

## البحث السابع

### **Cytokine assessment and Immunomodulatory Effect of Bee Venom in HBV&HCV Infected Patients**

#### **Abstract**

**Background:** Hepatitis B & Hepatitis C viral infections are common health problems worldwide. New strategies for treatment are now evolving. The therapeutic application of bee venom has been used in traditional medicine to treat many diseases.

**Aim:** The aim of this study was to investigate the effect of bee-sting (venom) therapy on progression of chronic viral hepatitis B & C and on the levels of proinflammatory cytokines IL-1 $\beta$ , IL -2 and IL -6 and the anti inflammatory IL -10 in HBV&HCV infected patients.

**Methods:** 67 Egyptian patients with chronic hepatitis were enrolled, 20 of them have HBV and 47 have HCV. Bee stings were administered using live bees at apipunctur point. CBC, liver enzymes, Hepatitis B & C RT-PCR, IL-1 $\beta$ , IL -2, IL -6 and IL -10 were estimated before & after bee stings therapy. Results: there was a significant decrease in ALT; AST ( $P \leq 0.05$ ) after bee venom injection in both types of hepatitis. viral load was decreased during the course of treatment, it became negative after 9 months therapy in all cases of HBV infection and in 34.04% of HCV infection. IL-1 $\beta$ , IL -2, IL -6 and IL -10 levels were also significantly decreased after 9 months therapy in both types of hepatitis patients.

**Conclusions:** bee venom stings decreased the viral load and IL-1 $\beta$ , IL -2, IL -6 and IL -10 after 9 month's therapy in both types of hepatitis.

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