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ORIGINAL ARTICLE

Human anti-rabies post-exposure care in a city in Paraná - 2007 to 2022: demographic factors and causality

Atendimento antirrábico humano pós-exposição, Paraná - 2007 a 2022: fatores demográficos e causalidade

Atención antirrábica humana posterior a la exposición en ciudad de Paraná - 2007 hasta 2022: factores demográficos y causalidad

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ABSTRACT

Justificativa e Objetivos: Antropozoonose de relevância global, a raiva apresenta alta letalidade e requer atendimento qualificado, assim como atenção às espécies agressoras. Assim, o objetivo foi descrever o perfil socio-demográfico e a causalidade de atendimentos antirrábicos humanos pós-exposição notificados entre 2007 e 2022 no município de Ponta Grossa, Paraná. **Método:** Estudo epidemiológico descritivo e quantitativo realizado com dados secundários obtidos das fichas de notificação de atendimento antirrábico humano no município de Ponta Grossa, Paraná, entre janeiro de 2007 e dezembro de 2022. Os dados foram coletados do sistema de informação de Agravos de Notificação (SINAN) e tabulados no programa *Excel*. As variáveis analisadas foram: fatores sociodemográficos, data de atendimento, tipo de exposição e espécie do animal envolvido. Os dados foram analisados a partir de frequência absoluta e relativa. **Resultados:** A amostra foi composta por 16.668 casos. O perfil sociodemográfico dos usuários que buscaram atendimento antirrábico foi dividido em 51,93% do sexo masculino, 92,98% brancos e 4,55% pardos, 15,77% com idade entre 20 e 29 anos. Quanto à causalidade, 90,35% das notificações decorreram de mordeduras, e 95,60% destas foram causadas pela espécie canina e 4,43% pela felina. **Conclusão:** Apesar do predomínio de notificações decorrentes de acidentes envolvendo mordeduras, é necessário sensibilizar os profissionais da saúde e a população sobre a importância epidemiológica dos outros tipos de potenciais exposições ao vírus da raiva.

Descritores: Raiva. Profilaxia Pós-Exposição. Causalidade. Epidemiologia.

ABSTRACT

Background and Objectives: Rabies is an anthropozoonosis of global relevance and high lethality that requires qualified care and attention to the aggressor species. The objective was to describe the sociodemographic profile

and causality of human anti-rabies care services reported between the years 2007 and 2022 in the city of Ponta Grossa, state of Paraná. **Method:** Descriptive and quantitative epidemiological study carried out from the notification forms of human anti-rabies care in the city of Ponta Grossa, Paraná, between January 2007 and December 2022. Data were collected from the Notifiable Diseases Information System (SINAN) and tabulated in the Excel program. The main variables addressed were: sociodemographic factors, date of care, type of exposure, and species of the animal involved. Data were analyzed from absolute and relative frequency. The project follows the ethical standards of the National Health Council. **Results:** The sample included 16,668 cases. The sociodemographic profile of users who sought anti-rabies care was made up of 51.93% male, 92.98% were White and 4.55% Brown race, 15.77% were aged between 20 and 29 years, 13.16% between 30 and 39 years old. As for causality, 90,35% of notifications were due to bites, of which 95.60% were caused by canines and 3,81% by felines. **Conclusion:** Despite the predominance of reports resulting from accidents involving bites, it is necessary to raise awareness among health professionals and the population regarding the epidemiological importance of other types of potential exposure to the rabies virus.

