

NURSING CARE ACTIONS IN SERVING VICTIMS OF SCORPION STINGS IN PRIMARY HEALTH CARE

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ABSTRACT

Objective: To evaluate the knowledge and practices of nursing professionals in primary care.

Method: An exploratory-descriptive study with a qualitative approach developed from February to March 2018 with 20 nurses from Family Health Units in Paraíba, Brazil, through semi-structured interviews, submitted to the thematic analysis technique.

Results: It was verified that the nurses do not develop systematized care, but a punctual one, based on the signs and symptoms of the mild condition, and transfer the responsibility for handling the case to the reference service, due to lack of knowledge of the guideline established for the victim. In addition, 19 nurses do not carry out educational actions to prevent accidents and pass on the responsibility to the health surveillance system.

Conclusion: The implementation of training programs, the elaboration of the Standard Operating Procedure, and the provision of health education for the professionals are necessary in order to improve the care provided to victims of scorpion bites.


DESCRIPTORS: Scorpion stings; Health care; Nursing; Family Health Strategy; Primary Health Care.


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CUIDADOS DE ENFERMAGEM NO ATENDIMENTO ÀS VÍTIMAS DE PICADAS ESCORPIÔNICAS NA ATENÇÃO PRIMÁRIA À SAÚDE

RESUMO

Objetivo: avaliar conhecimentos e práticas dos profissionais de enfermagem na atenção primária.

Método: estudo exploratório-descritivo, com abordagem qualitativa, desenvolvido de fevereiro a março de 2018, com 20 enfermeiros de Unidades de Saúde da Família, da Paraíba, Brasil, por meio de entrevista semiestruturada, submetida à técnica de análise temática.

Resultados: verificou-se que os enfermeiros não desenvolvem uma assistência sistematizada, mas pontual, com base nos sinais e sintomas do quadro leve, e transferem ao serviço de referência a responsabilidade pelo atendimento ao caso, por desconhecimento das condutas estabelecidas para o acidentado. Ademais, 19 enfermeiros não realizam ações educativas para a prevenção dos acidentes e repassam a responsabilidade ao sistema de vigilância em saúde.

Conclusão: são necessárias a implementação de programas de treinamentos, a elaboração de Procedimento Operacional Padrão e a realização de educação em saúde para os profissionais, a fim de melhorar a assistência às vítimas de picadas escorpiônicas.

DESCRITORES: Picadas de Escorpião; Assistência à Saúde; Enfermagem; Estratégia Saúde da Família; Atenção Primária à Saúde.

CUIDADOS DE ENFERMERÍA PROVISTOS A VÍCTIMAS DE PICADURAS DE ESCORPIÓN EN LOS SERVICIOS DE ATENCIÓN PRIMARIA DE LA SALUD

RESUMEN:

Objetivo: evaluar los conocimientos y las prácticas de los profesionales de enfermería en la atención primaria.

Método: estudio exploratorio-descriptivo con enfoque cualitativo, desarrollado de febrero a marzo de 2018 con 20 enfermeros de Unidades de Salud de la Familia de Paraíba, Brasil, por medio de entrevistas semiestructuradas, sometidas a la técnica del análisis temático.

Resultados: se verificó que los enfermeros no ofrecen asistencia sistematizada, sino más bien puntual, en función de las señales y de los síntomas del cuadro leve, y que transfieren al servicio de referencia la responsabilidad de manejar el caso por desconocer las conductas establecidas para atender a la víctima. Además, 19 enfermeros no realizan ninguna acción educativa para prevenir los accidentes, además de transferir la responsabilidad al sistema de vigilancia de la salud.

Conclusión: es necesario implementar programas de capacitación, elaborar un Procedimiento Operativo Estándar, y realizar acciones de educación en salud para los profesionales, a fin de mejorar la asistencia que se presta a las víctimas de picaduras de escorpión.

DESCRIPTORES: Picaduras de escorpión; Asistencia a la Salud; Enfermería; Estrategia de Salud de la Familia; Atención Primaria de la Salud.

INTRODUCTION

Human beings have always suffered attacks by venomous animals. The concern with these animals is due to the poison expelled, which can cause serious problems to the health of its victims, as well as generate financial losses to Public Health⁽¹⁾.

Among the various types of venomous animals, the scorpion stands out, which has shown a worrying incidence in urban locations, often due to deforestation. This action alters the natural environment of these beings, decreasing the resources for their survival and increasing their invasion in residences, vacant lots, and construction areas⁽²⁾.

