

Knowledge of snake bite patients referred to Ahvaz Razi Hospital about pre- hospital care

Somayeh Ansari¹, Leila Ghasemzade Dehkorde², Neda Sayadi^{3*}

¹Lecturer, Midwifery Department, Reproductive Health Promotion Research center, Nursing & Midwifery School, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran, ²M s.c student, Midwifery Department, Nursing & Midwifery School, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran, ³Assistant Professor, Nursing Department, Nursing & Midwifery School, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

Correspondence: Neda Sayadi, Nursing & Midwifery School, Jundishapur University of Medical Sciences, Golestan, Ahvaz, Iran, E-mail: sayadi_neda@yahoo.com.

ABSTRACT

Background: Snakebite is one of the important medical emergencies and directs a great number of people to therapeutic centers. The aim of this study is Knowledge of snake bite patients referred to Ahvaz Razi Hospital in 2011 about pre- hospital care. **Methods:** This research is a descriptive- correlation study in which 120 snakebite patients were surveyed. The method for collecting the data is a researcher-made questionnaire. After collecting the data, they were entered the SPSS statistical software version 18. Then, the data were analyzed using the descriptive statistics. **Results:** The results of the present study showed that 96.7% of the bites happened in autumn. In addition, most patients referred to hospital 15 minutes after sting and their stay duration in hospital was three days. Besides, pain was the main complication of many patients. In most cases (80%) did not have knowledge about first aids to the injured person. In addition, in most cases (70%) they had very low knowledge about how to use a tourniquet. **Conclusion:** Considering the importance of the pre hospital cares for the accident- exposed patients, it seems necessary for the society to be educated adequately about this issue to prevent the adverse outcomes.

Keywords: Snakebite, pre hospital actions, patient

Introduction

Bites are among the poisonings, which are very prevalent. Insects and animals like scorpions and snakes cause the poisoning signs in the victims by entering their venom to the human body. Except the signs related to the direct effect of the venom on the body, severe allergic reactions may occur, which need special awareness for diagnosis, approach, and timely treatment ^[1]. Snakebite is one of the prevalent and potentially life- threatening problems and is one of the most prevalent health problems in many countries ^[2]. If we consider the global mortality rate induced by snakebite, 125000, and 342 persons

die annually and daily, respectively. The studies confirm that most snakebites are in tropical regions of Asia (15400- 57600 annual deaths) and Africa (3500- 32100 annual deaths) ^[3]. Exact statistic about snakebite in Iran is not available. But because snake bite is one of the important medical emergencies; directs a great number to therapeutic centers and considering that it can cause immediate death, exact and accurate knowledge about this issue and the essential primary therapeutic methods seems necessary ^[4]. On the other hand, there are few studies and articles about the knowledge level of the patients with these accidents about primary cares. As it is time consuming for the persons with snake bites to be transported to hospital and during this time the patients and their relatives may take actions that aggravate their conditions and cause irremediable complications, long- term stay at hospital, and next complications like delay in wound remission, and increase in therapeutic costs; therefore it seems necessary to evaluate the knowledge level of the patients about pre- hospital cares and the accurate way of actions to give correct training according to the achieved data for right actions if affliction reoccurs.

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Materials and Methods

This is a descriptive- correlation study. After obtaining the permission of the formal attendants, the researcher referred to the internal ward of Razi hospital and after one's introduction to the patient and explanation about the objective of the study, and taking the consent about tendency to participate in the study, and after signing An informed consent form, the questionnaire was filled by interviewing method if the patient had the inclusion criteria. In this study, the tools for collecting the data were a questionnaire of demographic data, including nine questions and a researcher-made questionnaire related to the knowledge level of the patients about the pre- hospital cares consisting of 12 questions. The ranking method for the questions of the questionnaire was based on a five- point Likert scale. Very much, much, moderate, low, very low levels of knowledge and I do not know had the grades five, four, three, two, one and zero, respectively. The maximum grade for this questionnaire is 60. Grades 0-20, 21- 40, and 41- 60 respectively show weak, moderate, and good knowledge. Content validity was used to determine the validity of the researcher-made questionnaire. As the mentioned questionnaire was given to 10 faculty members of the School of Nursing and Midwifery and it was used after implanting the corrective opinions. To determine the reliability, internal consistency method was used, which was measured equal to 0.7 with Cronbach's alpha. Pilot sampling was used to measure the

sample size. The sample size was evaluated equal to 120 according to of a statistics teacher' opinion.

Results

The results of the present study showed that 96.7% of the bites happen in fall. In addition, most patients referred to hospital 15 minutes after sting and their stay duration in hospital was three days. In addition, pain was the main complication of many patients. Other demographic data are shown in table 1. Moreover, the knowledge level of the patients about pre hospital actions is mentioned in table 2.