Keywords: *Rabies. Post-Exposure Prophylaxis. Causality. Epidemiology.*

RESUMEN

Justificación y Objetivos: Antropozoonosis de relevancia mundial, la rabia tiene una alta letalidad y requiere cuidados calificados, así como atención a la especie agresora. Así, el objetivo fue describir el perfil sociodemográfico y la causalidad de las visitas antirrábicas humanas notificadas entre los años 2007 y 2022 en el municipio de Ponta Grossa, Paraná. **Métodos:** Estudio epidemiológico descriptivo y cuantitativo realizado a partir de los formularios de notificación de atención antirrábica humana en el municipio de Ponta Grossa, Paraná, entre enero de 2007 y diciembre de 2022. Los datos fueron recolectados por el Sistema de Información de Enfermedades de Declaración Obligatoria (SINAN) y tabulados en el programa Excel. Las principales variables abordadas fueron: factores sociodemográficos, fecha de atención, tipo de exposición y especie de animal involucrada. Los datos se analizaron a partir de la frecuencia absoluta y relativa. El proyecto sigue las normas éticas del Consejo Nacional de Salud. **Resultados:** La muestra incluyó 16.668 casos. El perfil sociodemográfico de los usuarios que buscaron atención antirrábica estuvo conformado por 51,93% hombres, 92,98% eran blancos y 4,55% mestizos, 15,77% con edad entre 20 y 29 años, 13,16% entre 30 y 39 años. Cuánto a la causalidad, 90,35% de las notificaciones se debieron a mordeduras, de las cuales 95,60% fueron causados por caninos y el 3.81% por felinos. **Conclusiones:** A pesar del predominio de las notificaciones resultantes de accidentes con mordeduras, es necesario concientizar a los profesionales de la salud y la población sobre la importancia epidemiológica de otros tipos de exposición potencial al virus de la rabia.

Palabras Clave: *Rabia. Profilaxis Posexposición. Causalidad. Epidemiología.*

INTRODUCTION

Rabies is an infectious disease that affects all mammals. It is an anthropozoonosis of great global relevance characterized by an acute and progressive encephalomyelitis with a fatal course caused by the virus of the *rhabdoviridae* family, genus *Lyssavirus*.[1]

The virus can be transmitted mainly by bites and, in rarer cases, by licking or scratching mucous membranes. The epidemiological chain of the disease involves the urban (dogs and cats), rural (horses and cattle), wild aerial (bats) and wild terrestrial (monkeys, opossums, among others) cycles.[2-4] The incubation period of the virus can vary according to the animal involved and other criteria, such as the extent and location of the wound. In carnivorous and herbivorous species, the incubation period can vary from 15 days to four months, while in chiropterans, this period is longer.[5] In humans, the incubation period can vary from days to months.[2]

The classification of the accident depends on characteristics such as location, depth, extension and number of injuries. The use of anti-rabies vaccination is the most efficient action for controlling and eliminating the disease, which is highly preventable when appropriate immunization strategies are adopted for people at risk and animals, as they are the main source of transmission.[2]

Prophylaxis against human rabies can be done pre- or post-exposure. The former is indicated for people at risk of permanent exposure to the virus, during occupational activities performed by veterinarians, biologists, researchers, among others. The post-exposure prophylaxis (PEP) is indicated for people accidentally exposed to the virus and involves evaluation, careful cleaning of the wound and immunization with the rabies vaccine, alone or in combination with serum or human anti-rabies immunoglobulin.[2] The incorrect assessment of the wound can lead to the unnecessary use of already scarce therapeutic resources, in addition to exposing patients to unnecessary adverse effects.[6]

Rabies is a public health problem as it presents high risk of infection, high fatality rates, and high cost of treatment and prevention actions. As reliable sources in some endemic countries are lacking, the exact number

of human rabies cases worldwide is unknown, but the estimated number of deaths associated with the virus is close to 60,000 per year.[7,8] Rabies is considered endemic throughout Brazil, but occurs to different degrees depending on the geopolitical region analyzed.[2]

Despite the known importance of the disease and the large number of human anti-rabies treatments, the disease and its flows may still remain unclear to health professionals, and more information is needed to improve the actions developed in the control and prevention of rabies.[6] Thus, the objective of the present study was to describe the sociodemographic profile and causality of post-exposure human anti-rabies treatments reported between 2007 and 2022 in the municipality of Ponta Grossa, Paraná.