Accidents due to scorpions are a current public health problem in Brazil, and the reduction in the number of occurrences must be done preventively. The most effective way to combat this problem is to have clinical and epidemiological knowledge of it⁽²⁾.

In this sense, the implementation of notification of scorpion-related accidents in Brazil in 1988 and the improvement in the registration of this condition contributed to the increase in the incidence rate. According to data from the Ministry of Health, 951,727 cases of accidents caused by scorpions were recorded in Brazil between 2000 and 2017^(2,3).

It is necessary to control the growth of populations of these animals, given the risk they pose to human health. As a measure to contain this advance, the Brazilian Government created Ordinance No. 1,172, of June 15th, 2004 which, in its article 3, item 10, establishes that the municipality is to be responsible for the registration, capture, seizure, and elimination of animals that pose a risk to human health and, for the state, the responsibility for the supervision, monitoring, and guidance of these actions⁽⁴⁾.

At the municipal level, according to the National Primary Care Program (*Programa Nacional de Atenção Básica*, PNAB), one of the characteristics of the teams is to plan and implement health actions according to the needs of the population, prioritizing clinical and sanitary interventions in health problems, according to frequency, risk, vulnerability, and resilience criteria⁽⁵⁾.

Thus, the nursing professionals must be trained to provide adequate assistance to the victim of a scorpion sting that occurs in their area of activity, since the victim will be able to access the nearest health service and this must be resolved in its demand by following the manual for diagnosis and treatment of accidents caused by venomous animals⁽⁶⁾. It is emphasized that the care provided to these people requires quality and agility, which contributes to the accuracy of the diagnosis and, when necessary, the referral of victims to specialized health units.

In view of the problem, it is understood that the assessment of the knowledge and practices carried out by the nursing professionals in the face of a scorpion-related accident will allow for the qualification of the therapeutic and preventive care service currently carried out. Possible deficiencies found in this process will serve as a subsidy for the implementation of actions to improve health care for people stung by scorpions. Thus, this study aimed to assess the knowledge and practices of the nursing professionals in primary care regarding scorpion-related accidents.

METHOD

An exploratory and descriptive research with a qualitative approach, developed in Family Health Units (FHUs) belonging to Sanitary District III (SD III), located in the city of João Pessoa, Paraíba, Brazil.

The study population was 60 nurses, of whom 20 nurses ended up being participants, obeying the response saturation technique. For the collection of information, the authors prepared a semi-structured, individual interview script, with MP3 recording, containing questions pertinent to the accident's characterization data, clinical condition resulting from the sting, care offered to the patient, actions that should not be carried out in the face of occurrence, and preventive measures in the community exposed to the injury.

Data was collected during the months of February and March 2018, according to the institution's operation, in the morning and afternoon shifts, according to the availability of the participants, and after reading and signing the Free and Informed Consent Form (FICF).

The recordings were fully transcribed and submitted to the content analysis technique, thematic modality⁽⁷⁾. For data interpretation, the nuclei of meanings were organized into categories. To preserve their anonymity, the professionals were identified by the letter E for nurse ("Enfermeiro" in Portuguese), followed by increasing cardinal numbers related to the order of the interviews.

The research was approved by the Research Ethics Committee of the Nova Esperança Nursing School under Opinion No. 2,866,645, and respected the ethical aspects contained in Resolution No. 466/12 of the National Health Council⁽⁸⁾.

RESULTS

After reading the empirical material, due to similar content, four categories emerged that provided an understanding of the nursing care provided at the PHC level in the SD III of the investigated municipality.

Category 1 - Specific actions without deepening of the professionals in the initial service

Initially, the health professionals were asked about what information is collected when they receive the injured person in their unit. It was observed that the nurse assertively identifies some specific actions, but without deepening and completeness of skills, such as: type of scorpion, if the victim captured the animal, date of the accident, clinical condition, sting area, procedure the patient had at the accident site, and referral to the municipality's reference service: Toxicological Assistance Center (Centro de Assistência Toxicológica, Ceatox).

