








Clinical and epidemiological profile of accidents caused by Lepidoptera, of the *Lonomia* genus, assisted at CIATox/PR

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Abstract

Introduction: Lonomic accidents are of public health interest and the evaluation of their characteristics can contribute to the improvement of their attention and prevention. This study analyzed the epidemiological profile of Lonomic accidents in Paraná. **Methods:** This study is a retrospective secondary-based study carried out at the Center of Toxicologic Information and Assistance of Paraná (CIATox/PR), in Curitiba, from 2015 to 2019. Descriptive statistical analyses were performed using the Chi-square test ($p < 0.05$). **Results:** The sample consisted of 84 accidents with *Lonomia* sp., showing greater occurrences among adults (45.2%) of the male gender (59.5%) and injuries on the upper limbs (84.5%). Contact with the worm occurred mainly in the patient's usual residence (72.6%), in the rural area (64.27%), and in Paraná's West macro-region (38.1%). Most cases were registered in the summer (71.4%), followed by spring and autumn (14.3%), and no accidents were registered in winter. The most frequent clinical manifestations were local pain (62.3%), ecchymosis (34.1%), erythema (34.1%), swelling and burning (17.6% each). The mild classification showed a reduction between the initial and the final phase of the process, as opposed to moderate and severe classifications, which showed a significant increase in the percentage ($p = 0,006$). The INR was incoagulable in 16.7% of patients. Two cases showed progressive worsening, one of them evolved into a hemorrhagic stroke and one death. **Discussion:** The greater number of incidents registered in the rural area, both in the patients' usual residence and work environment, can be due to the greater contact with the caterpillar's natural habits, such as fruit trees and large monocultures. This also explains the larger number of registered incidents in the western macro-region. The increased deforestation, the construction of public parks, and the planting of fruit trees in the urban area are hypotheses for the increase of reported cases in this area. When comparing initial and final staging, it was noticed that discrete clinical manifestations could have an unfavorable evolution. The INR request proved to be of great importance in the management, diagnosis and change of staging of the patient. **Conclusion:** The epidemiological profile was of *Lonomia* sp. accidents happening in summer in adult males in the rural area with moderate severity. These findings reveal the importance of early diagnosis and treatment in view of these accidents' different possibilities of clinical evolution. It is essential to encourage strategies for identifying the caterpillar, reporting cases, and implementing permanent preventive measures to reduce risks and complications.

Keywords: Lepidoptera, Accidents, Poisonous animals, Epidemiology, Poison control centers.

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INTRODUCTION

Lepidoptera is a group of insects represented by butterflies and moths from the families Megalopygidae, Saturniidae, Arctiidae, and Limacodidae, which exhibit scaly wings in the adult stage and worm-like bodies in the larval stage. They have medical importance because, in their larval stage, the bristles of *Lonomia* sp. release toxins when touched with the potential to cause lesions of varying intensity, which can be fatal. The larval forms are responsible for accidents called erucism, and the adults for lepidopterism. Clinical manifestations of poisoning include urticaria, severe pain, phalangeal peri-arthritis and hemorrhagic syndrome, which is a severe and sometimes irreversible condition¹⁻⁴.

In the Brazilian State of Paraná, several cases of accidents by caterpillars of the *Lonomia* genus, also called *taturana*, "fireworm" or *oruga* have been recorded. These moth caterpillars are more frequent on trunks of wild trees (*aroeira*, cedar, ipe, wild peach, *yerba mate*, *caúna*, *congonha*, *Capitão do Mato*, *ariticum*) or fruit trees (peach, plum, avocado, guava, apple, pear) and are related to agricultural and gardening activities. Its toxin has hemorrhagic activity and, if left untreated, can lead to patient death⁵.