METHODS

This is a quantitative, descriptive, observational, cross-sectional retrospective epidemiological study conducted through exploratory analysis of secondary data obtained from the Notifiable Diseases Information System (SINAN) processed by the Epidemiology Department of the Ponta Grossa Municipal Health Foundation, state of Paraná, in partnership with the Immunization Department, responsible for implementing the pre- and post-exposure prophylaxis.
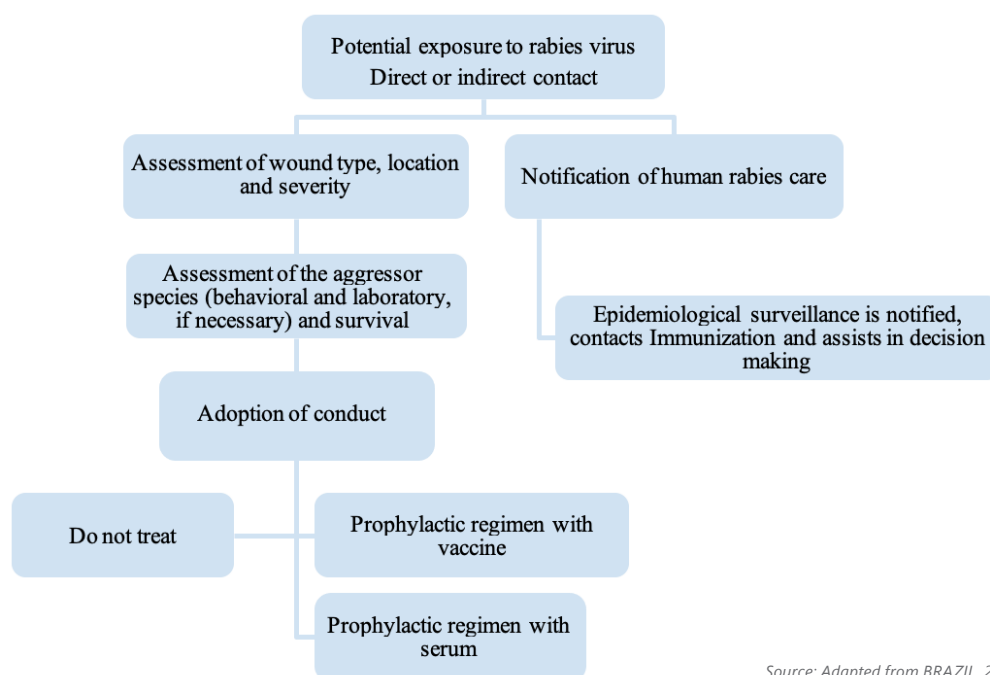
The municipality of Ponta Grossa (25°05'41" S and 50°09'42" W) is located in the central region of the state of Paraná, on the second plateau of the Campos Gerais region of Paraná at approximately 117 km from Curitiba, the state capital. According to the most recent data from the Brazilian Institute of Geography and Statistics (IBGE),

it is the fourth most populous municipality in Paraná with approximately 358,838 inhabitants in an area of 2,054,732 km^2 (population density of 150.72 inhabitants/km^2). The neighboring municipalities are Campo Largo, Carambeí, Castro, Ipiranga, Teixeira Soares and Tibagi.[9]

All human rabies care caused by different animal species in the last 15 years (2007 to 2022) reported to the Epidemiology Department of the city of Ponta Grossa, Paraná, were included and considered, without exclusion. The analysis compared absolute numbers, relative values and the average number of care services provided.

As the focus of this study is the rabies PEP, it is important to recognize and define the flow to be followed by an individual potentially exposed to the human rabies virus (Figure 1). The first step after seeking care is to define the type of exposure (indirect or direct contact through licking, scratching or biting), the site of contact (mucosa, head, trunk or limbs), the type of injury and its severity (superficial, deep or lacerated), as well as the species of animal involved.[2]

Along with the procedures for addressing the wound, the professional responsible for the care must complete the SINAN Human Anti-Rabies Care Form and forward it to the Epidemiology and Zoonosis service of the municipality responsible for observing and evaluating the animals involved. At the same time, the Immunization Department is notified and will contact the patient to begin PEP according to the criteria established by the municipal protocol and clinical evaluation. Several factors are taken into consideration to define the conduct, such as the possibility of observation and the behavior of the animal involved, its survival for the next ten days, in addition to the aforementioned factors related to the accident.

Source: Adapted from BRAZIL, 2011.

Figure 1. Approach to accidents with potential exposure to the human rabies virus.

Data collected by the Immunization and Epidemiology services date from January 1, 2007 to December 31, 2022 and involve all cases of accidents with application of the PEP reported by the health services of the municipality of Ponta Grossa.

The Anti-Rabies Care Form served as a subsidy for adopting the following variables: date of care, sociodemographic factors, type of exposure, number and location of wounds, history of rabies treatment, species and condition of the animal involved, treatment indicated for the accident, status of the rabies regimen and occurrence of adverse effects.

The information shared by the Epidemiology Department did not contain any type of patient identification, only the notification number, sociodemographic data and accident characteristics. The notification forms were transcribed by the department and coded into variables in the Excel program, where the average values for absolute and relative frequencies were also calculated. The descriptive analysis of data was performed based on these frequencies, which represent the prevalence of accidents requiring anti-rabies prophylaxis. In total, 16,668 notification forms for human anti-rabies care were analyzed.