Table 1: Demographic data of the snakebite patients

| Demographic indexes | | Frequency | Percentage |
|---------------------|---------------|-----------|------------|
| Sex | Female | 40 | 33.3 |
| | Male | 80 | 66.7 |
| Living place | City | 20 | 16.6 |
| | Village | 100 | 83.4 |
| Accident site | Home | 40 | 33.3 |
| | Out of home | 80 | 66.7 |
| Accident time | Morning | 30 | 25 |
| | Evening | 55 | 45.8 |
| | Night | 35 | 29.2 |
| History of bite | Has | 30 | 25 |
| | Doesn't have | 90 | 75 |
| | Illiterate | 10 | 8.3 |
| Literacy level | Elementary | 50 | 41.5 |
| | Secondary | 20 | 16.6 |
| | Diploma | 10 | 8.3 |
| | Diploma above | 30 | 24.9 |

Table 2: The data about the knowledge level of the pre hospital cares in snakebite patients

| The evaluated index | I completely agree | | I agree | | I relatively agree | | I disagree | | I completely disagree | | I do not know | |
|--|--------------------|------------|-----------|------------|--------------------|------------|------------|------------|-----------------------|------------|---------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| primary- aid should be done for injured person | 10 | 8.3 | 60 | 49.9 | 0 | 0 | 10 | 8.3 | 0 | 0 | 40 | 33.2 |
| should be as relaxed as possible whit a injured person | 15 | 12.5 | 50 | 41.5 | 10 | 8.3 | 5 | 4.1 | 0 | 0 | 35 | 29.1 |
| the best action is to keep the injured organ still for injured person | 5 | 4.1 | 0 | 0 | 5 | 4.1 | 15 | 12.3 | 15 | 12.3 | 80 | 66.4 |
| the injured organ should be kept below the heart level. | 5 | 4.1 | 50 | 38 | 5 | 4.1 | 15 | 12.3 | 10 | 8.3 | 35 | 29.1 |
| one's jewelry should be removed for injured person | 5 | 4.1 | 80 | 66.6 | 0 | 0 | 20 | 16.6 | 0 | 0 | 15 | 12.3 |
| should be transported to hospital, immediately injured person | 5 | 4.1 | 60 | 50 | 0 | 0 | 20 | 16.6 | 0 | 0 | 35 | 29.1 |
| ice should not be used on the sting site for a long time for injured person | 100 | 83.3 | 20 | 16.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| razor blade should not be used at the sting site. | 0 | 0 | 30 | 25 | 5 | 4.1 | 50 | 41.6 | 0 | 0 | 35 | 29.1 |
| the bite site should not be sucked. | 6 | 3.3 | 92 | 40 | 6 | 3.3 | 66 | 36.7 | 6 | 3.3 | 24 | 13.3 |
| tourniquet should not be used except at special circumstances for injured person | 10 | 8.3 | 90 | 75 | 5 | 4.1 | 10 | 8.3 | 5 | 4.1 | 0 | 0 |

Discussion

Snakebite is one of the important medical emergencies and directs a great number of persons to therapeutic centers, annually. Considering this issue that snakebite can cause immediate death of the patient, accurate and exact knowledge about this issue and essential primary therapeutic methods seem necessary^[4]. The results of the present study showed that the ratio of the bites outside the home (66.7%) was nearly two times more than the bites inside the home (33.3%). Pandey *et al.*'s study showed that most bites had occurred while working out (37%); In addition, 14% of bites happened inside home and 14% occurred during sleep^[5]. Sharma *et al.*'s study in Southeast Nepal showed that 47% and 18% of the bites were while working and inside home, respectively^[6], which they are similar to the results of the present study. In addition, the mean time for the transport to hospital was 15 minutes in the present study. Pandey *et al.*'s study stated that the mean time for transport was 61.51 ± 33.55 , which is different from the results of our study. This difference may be due to that the snakebite patients in Pandey *et al.*'s study had referred to traditional centers to receive first- aids before referring to hospital. However, in the present study, the patients referred to hospital, directly. Over all, the researches show that if the time for transporting the patient to hospital is more than six hours, the death ratio will increase^[5]. In addition, a significant relation was not found between the literacy levels of the patients and having the history of the sting with the level of their knowledge about pre hospital cares (P- value > 0.05). On the other hand, the standard pre hospital cares for a person experiencing snakebite include the following issues: Relaxing the injured person, moving the person away from the accident site, doing first aids correctly, immobilizing the injured organ

Keeping the injured organ below the heart level, removing the jewelries, using tourniquet at special circumstances^[7]

The results of the present study showed that the surveyed persons had knowledge about the above actions, primarily, but in most cases (80%) did not have knowledge about first-aids to the injured person. In addition, in most cases (70%) they had very low knowledge about how to use a tourniquet, which this issue increases the possibility of causing damage to the injured organ

Conclusion

So, considering the importance of the pre hospital cares for the accident- exposed patients, it seems necessary for the society to be educated adequately about this issue to prevent the adverse outcomes (like amputation of an organ because the incorrect use of tourniquet, death of the injured person due to lack of

knowledge about first aids) induced by the lack of knowledge of the injured people about these actions as possible.

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Implication for health policy/ practice/

research/ medical education: The purpose of this study is to investigate Knowledge of snake bite patients referred to Ahvaz Razi Hospital about pre- hospital care, Iran.

Authors' Contributions: All authors have participated equally in this work

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