Lonomia sp. is about six to seven centimeters long and its color varies between different shades, being green, brown, yellowish, and with dark brown bands. The evolution to the adult stage (moth) occurs after three to six months of larval life and this transformation takes an average of ten weeks. Its body is covered in bristles that contain toxins, substances with pro-coagulant and fibrinolytic active principles, which quickly consume clotting factors through the activation of prothrombin, degrading fibrinogen, and fibrin. Its venom also contains several lipocalins, including the prothrombin activator protein *Lonomia obliqua* (Lopap, acronym for *Lonomia obliqua* prothrombin activator protease), which is involved in increasing the expression of adhesion molecules on surface cells⁶.

The size or larval stage of the caterpillar, its quantity, the affected anatomical extent, the intensity and type of contact (touch or pressure/crushing), as well as the individual characteristics of each patient are factors that influence the clinical and laboratory repercussions of the accident and the evolution in a localized or disseminated way. According to CRUZ⁷, in *L. obliqua* envenomation,

consumption coagulopathy, depletion of certain coagulation factors and inhibitors, and secondary fibrinolysis occur, suggesting a special form of disseminated intravascular coagulation.

Contact with caterpillar bristles causes pain, burning, erythema, heat, malaise, headache, nausea, and vomiting. After 8 to 72 hours, hemorrhagic manifestations may appear, such as body spots, epistaxis, gingival bleeding, hematuria, and hemorrhage in recent wounds, which may progress to hemorrhagic syndrome with severe clinical manifestations, brain and kidney complications and death⁸⁻¹⁰.

Victims of accidents by venomous lepidopterans, especially by *Lonomia* sp., should be immediately referred to Health Units, where they will be treated according to symptoms and severity. For treatment, laboratory tests are performed, investigation of blood clotting, and, if necessary, antilonomic serum is used, and health professionals should contact the Center of Toxicologic Information and Assistance (CIATox) to assist in the diagnosis, treatment, and registration of the accident.

METHODOLOGICAL PROCEDURES

This is a descriptive, exploratory, and retrospective secondary-based study carried out at Center of Toxicologic Information and Assistance of Paraná (*Centro de Informação e Assistência Toxicológica do Paraná* - CIATox/PR) covering the services marked as "accidents by lepidopterans of the *Lonomia* genus" in the DATATOX system, from January 2015 to December 2019.

DATATOX-2, used at CIATox/PR, is a computerized system of medical records for recording, monitoring, storing, processing, and retrieving data, which was designed to standardize data in order to facilitate the comparison of clinical-epidemiological studies, evaluation of product safety (toxic and pharmacovigilance) and national assessment of the impact of toxic agents on the health of the population¹¹.

The sample included all cases of accidents caused by *Lonomia* sp. attended at CIATox/PR, in the period of interest of the study. Poisonings, accidents, and intoxications by other causes and accidents by lepidopterans with incomplete records were excluded.

The following variables were analyzed: gender, age, anatomical area of contact with the caterpillar, time of occurrence, season, place and

environment, health macro-region of initial care, clinical manifestations, accident classification, INR, and outcome.

The age range of cases was grouped into children (< 20 years), adults (20 to 59 years), and elderly (> 60 years). The accident sites were divided into rural and urban areas, and analyzed regarding the external/public environment, workplace, area of the patient's usual residence (fixed residence), and non-habitual residence. The causal agent (caterpillar) was identified by its morphology through photographic documentation and/or laboratory epidemiological clinical correlation.

To identify the municipality that contacted CIATox/PR for the initial care provided to the patient, the division into macro-regional health was adopted (east, general fields, south center, northwest, and west), as used by the Public Ministry of Paraná⁵.

The staging of accidents by *Lonomia* sp. was classified as mild, moderate, or severe, according to the Ministry of Health (Chart 1), based on the evaluation of the initial clinical and laboratory manifestations (INR) to guide the conduct at the first moment, with the administration of ten ampoules of antilonomic serum (SALon) being indicated for severe cases, five ampoules for moderate cases and observation associated with symptomatic drugs for mild cases.

Chart 1

Classification of accidents by *Lonomia* sp.