The study project was exempted from consideration by the Research Ethics Committee, according to the regulations of the National Health Council (CNS) Resolution No. 510 of April 7, 2016, sub paragraph, item V.

RESULTS

1 - Sociodemographic profile

When analyzing the profile of the sample, composed of 16,668 cases, it was possible to observe that 48.06% (n=8,011) of the people who sought human anti-rabies care were women, 51.93% (n=8,656) were men and 0.01% (n=1) had their sex ignored when filling out the notification form.

Regarding race/color, 92.98% (n=15,498) of the sample was classified as White, 4.55% (n= 759) as Brown, 1.22% (n=209) as Black, 0.19% (n=31) as Yellow and 0.28% (n=46) as Indigenous, while 0.78% (n=130) was ignored.

The most predominant age groups (Figure 2) in the study were 20-29 years with 15.77% (n= 2,628), 30-39 years with 13.16% (n=2,192) and 40-49 years with 12.46% (n=2,077).
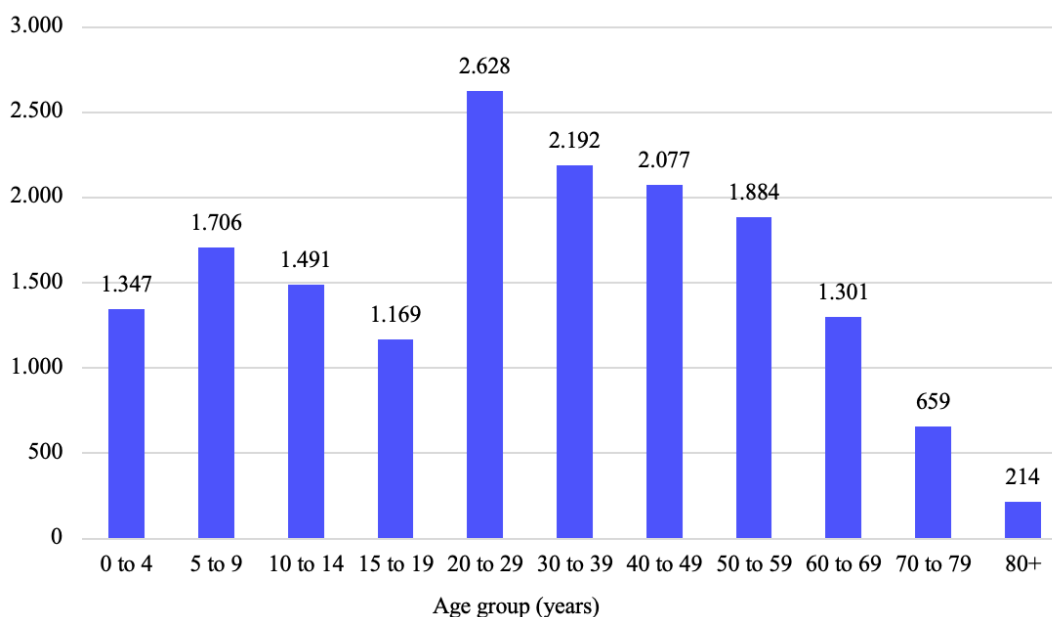
Older adults were the sample population with the lowest proportion of anti-rabies care services (n=2,174; 13.04% considering all age groups aged 60 or over). The frequency of notifications related to babies and children aged between 0 and 4 years is noteworthy with 8.08% (n=1,347), and between 5 and 9 years with 10.23% (n=1,706).

When considering education, some individuals had incomplete primary education (n=5,798; 34,78%;), complete secondary education (n=3,900; 23.40%) or incomplete secondary education (n=1,803; 10.82%), only 4.12% (n=686) had started higher education and 4.91% (n=818) had completed it.

2 - Causality

Among the 16,668 reports (Table 1) of exposure to the human rabies virus, the significant majority of accidents were due to bites (n=15,059; 90.35%), of which 95.60% (n=14,396) were caused by dogs and 3.81% (n=574) by cats.

