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RESEARCH ARTICLE

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EPIDEMIOLOGICAL CHARACTERISTICS OF PREGNANT PATIENTS ACCIDENTED BY FISH IN THE BRAZILIAN AMAZON

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ABSTRACT

Ichthysm is defined as accidents caused by fish, being considered a public health problem, with low lethality rates, but with high morbidity among humans. Affecting people who go to beaches, streams or fish for animals such as riverside dwellers. However, in the literature there is no record of ichthysm in pregnant women. Therefore, we present two cases of pregnant women with stroke. Who were injured by freshwater stingrays. The age group of the pregnant women was between 25 and 40 years old. Both had brown skin color, lived in the urban area and suffered the accident in Alter do Chão. Both had time equivalent to an hour after the accident. The anatomical location, patient I had the accident recorded on her toe and patient II on her foot. Regarding clinical aspects, patients I and II had local clinical manifestations, and only patient I also had edema. After treatment, patients I and II had a reduction in clinical symptoms and evolution to cure.

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INTRODUCTION

Ichthysm is defined as accidents caused by fish, being considered a public health problem, with low lethality rates, but with high morbidity among humans, the main causes being trauma and cases of poisoning (Haddad Junior *et al.*, 2014). In this context, the rates of accidents caused by ichthysm in the Brazilian territory are considered a neglected public health problem, and the Amazon region has the highest numbers of accidents by fish, specifically in the North of Brazil, it appears that the poisoning from stings of stingrays is the most frequent (Monteiro *et al.*, 2015). People who go to beaches, streams or work fishing for animals, such as riverine people, may have their health at risk due to accidents caused by fish of different species, and in some cases these can be serious and can lead to death, being this type of accident common in the Amazon territory (Carmo *et al.*, 2018).

Accidents caused by freshwater rays in artisanal fishermen are frequent, with the majority occurring in the male population (Carvalho *et al.*, 2019), as fishing is an activity more commonly performed by men than by women. However, contradicting what was expected, there are reports of accidents with the female population. This study reports the first reports of fish accidents in pregnant women. Based on this information, this study aimed to report the epidemiological aspects of pregnant patients injured by fish in the Amazon region.

CASE REPORT

A descriptive study was carried out through an epidemiological retrospective of pregnant women injured by fish in the municipalities that make up the 9th Regional Health Center (CRS) of the State Health Department of Pará (SESPA), namely:

Santarém, Alenquer, Almerim, Aveiro, Belterra, Curuá, Faro, Itaituba, Juruti, Jacareacanga, Mojuí dos Campos, Monte Alegre, Novo Progresso, Óbidos, Oriximiná, Prainha, Placas, Rurópolis, Terra Santa and Trairão; located in the Lower Amazon mesoregion, West Pará, in the Eastern Amazon (Figure 1).

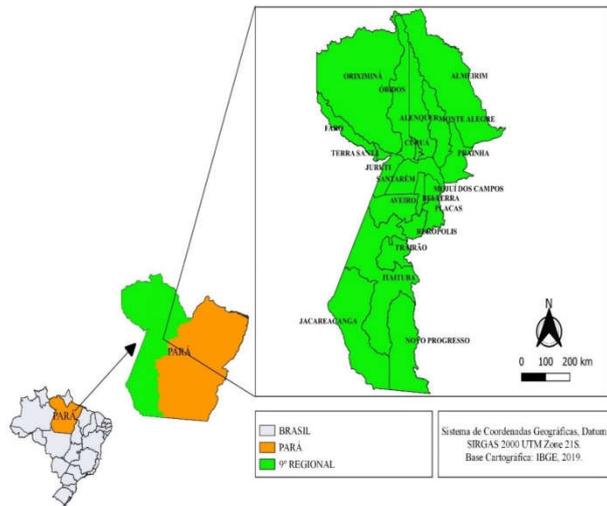


Figure 1. Location of the studied area

Data were collected from the Individual Notification Form (FIN) which is filled out by the healthcare units for each patient when there is suspicion, health problem and mandatory notification or notification of national, state or municipal interest. Case analyzes were performed using the number of reported cases of pregnant women injured by fish, considering the variables: color/race (white, black, yellow, brown or indigenous), anatomical location (hand, arm and forearm, head, chest, thigh, shin and feet), time to service (0 - 1h, 1 - 3h, 3 - 6h, 6 - 12h, 12 - 24h, 24 or +), age range (18 to 24 years, 25 to 40 years, 41 to 56 years old and over 60 years old), place of accident, area of residence (urban, rural or peri-urban). To assess the clinical aspects, the analysis of local clinical manifestation (LCML) was used and whether the patients were cured or died. After analyzing the individual notification forms, two pregnant patients were found, hereinafter defined as patient I and II, who were injured by freshwater stingrays. Thus, when analyzing the age group of the pregnant women, it was found that patient I was 34 years old and patient II 28 years old, who are in the 25 to 40 age range.