Classification	Clinical and laboratory manifestations (INR)
Mild	Patient with local poisoning and without clotting or bleeding alterations up to 48 hours after the accident, confirmed with the identification of the agent.
Moderate	Patient with local poisoning, coagulation alteration only and/or hemorrhagic manifestations in the skin and/or mucous membranes*, hematuria, and no hemodynamic alteration**.
Severe	Patient with coagulation disorders, hemorrhagic manifestations in viscera***, and with hemodynamic changes and/or failure of multiple organs or systems.

Source: *Manual de diagnóstico e tratamento de acidentes por animais peçonhentos do Ministério da Saúde (2001)*

Notes: *gingival bleeding, ecchymosis, hematoma; **hypotension, tachycardia or shock; ***hematemesis, hypermenorrhagia, pulmonary bleeding, intracranial hemorrhage.

INR = International Normalized Ratio.

The INR (International Normalized Ratio) is the ratio of the prothrombin time (PT), using thromboplastins, and the mean of PT values of normal fresh plasma elevated to the ISI (International Sensitivity Index), in order to reduce the variation in the result of PT between different clinical laboratories. Laboratory monitoring of anticoagulants is the primary utility of the INR. This relationship was interpreted considering that patients with alterations in the coagulogram are injured by *Lonomia* sp: normal (< 1.5), mild alteration (1.5-2), moderate alteration (2.01-3), severe alteration (> 3), and incoagulable.

The project was approved by the Research Ethics Committee of Universidade Positivo (CEP UP CAAE: 31017820.1.3001.5225) and by the Paraná State Health Department (CEP SESA/HTCAAE1 31017820.1.3001.5225), guided by Resolution 466/2012 of the National Council of Health (CNS), guaranteeing the maintenance of secrecy, respect, and confidentiality.

Data were entered and analyzed in a Microsoft Excel spreadsheet. The results were analyzed using descriptive statistics to characterize the sample and the chi-square test was used for the comparative analysis, considering $p < 0.05$ as a level of statistical significance.

RESULTS

The research, in the analyzed period, has a sample of 84 occurrences of *Lonomia* sp. of a total of 1357 certified cases of accidents by lepidopterans and registered at CIATox/PR. Of these, the male sex is predominant, comprising 59.5% of the cases. Table 1 shows the number of accidents divided into age groups related to the change in INR. In the adult age group, a greater number of cases are present (45.2%). On the other hand, the elderly corresponds to 20.2% of the cases. Regarding the laboratory alteration of INR, a higher percentage was verified with classification 1 (Group 1 of the INR). Table 1 also shows that there was no significant difference in the relationship between age groups and the change in INR caused by accident ($p = 0.175$).

The upper limb was the site with the highest frequency of accidents (84.5%), followed by the lower limbs (11.9%) and trunk (2.4%). The head region had only one occurrence (1.2%). However,

Table 1

Change in the INR (International Normalized Ratio) caused by *Lonomia* sp. accident, according to patient age group (N = 84 cases)

INR	Patient age groups		
	Adult n (%)	Elderly n (%)	Children and youth (%)
1	14 (36,8)	3 (17,6)	10 (34,5)
2	7 (18,4)	3 (17,6)	5 (17,2)
3	8 (21,1)	1 (5,9)	5 (17,2)
4	3 (7,9)	4 (23,5)	7 (24,1)
Incoagulable	6 (15,8)	6 (35,3)	2 (6,9)
Total:	38 (45,2)	17 (20,2)	29 (34,5)

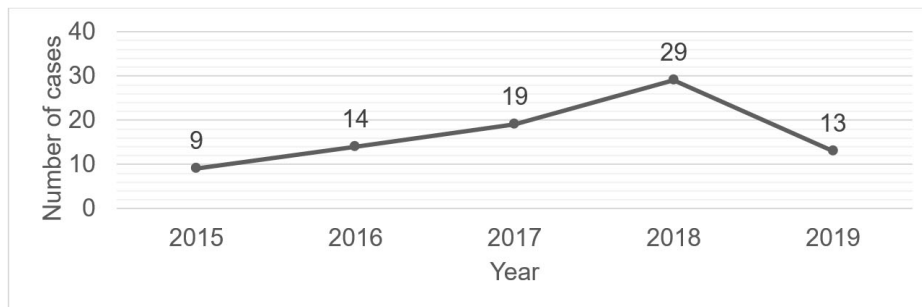
Source: Research data.

no significant correlation was observed between the lesion site and the INR ($p=0.234$). In addition, there is no statistically significant change between the injury site and the final classification ($p=0.671$).