Canines stood out as the most frequent aggressor species leading to anti-rabies care, accounting for 93.98% (n=15,665), followed by felines with 4.43% (n=739).
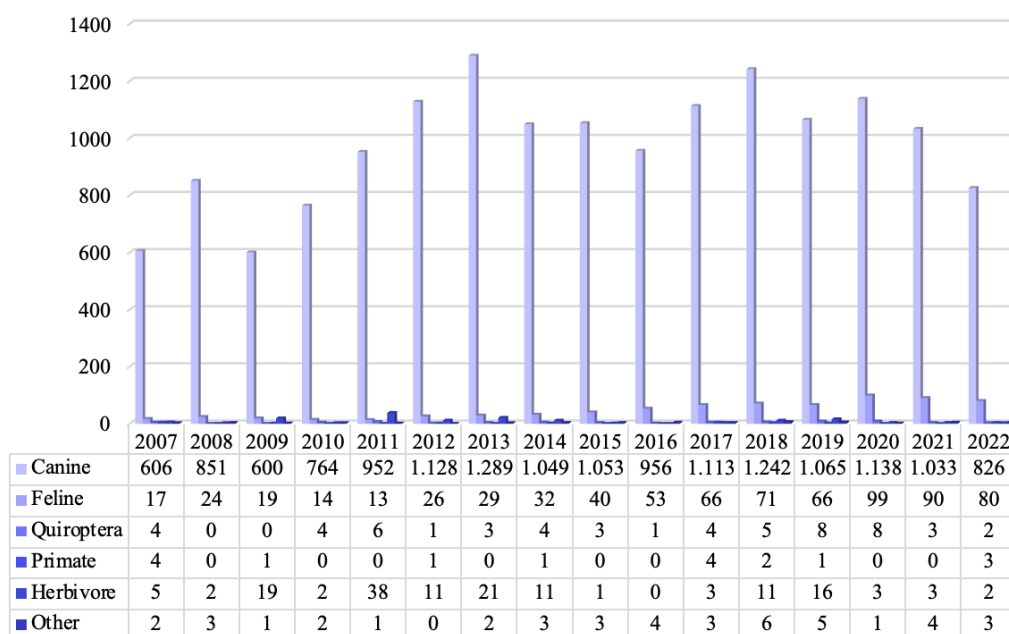

Source: the authors (2023).

Figure 2. Distribution of human anti-rabies care provided between 2007 and 2022 in the municipality of Ponta Grossa, Paraná, according to age group. n=16,668.

Table 1. Distribution of post-exposure prophylaxis cases by type of exposure and animal species between 2007 and 2022. Ponta Grossa, 2023. (n=16,668).

Species	Indirect n (%)	Scratching n (%)	Licking n (%)	Biting n (%)	Combined** n (%)	Ignored n (%)	Total n (%)
			Type of exposure				
Canine	91 (43.13)	677 (88.27)	46 (74.20)	14,396 (95.60)	409 (83.81)	46 (56.80)	15,665 (93.98)
Feline	04 (1.90)	84 (10.95)	04 (6.45)	574 (3.81)	73 (14.96)	0 (0)	739 (4.43)
Chiroptera	19 (9.00)	01 (0.13)	0 (0)	26 (0.17)	02 (0.41)	08 (9.88)	56 (0.34)
Primate	01 (0.47)	0 (0)	0 (0)	16 (0.11)	0 (0)	0 (0)	17 (0.10)
Domestic herbivore	93 (44.08)	0 (0)	12 (19.35)	16 (0.11)	0 (0)	27 (33.32)	148 (0.89)
Other*	03 (1.42)	05 (0.65)	0 (0)	31 (0.20)	04 (0.82)	0 (0)	43 (0.26)
Total	211 (1.26)	767 (4.60)	62 (0.37)	15,059 (90.35)	488 (2.93)	81 (0.49)	16,668 (100)

Caption: *Other includes wild boars, opossums, coatis, otters, squirrels and wild cats. It also includes cases of more than one species at the same time, such as coati/dog and cat/dog.
**Combined contact: more than one type of contact at the same time, such as scratching and licking, scratching and biting or licking and biting.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Canine	606	851	600	764	952	1.128	1.289	1.049	1.053	956	1.113	1.242	1.065	1.138	1.033	826
Feline	17	24	19	14	13	26	29	32	40	53	66	71	66	99	90	80
Quiroptera	4	0	0	4	6	1	3	4	3	1	4	5	8	8	3	2
Primate	4	0	1	0	0	1	0	1	0	0	4	2	1	0	0	3
Herbivore	5	2	19	2	38	11	21	11	1	0	3	11	16	3	3	2
Other	2	3	1	2	1	0	2	3	3	4	3	6	5	1	4	3

Source: The authors (2023).