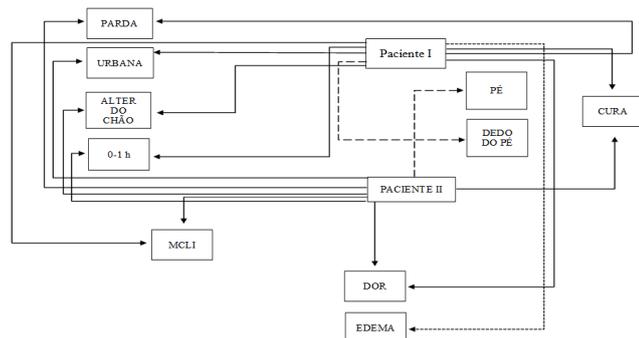


Figure 2. Relation between the variables evaluated in the pregnant women's charts, in which the undotted line indicates information for both patients (—), the larger dotted line indicates different information for each patient (----) and the smaller dotted line shows information exclusive for one of the patients (...). MCLI = Local Clinical Manifestation

As for skin color, it was possible to evidence that both patients were brown. Regarding the location of the accident, both are residents of the urban residence area and suffered the accident in Alter do Chão, one of the administrative districts of the municipality of Santarém. As for the time until the service, both had time equivalent to one hour after the accident. As for the anatomical location, patient I had the accident recorded on her toe and patient II on her foot.

Regarding clinical aspects, patients I and II had local clinical manifestations, with pain at the sting site being observed in both, and only patient I also presented edema. After the treatment, both patients I and II showed a reduction in clinical symptoms and progressed to cure.

DISCUSSION

In this study, pregnant women were injured by water stingrays. This family of stingrays that live in these environments tends to cause poisoning in their prey through the perforation with their spines in the caudal part of the tail, whether they are animals or humans, with stingrays being one of the main causes of serious injuries in South America(Haddad Junior *et al.*, 2004). In addition, among aquatic animals, stingrays have also been considered one of the main species causing accidents(Reckziegel *et al.*, 2015), with accidents being recorded in people who go to beaches and river areas through studies in the state of Pará, described by Silva *et al.* (2018). Regarding age, it was found that the pregnant women were aged between 28 and 34 years old. In Brazil, this age group is the most pregnant(Fernandes *et al.*, 2019). In addition, they tend to leave their homes more often, mainly looking for leisure areas, such as beaches, lakes, rivers and spas on weekends (Julio *et al.*, 2011), which is a common practice in the study region. This fact was evidenced in the present study, which signaled that both patients were on the beach of Alter do Chão, considered one of the most visited tourist spots in the western region of Pará, this being the location of the accident. Corroborating these results, Vidal *et al.* (2013) indicated that stingray accidents generally occur in patients aged over 20 years old. In this study, it was observed that pregnant women received prompt medical care. This fact becomes possible, as a result of the accident site having an emergency hospital care, maximizing the chances of worsening the patient's clinical condition. Delay in care can increase the levels of self-infection in patients, making the case more serious. Furthermore, more severe complications are diagnosed in patients who tend to receive medical care more than 24 hours after the accident(Pardal, 2002). The lesion site evidenced in the pregnant women in this study was in the lower limbs, specifically, in the toes and feet. This is due to the fact that stingrays have benthic habits and stay in the mud, consequently bathers, for example, end up stepping on these animals. These findings are consistent with those observed in the studies by Pardal (2002), Julio *et al.*(2011) and Vidal *et al.*(2013). Among the clinical symptoms observed, the local clinical manifestations present in both patients stand out, as well as intense pain. However, edema formation was diagnosed in only one of the patients. Similar findings in non-pregnant patients were described by Holanda *et al.* (2019).

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