During the period studied, an increase in the number of cases was observed between 2015 and 2018, with the number decreasing in 2019 (Graph 1).

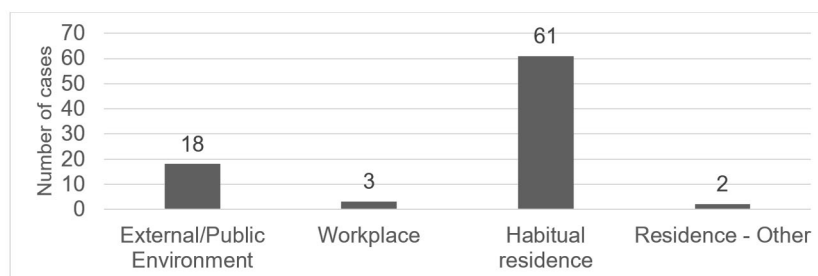
Graph 2 shows the distribution regarding the place of exposure, which corresponds to the

environment in which the accident occurred, with most accidents occurring in the area of the patient’s usual residence (72.6%), followed by external or public environment (21.4%), workplace (3.5%), and finally the patient’s non-habitual residence (2.3%). Regarding the exposure area, the rural area contributed to 64.27% of the cases, while the urban area corresponded to 35.71% of the cases.



Graph 1: Temporal distribution of accidents caused by *Lonomia* sp. reported in Paraná between 2015-2019 (N = 84 cases).

Source: Research data.



Graph 2: Environment where the accident caused by *Lonomia* sp. took place in Paraná between 2015-2019 (N = 84 cases).

Source: Research data.

Image 1 presents the six macro-regions of the state, containing the city with the highest number of accidents in each macro-region. In the western region, a higher frequency of cases is observed, with 38.1%, whereas the northern region had no reported cases in the evaluated period. Regarding the season, the highest number of accidents occurred in the summer, with 71.4% of cases, followed by spring and autumn, both with 14.3%, and in winter, there were no accidents.

Among the various clinical manifestations recorded (Table 2), local pain (62.4%), ecchymosis (34.1%), erythema/hyperemia (34.1%), edema (17.6%) and burning/burning (17.6%) are the most frequent. Some more severe manifestations stand out, such as that of a patient who had a hemorrhagic cerebrovascular accident and another who evolved with acute renal failure and, later, death. The patient who died was 77 years old, male, had the accident on his right hand, and required ten ampoules of



Image 1: Distribution of cases of *Lonomia* sp. in the six health macro-regions of Paraná, highlighting the city with the highest notification between 2015-2019 (N = 84 cases).

Source: Research data.

Note: Map adapted from the Public Ministry of Paraná.

Table 2

Most common clinical manifestations in accidents caused by *Lonomia* sp. in Paraná between 2015-2019 (N = 84 cases).

Clinical manifestations	n	%
Local pain	53	62.40%
Ecchymosis	29	34.10%
Erythema/Hyperemia	29	34.10%
Stinging/Burning	15	17.60%
Edema	15	17.60%
Macroscopic hematuria	14	16.50%
Bruises	7	8.20%
Itching	5	5.90%
Gingival bleeding	4	4.70%
Paresthesia	4	4.70%
Petechiae	2	2.40%
Hematemesis	2	2.40%
Epistaxis	1	1.20%
Local abrasions	1	1.20%
Vaginal bleeding	1	1.20%
Hemorrhagic stroke	1	1.20%
Acute renal failure	1	1.20%

Source: Research data.

antilonomic serum. Treatment depends on the severity of the patient, and in the cases analyzed in Paraná, 27.4% did not need antilonomic serum, 56% used five ampoules, and 16.7% of patients needed ten ampoules of serum.