Figure 3. Annual distribution of anti-rabies care services according to the aggressor species. Ponta Grossa, 2023. (n=16,668).

The prevalence of attacks caused by bats found in this study was 0.34% (n=56) and the frequency of bite cases involving bats was 0.17% (n=26).

Next, the most common cases were scratches (n=767; 4.60%), most of which were caused by canine and feline species, and combined exposures (n=488; 2.93%) caused by canines, domestic herbivores and felines. Contamination from indirect contact was (n=211; 1.26%).

Regarding the number of annual notifications (Figure 3), there was an average of 1,041 cases per year, and an increase of 21% in the number of notifications when comparing the year 2011 (n=1,003) to the previous year (n=786).

Another year in which the number of care services provided was significantly higher was 2018 (8.02%; n=1,337).

DISCUSSION

After performing the analysis, a predominance of the search for care by men was observed. This profile is corroborated by a study conducted in Brazil between 2014 and 2019 with data referring to notifications of anti-rabies care, in which the sample was composed mostly of men, probably due to their work activities, such as postmen, delivery men, garbage collectors, meter readers, among others, with greater exposure to animals that can potentially transmit rabies.[10-11]

The presence of a higher prevalence of one ethnicity over others can lead to debates such as the accuracy in the completion of notification forms, since the race must

be self-declared at the time of care and not inferred by the professional, which can lead them to automatically fill in a certain ethnic group, differing from other similar studies. Furthermore, according to the demographic census performed by the IBGE in 2022, 78.56% of the population of Ponta Grossa is of declared White, corroborating the number found in the present study.[9]

Individuals under 19 years of age were treated more frequently, which may be related to behavioral aspects of these age groups, such as playfulness and abrupt attitudes that may trigger an aggressive reaction in the animals involved.[10-12]

A descriptive study that used data from SINAN to evaluate anti-rabies care between 2014 and 2019 in Brazil highlighted similar findings: 81.9% of accidents were caused by bites.[10] Another study conducted in Belo Horizonte through the analysis of notification forms for human anti-rabies care from 2011 to 2012 also highlighted a higher prevalence of contact through bites when analyzing the canine species (n = 15,665; 93.0%).[13]

The high prevalence of care resulting from bites may be due to the fact that this act is a defense mechanism for most aggressor animals.[9] In addition, the population and the healthcare community recognize that this type of contact has a greater potential for contamination by the rabies virus, which leads to greater demand for health services and an increase in notifications.[10,13]

On the other hand, it is essential to highlight the importance of seeking health services in the most diverse types of contact, including minor accidents or indirect contact. Such search should be reinforced and intensified in cases of exposure to wild animals, considering the need to evaluate post-exposure behavior and the high lethality of human rabies.[10]

A study developed by Estima et al. (2022) in Brazil indicated that 81.5% of accidents were caused by dogs, while cats accounted for 15.2%.[10] This finding is corroborated by the systematic review conducted by Mshelbwala et al. (2021) with articles on rabies records between 1978 and 2020 in Nigeria, in which a large part of the attacks were related to dog bites, ranging from 36.4% to 97% of cases.[14]

Despite the high prevalence of care linked to the urban cycle of rabies transmission (canines and felines), with the adoption of strategies such as large-scale vaccination of dogs and cats and expanded access to prophylaxis, Brazil has undergone a transmission transition - where the latest records of the disease were related to exposure to wild animals, mainly bats - as observed in developed countries. A descriptive investigation of the epidemiological profile of human rabies in Brazil between 2000 and 2017 demonstrated that 45.9% of cases of the disease involved the chiropteran species.[10,15-16]

The lower number of notifications involving the species in the present study may be due to the profile of chiropterans in the region, where non-hematophagous bats predominate, with a low frequency of bites, considering the behavior of frugivorous and insectivorous bats.[17] In any case, it is necessary to remain alert to exposure to bats, as in 2017, the Central Laboratory (LACEN) of Paraná identified four insectivorous bats infected with the rabies virus.[18] Furthermore, bats have a good adaptive capacity to the conditions of cities and environments of human intervention, which favors contact with humans, domestic animals and herbivores.[19,20]