I usually ask about the scorpion, what it was like, if the person managed to capture it, then I go to look at the place and the symptoms the patient was feeling, depending on the symptoms, I already forward to the Ceatox [...]. (E.01)

First I ask when the sting happened, which day it was, if he knows the type of scorpion and what he did at the sting site [...]. (E.03)

Then, the health professionals were asked about the symptoms that the patient may experience after being stung by a scorpion, revealing that the majority of the respondents highlighted severe pain and hyperemia at the accident site. In addition to these symptoms, local edema, flushing, fever, paresthesia, dizziness, burning, numbness, nausea, vomiting, and headache were mentioned.

Edema, flushing, headache, nausea, local pain. The pain is the strongest a person has, the main one is the pain [...]. (E.02)

[...] A very strong pain and tingling in the limbs [...]. (E.10)

Burning and pain at the site, redness and tingling. I ask if the patient has nausea, vomiting and headache. (E.20)

Category 2 - Fragmented care and transfer of responsibility to the reference service

Subsequently, the nurses were asked about which health actions should be offered to the patient stung by a scorpion. Among those mentioned are the prescription of analgesics or antiallergics, guidance to the victim to take analgesics, making a cold compress, or washing the sting with soap and water and referring to the Ceatox.

[...] I advise the cold compress, refer and let him take some type of painkiller. (E.03)

In the nursing area, we only advise on cleaning or referring to the Ceatox [...]. (E.07)

At the unit, we refer to the University Hospital where the Ceatox is located, but we can give an anti-allergic and give an analgesic [...]. (E.10)

Concomitantly, a significant portion of the professionals are unaware of the care that must be offered to patients stung by scorpions, as well as denying that there is such care in the FHS.

To be honest, I don't know about the treatment, what the Ceatox does. I don't know [...]. (E.16)

As far as I know, it's the painkiller, if it's the normal scorpion; if it's the dark-bellied one, I confess I don't know that part very much. I don't have that experience to answer [...]. (E.17)

Here there is no treatment for this accident [...]. (E.20)

Category 3 - Initial community care through knowledge from popular culture

The nurses listed some procedures that should not be done in the face of a scorpion-related accident, but that the community usually performs, such as putting garlic, alcohol, dressing, anti-inflammatory, coffee powder, seasoning, toothpaste, ointment, butter, earth, tea, vinegar, or squeezing, cutting, or sucking the sting and making a dressing.

[...] We see a lot of people squeezing the location of the sting [...] People make spices and put them on, which should not be done [...]. (E.14)

What shouldn't be done is to close, cover the place, put some kind of band [...]. (E.15)

Cutting, sucking, people have this habit [...]. (E.17)

People must not put garlic, alcohol, bandages, or toothpaste, ointments that they might have at home, they should take anti-inflammatory drugs that they also have at home [...]. (E.20)

Category 4 - Prevention without preventing - intersectoriality for environmental control only when it occurs

At the end of the questions, the health professionals mentioned what preventive measures they take in front of the community exposed to accidents involving scorpions and the way these actions are carried out. It was verified that the nurse activates the Zoonosis Control Center (Centro de Controle de Zoonoses, CCZ), Environmental Surveillance, Epidemiological Surveillance, the Ceatox, and the agency responsible for pest control; partners with the Agents to Combat Endemics (ACÉs) and with the Community Health Agents (CHAs) so that these professionals check the hygiene conditions around the homes

and carry out health education.

I think I would call the Ceatox [...]. (E.01)

I think calling on the competent body to do a work in the area. It would be a work of pest control [...]. (E.02)

[...] We get in touch with Epidemiological Surveillance to make visits to the homes and guide the community [...]. (E.06)

[...] One of the things we do is to contact the Zoonoses network. [...] it's the Zoonosis Center that does this work together with the endemic agents. (E.16)

Of the professionals interviewed, two said that they only carried out preventive measures in the community after receiving cases of accidents with scorpions in the health units where they work.

[...] I don't usually do it as a prevention, usually, only when it happens [...]. (E.12)

[...] There is no routine of passing on this information to the population. We only guide them when there are cases. (E.19)

DISCUSSION

Scorpion-related accidents occur throughout the national territory, and the increase in the annual incidence rate is related to factors such as the destruction of the natural habitat of these animals, the lack of infrastructure, and the disorderly growth of large urban centers, which results in precarious housing, lack of basic sanitation, and no garbage collection, which facilitates the presence and proliferation of these arthropods in the home environment⁽⁹⁾.

The severity of the accidents caused by scorpions varies according to the type and size of the animal, the location of the sting, the age of the victim, the amount of poison injected, and a time greater than three hours between sting and treatment⁽¹⁰⁾.