The study also points out that 48 patients did not have a photo of the lesion registered, and the other 36 patients' files presented photo records of the lesion. In addition, 49 patients had a photo of the caterpillar in the records, unlike the other 35 occurrences that were included by epidemiology, by the clinic, and because they did not present the exclusion criteria described above.

The research showed a greater number of moderate cases in the final classification related to mild and severe cases (52.9% in women and 60% in men); however, there was no statistically significant difference in the final classification between men and women. In addition, regarding the time taken to seek care, the median for females was 19 hours, while for males, it was 16 hours. Regarding the final classification concerning age, in the three age groups, there was a predominance of moderate cases (55.3% for adults, 52.9% for the elderly, and 62.1% for children and adolescents); however, there was no significant difference in the analysis between ages ($p=0.43$).

Table 3 shows that both in the initial and final classification, the median time elapsed is greater in severe than in mild cases ($p=0.035$ in the initial classification and $p=0.003$ in the final classification). In addition, the time elapsed in moderate cases regarding mild cases also has a more expressive

median ($p<0.0001$ in the initial classification and $p=0.019$ in the final).

Table 4 shows the relationship between the initial and final classification of the accident ($p=0.006$). The initial classification had a greater number of patients with mild symptoms, while in the final classification, a greater number of severe patients was observed due to the evolution of the clinical and laboratory conditions (INR).

Of the 84 records analyzed, only two were recorded as an accident with multiple caterpillars. According to the data available, the patients were initially classified as mild and maintained the classification at the end of the follow-up without significant changes in the INR that could increase the risk classification. As a clinical manifestation, both presented local pain and erythema, without systemic signs and symptoms.

DISCUSSION

The sample revealed that accidents by lepidopterans of the *Lonomia* sp. genus were more prevalent in male adults coming from rural area, probably due to the higher percentage of men working in the field in the state of Paraná¹². The involvement of the upper limbs can be explained by the greater possibility of the hands and forearms having contact with the caterpillars.

The temporal distribution of cases shows that after the peak of accidents recorded in 2018, there was a decrease in notifications in 2019. Possible explanations would be geoclimatic fluctuations,

Table 3

Initial classification and final classification concerning the elapsed time of the accident with *Lonomia* sp. (N = 84 cases).

Elapsed time	Initial rating			Final rating		
	Mild	Moderate	Severe	Mild	Moderate	Severe
Median	5	25,5	48	5	19	48
Interquartile range	03 -19	18,5 - 90	8,2 - 132	02 - 19	05 - 48	22,5 - 108

Source: Research data.

Table 4

Relationship between the initial and final classification of the accident with *Lonomia* sp. (N = 84 cases).

	Initial rating n (%)	Final rating n (%)
Severe	8 (9.5)	13 (15.5)
Mild	43 (51.2)	23 (27.4)
Moderate	33 (39.3)	48 (57.1)

Source: Research data.

public health policies, and the dissemination of accidents in the media, alerting the population about their risks.

The fact that the accident occurred in the countryside, or the patient's habitual residence⁷ or the rural work environment, is explained by the greater contact with nature in activities such as gardening, subsistence agriculture, and plantations, these means being the natural habitat of venomous caterpillars, such as *Lonomia* sp.⁴

In the present sample, the finding of 64.28% of the cases in the rural area remained proportional to the study by Garcia⁹ in 2002. However, Oliveira⁹ points out that for each case reported in the urban area, another four occur in the rural area. An increase in cases is inferred in the urban area due to the increasing deforestation, which has reduced the natural habitat of *Lonomia* sp., in addition to the expansion of cities. On the other hand, the proliferation of caterpillars in urban areas may be the result of encouraging the planting of fruit trees and the construction of public parks, increasing the contact of the urban population with the vegetation where these caterpillars are found.

