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ABSTRACT

Accidents involving venomous animals and emergency assistance

Accidentes con animales venenosos y asistencia de emergencia

Acidentes com animais peçonhentos e a assistência de urgência e emergência

Eric Rosa Pereira[1*]
ORCID: 0000-0003-0202-6653
Thaísa Lopes de Lima[1]
ORCID: 0000-0002-5322-9234
Rafaela Pinto da Silva[1]
ORCID: 0009-0004-3460-9823
Luciana Castro de Oliveira Fraga[1]
ORCID: 0000-0002-6086-2599
Priscilla Valladares Broca[2]
ORCID: 0000-0003-3392-910X

[1]Faculdade Souza Marques. Rio de Janeiro, Brazil.
[2]Universidade Federal do Rio de Janeiro. Rio de Janeiro, Brazil.

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***Corresponding author:**
eric.pereira@souzamarques.br

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Introduction: Venomous animals are characterized by having glands that secrete venom expelled through a defense or hunting mechanism. The ability to eject venom comes from an inoculating apparatus, which varies according to the species[1]. Accidents caused by venomous animals were included by the World Health Organization (WHO) in the list of neglected tropical diseases, affecting most citizens living in rural areas. Furthermore, due to the high number of notifications, it was included in Brazil's Compulsory Notification List, that is, all cases must be reported to the Federal Government immediately after confirmation[2]. Accident notifications are carried out by the Information and Notifiable Injuries System (SINAN), and underreporting and the absence or uncertainty in filling in some data interfere with a fragile epidemiological analysis[3]. Among all species of venomous animals, the most common accidents in Brazil involve snakes, scorpions, and spiders. In most cases, the mechanisms of action of the venom of these animals include hemorrhagic, neurotoxic, and coagulant actions. The most common signs and symptoms include local pain, edema, bruising, blisters, abscess, and local necrosis[4]. The care provided in these accidents requires effective and appropriate care from a highly trained team, since the patient's condition can develop complications quickly. Professionals must be able to perform a cardiorespiratory assessment, identify risk factors, and recognize the severity of the problem early on, to act promptly to ensure survival[5].

Objective: Analyze, according to scientific literature, the clinical manifestations presented by patients who are attacked by venomous animals and describe the main nursing care in pre- and intra-hospital emergencies.

Methodology: This is a literature review study conducted in LILACS, CINAHL, and MedLine databases via PubMed. The descriptors used are: “Poisonous Animals”, “Emergencies”, and “Emergency Medical Services”. It was established that studies published in the last ten years, available in full, in Portuguese, English, and Spanish, which dealt with venomous animals would be included. Articles reporting exogenous poisoning caused by plants were excluded, as were these and dissertations.

Results and Discussion: Of the 54 articles found, 10 met the selection criteria for this study. After reading them in full, two thematic categories emerged: clinical manifestations of patients attacked by venomous animals, supported by five articles found, and main care in emergencies, supported by six articles selected in the search. In Brazil, a 2015 study analyzed the impact of non-modifiable risk factors in cases of poisoning by venomous animals and found that the highest average of accidents was caused by scorpions, and the highest number of deaths and fatality rates were caused by snakes. The age group found for the most affected population was young adults between 20 and 39 years old, and males were the most affected[6]. According to the Ministry of Health, first aid to be performed in cases of accidents caused by venomous animals includes cleaning the site of the bite with soap and water, not applying any condiment or covering, not applying a tourniquet or suction to the site of the wound. The only indicated and appropriate treatment to neutralize the action of venom from poisonous animals is serum therapy, which contains specific antibodies for each type of accident[1,5]. The first steps taken in cases of accidents involving venomous animals

will be taken at the scene of the accident, with actions that will calm the victim and begin first aid. Clothing or accessories that are oppressing the affected limb should be removed if the edema progresses rapidly, the affected area should be cleaned, and the time of the accident should be noted, as well as the order in which symptoms appear and progress[7]. It is observed that the time elapsed between the accident and the serotherapy is the main problem that increases the risk of lethality. Another problem is the inappropriate behavior carried out by the victims themselves, who often do not seek specialized care. The ways to combat this problem that can reduce these indicators are the education of people who live or work in areas of greater risk and the improvement in the transportation of victims from isolated locations[6]. Antivenom was not indicated in the case of an individual who had an allergic reaction after being bitten by the same type of snake twice within a month. In this case, the serum therapy treatment should be stopped immediately, and anti-allergy medication should be started[8].

Final Consoderations: The clinical manifestations presented by patients will vary according to the type of animal that caused the accident, ranging from nausea and vomiting to headache and multiple organ failure. Care to ensure the patient's survival involves identifying the causative agent and administering the specific serum as soon as possible. In this sense, the work achieved its proposed objectives, and it is hoped that this will stimulate further research on the subject presented.

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