It is necessary to identify the type of scorpion that had stung the patient, since serious and fatal accidents are associated with the *T. serrulatus* species, while the poison from *T. stigmurus* has a lower degree of toxicity, causing mild and localized clinical manifestations in the victims^(1,10). It is also relevant to know if the victim captured the animal, since this capture contributes to the control of the scorpion population for the production of the anti-venom and for the identification of species not registered in the region^(1,4).

The determination of the date of the scorpion-related accident was described in several research studies^(1,11) that reinforce the importance of obtaining this information, as it is fundamental for the best prognosis of the accident with a scorpion, since the action of the toxin occurs in a few minutes after the sting, worsening the patient's clinical condition over time. It is crucial that the clinical condition is carefully analyzed, as the symptoms determine the classification of the case and may indicate whether serum is to be used or not⁽¹¹⁾.

A number of studies^(12,13) show that complications and possible sequelae are greater if the accident site is close to vital organs. In addition, it is important to know from the patients what behaviors they had at the sting site, given that actions such as placing herbs and coffee powder, among others, affect the treatment, increasing the possibility of infections.

It was found that no interviewee addressed the age of the victim, at the moment the victim arrives at the health unit. A worrying fact, since several research studies^(10,14) reveal

that the risk of morbidity and mortality is higher in children under 7 years old and in the elderly, as their immune systems are developing or declining, respectively.

Regarding the clinical condition of scorpion-related accidents, symptoms like local pain, edema, hyperemia, and paresthesia were mentioned by the nurses and, according to a number of studies^(13,15), they are classified as mild. Most of the accidents have this level of classification, and pain is the main clinical sign, being present in all the cases.

Most of the symptoms described correspond to mild cases, with moderate symptoms being mentioned by only two professionals. No serious symptoms were mentioned. This result may reflect the nurses' lack of knowledge on the subject, indicating a possible lack of training. It is essential that the nursing professional knows how to identify the local and systemic signs and symptoms, as well as the complications of scorpion-related accidents, in pre-hospital care. This favors the speed of the victims' arrival at the referral unit, where they will receive safe care⁽¹⁶⁾.

Regarding the care provided to the injured, it was observed that one of the conducts performed by the nurses is to make cold compresses at the sting site. According to research⁽¹⁷⁾, this procedure is contraindicated, since the use of compresses with ice or ice water accentuates pain, apart from being ineffective and increasing the risk of complications.

The treatment reported by the interviewees refers to mild cases and consists of pain control. For these cases, the use is indicated of systemic analgesics, such as dipyrone, and anesthetics without vasoconstrictor, such as lidocaine (2%), which should be injected into the sting site or in the form of a blockade⁽¹⁴⁾.

No professional indicated the correct treatment for moderate and severe cases, when the use of serology was expected. Even if this therapy is not provided by the FHS, it is important that the nursing professional is aware of this therapeutic resource.

A possible explanation for the lack of knowledge of these professionals about the care that should be offered to the injured person can be seen in a survey conducted in the city of Cuiabá-MT⁽¹⁸⁾, which shows that the health professionals have little knowledge about accidents caused by poisonous animals, a result of the lack of information received during their academic training and of the lack of qualifications for the professionals addressing the theme.

In view of the above, there is a need for effective planning of Permanent Health Education (PHE) activities in the FHUs, inserting nursing professionals in these actions, in order to prepare them for providing adequate care to the victims. Still, it is crucial that the diagnostic and treatment conducts of the injured have an updated standardization and are always available, since health professionals regularly meet victims of this type of accident⁽¹⁸⁾.

As for the inappropriate actions in the face of a scorpion-related accident, the nurses listed some behaviors from popular culture that can impair diagnosis and correct treatment. It is noteworthy that popular knowledge has its value; however, in some situations, it is wrong, as an example, to make a tourniquet in case of accidents with venomous animals, a procedure which worsens the proteolytic action of the poison, increasing the risk of infection⁽¹⁹⁾.

With regard to accident prevention measures, it was observed that the professionals do not have a standardized routine and call on other public agencies to carry out the actions. Among these, the CCZ was one of the requested municipal centers linked to the Health Secretariat. This body is responsible for the prevention and control of zoonosis and accidents caused by venomous and poisonous animals, of relevance to public health^(4,20).