Still, it is important to discuss that although *Lonomia* sp. may be found all over Brazil⁸, most recorded cases of caterpillar accidents are in the southern region¹³. In Paraná, specifically, the health macro-region with the highest number of cases was the western region, with 38.1%, followed by the south-central region (33.3%). According to Moraes¹⁴, the predominant crops in the regions with the highest occurrence of accidents by *Lonomia* sp. are monocultures, with emphasis on soybean, and small fruit-growing properties in orchards (avocado, guava, peach, fig, pear, acerola) close to homes¹⁵. Cultivations in large tracts of land facilitate the appearance of pests that feed on these plants, together with the increased use of pesticides to control these pests, also unbalancing the natural enemies of caterpillars (Diptera, Tachinidae and Hymenoptera, braconids, nematodes, Pentatomidae)¹⁴. Another important aspect is the issue of deforestation since, according to studies from the last century, the caterpillars fed preferentially on cedar and mastic and, with their decrease, they began to feed on trees grown in orchards, leading to greater contact with humans.

The highest occurrence of these accidents in the summer was expected and can be attributed

to climatic factors such as high temperature and increased rainfall that occur in the hottest seasons, which are directly related to the proliferation of larvae¹⁶. The human behavioral factor probably contributed to the greater outdoor exposure and interaction with nature in this season, whether for leisure, sport, recreation in parks and gardens, or seasonal agricultural occupational activities.

In addition, in summer, people wear lighter and shorter clothes, leaving a greater area of skin susceptible to accidents. The last work published concerning accidents with *Lonomia* sp. in Paraná by Garcia⁹ presents the analysis of study data from 1989 and 2001, and shows similar results: a greater number of cases in summer and only one case registered in winter⁹. In the state of Santa Catarina, between 2015 and 2018, a higher incidence of accidents was also detected in December and January, in men (65.9%), in rural areas (72.3%), accidentally (82.7%), affecting upper limbs (76.8%), with hemorrhagic manifestations (23.9%), more frequent hematomas (32.5%) and macroscopic hematuria (26.9%)⁷.

Considering the characteristics of *Lonomia* sp., it is possible to correlate the data obtained in the present research more clearly and understand the evolution of the clinical condition of the 84 patients analyzed, of which 15.5% were classified as severe accidents or that progressed to severe, requiring the administration of ten ampoules of serum. The elderly patients were responsible for the highest percentage of severe final staging, with 29.4%. It is noted that most patients in the study had a mild initial classification (51.2%), as this changes in the final classification, where 57.1% of the cases were considered moderate and 15.5% severe (in the initial classification, only 9.5% of the cases were considered severe). This fact demonstrates that lesions considered mild might have an unfavorable evolution, requiring treatment and attention by the health professional responsible for the case.

Local pain (62.4%) and ecchymosis (34.1%) were frequent signs and symptoms and denote that patients who arrive only with local cutaneous manifestations are not always mild cases, as in many of these patients a significant change in INR was identified, making it evolve in the severity classification. In the initial consultations, the harmful mechanisms of coagulation have not yet been triggered. Proof of this is the 5% increase in

the percentage of severe final staging compared to the initial classification. In the analysis of coagulation and fibrinolysis parameters of patients injured by *Lonomia* sp., one can observe the presence of consumption coagulopathy (without thrombocytopenia) and fibrinolysis secondary to fibrin formation¹⁷, demonstrating the relationship between severity and INR changes.

It is noteworthy that 16.5% of the cases evolved with macroscopic hematuria and that bleeding in the gums, nose, and urine are worrying signs. In addition, recently healed wounds can bleed again within three days after the accident. In the data analysis, one patient evolved with hemorrhagic stroke, and another patient had an acute renal failure (ARI) as a consequence, which evolved to death. In the series of 396 cases from Santa Catarina, five (1.3%) patients developed acute renal failure attributed to the direct action of the venom and/or hemodynamic alterations resulting from blood loss, and of these, 10% progressed to chronic renal failure; in the same study, two elderly people (79 and 60 years old) presented respectively hemorrhagic stroke and acute renal failure, and the latter died⁷.

