Anti-inflammatory Properties of *Bothrops jararaca* Snake Antithrombin in Mice: Preliminary Results

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Introduction: Antithrombin is an important inhibitor of several coagulation serine proteases, including factors X_a, IX_a, XI_a and thrombin. Besides, a large number of recent studies have shown that human antithrombin has anti-inflammatory actions, which are independent of its effects on coagulation. **Objective:** The aim of this work was to investigate the effects of *B. jararaca* antithrombin (BjAT) on cell migration induced by carrageenan (cg) in mice. **Methods:** Antithrombin was purified from *B. jararaca* plasma by HiTrap Heparin HP column. The BjAT (20 µg/100 µL i.v.) or saline (100 µL) was administered 1 hour before intraperitoneal injection of cg (300 µg/200 µL) or saline (sal) (200 µL) in male Swiss mice (18-22 g). After 4 hours of cg injection or sal, cell migration to the peritoneal cavity was eva luated. The count of total peritoneal cells was determined in Neubauer´s hemocytometer and differential counts were preformed in smears stained with panchromatic stain. A total of 100 cells were counted by optical microscopy. **Results:** Pre-treatment with BjAT diminished cg-induced cell-influx into the peritoneal cavity, when compared with the group were pretreated with sal (sal+cg). The decrease in cell migration in animals pretreated with BjAT was 41% (sal+cg: 4.66 ± 0.56, BjAT+cg: 2.74 ± 0.31; $p < 0.05$). A significant decrease of 82% was observed for polymorphonuclear cells in animals pre treated with BjAT (sal+cg: 3.50 ± 0.81 , BjAT+cg: 0.60 ± 0.09; $p < 0.05$). **Conclusion:** The results demonstrated that BjAT significantly inhibited migration of polymorpho nuclear cells to peritoneal cavity. Thus we could suggest that BjAT presents anti-inflammatory properties.