In addition to the bodies that make up the health surveillance system, it is important to emphasize the role of other actors in the fight against scorpions, such as the CHAs and the ACEs, who carry out important work within the SUS. Both carry out their activities with the community in order to facilitate access to the health services and to prevent diseases^(5,21).

It is worth mentioning that it is not the competence of Epidemiological Surveillance, or of the Ceatox, to carry out preventive measures in loco against venomous animals. Epidemiological Surveillance has the following functions, among others: to collect and insert data in the health information systems; to analyze and interpret the processed data; and to disclose the result obtained. It is noteworthy that it is from the results that the competent bodies make direct action in combating harms. The Ceatox aims to provide information to the public about intoxications and poisonings through telephone assistance, and to provide care to exposed and/or intoxicated people, in order to reduce morbidity and mortality^(22,23).

It is known that pest control for the control of scorpions is contraindicated, due to the lack of studies that prove the effectiveness of the chemical treatment. What makes this method ineffective is that scorpions are able to remain with their lung stigmas closed for a long time, and they can also go months without moving. Furthermore, the application of chemicals in the habitats in which these animals live can cause their displacement, increasing the risk of accidents^(4,19).

It was possible to verify that only one nurse reported carrying out educational measures for the population, while the others transferred the responsibility for preventive actions to the health surveillance sectors, the CHAs and the ACEs.

In a survey carried out in the municipalities that make up the 10th Regional Health Region of Paraná, the nurses reported that they are unable to carry out health education due to the great curative demand, lack of staff in the team, bureaucratic work, and meetings at the Municipal Health Department, which take a lot of time from their daily routine⁽²⁴⁾.

According to reports by some professionals about preventive measures being carried out only after the occurrence of injuries, it is important to note that the FHU is a health model that operates in a comprehensive and continuous manner, prioritizing actions aimed at preventing, promoting, and recovering people's health, either in the basic health unit, at home, or through community mobilization⁽⁵⁾.

As such, treatment and cure are no longer the primary focus of care. Therefore, the nurses, inserted in this point of care, must perform their practices, according to the established principles and guidelines. The preventive measures should be carried out frequently and should not be initiated just because of a sudden increase in the number of cases.

In view of the above, it is worth mentioning that, in the scope of the health services, nurses are considered to be professionals with knowledge, attitudes, and skills aimed at promoting health care in a comprehensive and humanized way. In addition to creating bonds with the family and the community, which enables the exchange of knowledge, dialog, and health education⁽²⁵⁾.

It was observed that a professional mentioned notifying cases of accidents with scorpions. This result is different from what was stated in a survey carried out in the city of Palmas-TO, in which it is recommended that every accident caused by a venomous animal treated at health facilities should be notified, even if the patient has not been submitted to serotherapy. It also adds that the research form is a fundamental instrument to know the profile of the disease, to establish a patient care protocol, to program actions for the control of the animals, and to distribute serums, according to the local need⁽¹¹⁾.

Faced with a complex scenario, with the infrastructure difficulties inherent to a developing country, the importance of inter-sectoriality in combating scorpions must be highlighted, in which the municipality has the responsibility of implementing partnerships among the bodies involved in urban cleaning, surveillance in health, basic sanitation, and education, among others^(4,19).

The limitations of this study include the consideration of only one professional category linked to the health team of the basic units, and the qualitative methodological approach,

not aimed at measuring the specific knowledge of these professionals. Therefore, it is suggested that future publications with a quantitative approach be developed for nurses and other professionals in the health team.

CONCLUSION

The assessment of the knowledge and practices of the nursing professionals in PHC about scorpion-related accidents allowed us to identify that these professionals do not develop systematized care, but a punctual one, based on the signs and symptoms of the mild condition, and transfer the responsibility for handling the case to the reference service, due to ignorance of the conducts established for the victim. In addition, the vast majority do not carry out educational actions to prevent accidents and pass the responsibility on to the health surveillance system.

In view of the results, it is necessary to implement training programs that address this topic for the nursing professionals in order to improve the quality of care provided to the injured, as well as to conduct educational actions for the population, which reduce the incidence of accidents caused by scorpions.

Therefore, it is believed that this study can contribute to the implementation of strategies that expand the care of scorpion victims, in addition to providing greater visibility of the theme for the professionals working in PHC, sensitizing them to understand that the victims will access the nearest service and in which they maintain the bond, and that this service must be resolute in their demand, without neglecting assertive health actions, nor transferring full responsibility to the reference services.

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