These findings alert us to the importance of paying attention to the tree trunks and grass around them, observing if the leaves of the trees are gnawed, wearing long-sleeved shirts and pants in rural activities or contact with nature, as well as gloves and boots while entering woods or plantations¹⁸. These considerations are valid for tourists or residents in leisure activities, paying attention to signs of caterpillars (gnawed leaves, recurrent cases). It is recommended to avoid deforestation, fires, and abusive use of insecticides, as the ecological imbalance favors conditions for an increase in accidents.

Another important data analyzed shows that, of the 84 files investigated, only 58.3% contained photos of the caterpillar sent by the patient. The importance of these photos is mainly for the follow-up of treatment, associating the vector with clinical and laboratory manifestations. If the caterpillar is captured, its identification must be carried out to establish the differential diagnosis with other lepidopteran genera, and this differentiation is made by professionals trained at the CIATox, after the health professional has contacted the reference unit. If the caterpillar is identified as *Lonomia* sp., the patient must be followed up for 48 hours with

INR sequences due to the possible evolution to the hemorrhagic syndrome. Because of the possibility that it is a hemorrhagic accident caused by *Lonomia* sp, any patient who does not bring or photograph the caterpillar for identification must apply the Protocol for Unknown Caterpillar (CIATox/SC) and perform INR on admission (hour 0), after 6 hours and 12 hours have elapsed since the first collection, if at any time there is a change in the test, the accident is considered an accident by *Lonomia* sp.; if normal, they should be instructed to return if they present bleeding within 48 hours after contact¹⁹. The same protocol is followed for accidents by colonies of other lepidopterans, as *Lonomia* sp. can infiltrate different colonies, not being noticed among so many other caterpillars. Even though more than half of the patients identify the caterpillar, it is important to inform the population of the importance of its identification, if possible, for more adequate and quick conduct.

The two cases recorded as an accident with multiple caterpillars had mild clinical repercussions, with no change in the INR, and as a sign and symptom, they presented erythema and local pain. They did not progress to severe at the end of the treatment. The body site affected in both patients was the upper limb and in the rural area. As there was no photo or knowledge on the part of the victims about the type of colony, the Protocol for Unknown Caterpillar was used, in which no increase in INR was reported in the three samples.

Among the limitations of the present study, one should consider its retrospective design, restriction to a single toxicological center, possible underreporting bias, and relatively small sample. However, this study adds value by bringing to light a theme little explored in the scientific literature regarding lepidopterans, showing peculiarities about *Lonomia* sp. and eco-epidemiological aspects of interest to the general education of physicians, especially those who work in primary health care and emergency medical services. It is also worth mentioning the important role of CIATox/PR and its multiprofessional team in minimizing health and environmental problems and in meeting the different demands of intoxication in the daily life of the region.

All accidents by venomous animals, including accidents caused by the caterpillars analyzed in this study, must be reported by the health services and reported in the Notifiable Diseases Information

System - SINAN, according to Ordinance MS/GM No. 204, of February 17th, 2015²⁰. In the state of Paraná, according to the Sanitary Code of the State of Paraná (2002), the notification must be carried out within 24 hours, being then compulsory and immediate. It is essential to encourage the notification of these accidents and also the continuity of studies with larger sample size and follow-up of cases to analyze the actions taken.

CONCLUSION

The profile found was an adult male in the rural area, with upper limb involvement, local painful symptoms, ecchymosis, erythema, edema, and burning. There was an unfavorable evolution of accidents with *Lonomia* sp. compared to the initial assessment, with an increase in cases considered moderate and severe and an outcome of death. There is a need to invest in information for the general population and the medical community about the existence of cases, clinical consequences, and the need for notification.

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