

Evaluation of Hemolytic, Antioxidant and Coagulant effects from *Bothrops moojeni* snake venom

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INTRODUCTION: Brazil has shown approximately 29,000 annual cases of snakebite caused by snakes belonging to the Viperidae families (*Bothrops*, *Bothrocophias*, *Crotalus* and *Lachesis* genera) and Elapidae (*Micrurus* genus) and the *Bothrops* genus is the major responsible for snakebites occurred in Brazil. Snake venom is a mixture of pharmacological and biochemically active molecules (proteins, enzymes, peptides and inorganic compounds). Among the biological activities triggered by poisoning are some toxic (cytotoxicity, antiparasitic and antifungal) and pharmacological (hemolytic, stimulating/inhibiting platelet aggregation) effects. **OBJECTIVES:** This study assessed the hemolytic, anti-oxidant and coagulant activities performed by the venom of *Bothrops moojeni* in human blood components. **MATERIAL AND METHODS:** To evaluate the hemolytic and antioxidant activities was used a lyophilized sample of the crude ophidic venom from the *B. moojeni* solubilized in PBS in amounts 1000; 100; 10; 1 and 0.1µg against human erythrocytes and hemoglobins according Hubert et al (1997) and Naoum *et al* (2004), respectively. The assessment of human citrated plasma clotting by different amounts of snake venom (10; 5; 2.5; 1,25µg) was made according to Alvarado Gutierrez (1988). **RESULTS AND DISCUSSION:** No quantity of snake venom evaluated caused direct hemolysis in human erythrocytes of AB, A, B and O blood groups. However there was indirect hemolysis when the snake venom was incubated with fatty acid and calcium. There was a 30% increase in the oxidant effect of the hemoglobin in methemoglobin in the quantity of 1000 and 100µg of the snake venom only in the presence of phenylhydrazine, an oxidant agent. The measured coagulation time was less than 21 seconds on all quantities snake venom evaluated: 10µg -21sec.; 5µg -19sec.; 2,5µg -9sec.; 1,25µg -3sec.. **CONCLUSIONS:** The *Bothrops moojeni* snake venom showed hemolytic activity in the presence of fatty acid and calcium, oxidant activity potentiated by phenylhydrazine and dose-dependent coagulation, the greater the quantity of poison lower the observed clotting time.

Key words: *Bothrops moojeni*, snake venom, biological effects.

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