measured by inclinometer and functional disability was measured by oswestry disability scale and erythrocyte sedimentation rate (ESR). Measurements were taken at two intervals, pre-treatment and post-treatment.

**Results:** Bee venom therapy (BVT) was associated with clinically significant improvement at 3-month follow-up. The Group A which was treated with traditional therapy that is with bee venom therapy in the involved muscles showed significant improvement of pain intensity, functional disability and Lumbar range of motion (P<0.0001) along with a significant improvement for ESR.

**Conclusion:** There is a good scientific clinical evidence for bee venom therapy (BVT) more than control group treated by physical therapy only at 3-month therapy in pain, ROM, functional disability and ESR. The BVT group also showed significantly greater satisfaction when compared with the control group.

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