It is also important to highlight that most cases involving herbivores resulted from exposure to domestic herbivores, such as cattle and horses. In a study that evaluated epidemiological data on rabies cases in different species in Brazil between 2012 and 2017, Gonçalves, Soares & Santos (2018) highlighted that Paraná remains an endemic area for rabies in wild animals and herbivores, as does the municipality of Ponta Grossa.[17,18] Regarding serology, a descriptive observational study that used records of rabies cases diagnosed in herbivores between 1977 and 2012 in the state of Paraná identified a 28.1% positivity rate, with a higher occurrence in the central-eastern mesoregion, where Ponta Grossa is located.[19]

At the same time, the prevalence of different types of contact leads to reflections on the accuracy of the exposure classification, as well as the quality of the anamnesis and completion of the form. Furthermore, underreporting significantly impacts the reporting of suspected and confirmed cases and human anti-rabies care.[19] Several factors, such as work overload and ongoing and continuous health education, impact both the quality of the completion of notification forms and the search for health services and possible failures in epidemiological surveillance, and the control, prevention and diagnosis of zoonoses.[19,21]

Incomplete or erroneous completion of the form were also noted in similar studies regarding the analysis of care provided in the state of São Paulo, with a high frequency of incomplete fields and poor quality of completion.[12]

The increase in the search for human anti-rabies care may have been caused by the 13.5% increase in the number of confirmed cases of human rabies between 2017 and 2018.[22] This increase may also be related to the publication of information note No. 26-SEI/2017 by the Ministry of Health regarding changes in the PEP regimen of human rabies, promoting awareness among health professionals about the importance of disease prevention measures.[23]

The progressive increase in the number of notifications involving felines as aggressors may be related to the increase in the number of domesticated cats in the country.[24] A study conducted by Johann (2019) observed that the verticalization of cities brings with it the need for pets that adapt to environments with little space, causing an increase in the feline population in Brazilian homes.[24]

In the sample analyzed, a large part of the population that sought anti-rabies care was composed of white men with low education, between the ages of 20 and 29 years old. Most notifications analyzed were of dog bites, followed by those of cat bites. The number of notifications analyzed follows the trend shown by similar Brazilian studies, with 2013 and 2018 as the years with the highest records of human anti-rabies care.

It is important to raise awareness among the population to seek anti-rabies care in the event of any type of contact with a potential transmitter of the rabies virus,

and to assist in monitoring the animals involved in order to notify the competent authorities for better decision--making regarding the prophylactic protocol.

It is also necessary to properly train health professionals at the different levels of care responsible for providing care and completing the notification form, aiming at greater accuracy in epidemiological data and the reduction of underreporting of exposure cases.

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AUTHOR CONTRIBUTIONS

Lucas Lauriano Tremel Trupel contributed to the literature search, abstract writing, methodology, discussion, interpretation and description of results, preparation of tables, conclusions, review and statistics. **Clara Caroline Ferrarezi Antunes Pereira** contributed to the literature search, abstract writing, introduction, discussion, interpretation and description of results, preparation of tables, conclusions, review and statistics. **Tayane Diniz Batista** contributed to the discussion of results, conclusions and review. **Jisiane** Fátima **Sobczak Maia** contributed to the literature search, introduction and review. **Caroliny Stocco** contributed to the review and statistics. **Mônica Kloster** contributed to the project administration and review.

All authors approved the final version to be published and are responsible for all aspects of the work, including ensuring its accuracy and integrity.

ANNEX A

Mandatory notification form for human anti-rabies care.

República Federativa do Brasil
Ministério da Saúde

SINAN
SISTEMA DE INFORMAÇÃO DE AGRAVOS DE NOTIFICAÇÃO
FICHA DE INVESTIGAÇÃO **ATENDIMENTO ANTI-RÁBICO HUMANO**

Nº

Dados Gerais

1 Tipo de Notificação — 2 - Individual

2 Agravo/doença **ATENDIMENTO ANTI-RÁBICO HUMANO** — Código (CID10) W 64 — 3 Data da Notificação

4 UF — 5 Município de Notificação — Código (IBGE)

6 Unidade de Saúde (ou outra fonte notificadora) — Código — 7 Data do Atendimento

Notificação Individual

8 Nome do Paciente — 9 Data de Nascimento

10 (ou) Idade — 1 - Hora 2 - Dia 3 - Mês 4 - Ano — 11 Sexo M - Masculino F - Feminino I - Ignorado — 12 Gestante 1-1ºTrimestre 2-2ºTrimestre 3-3ºTrimestre 4- Idade gestacional Ignorada 5-Não 6- Não se aplica 9-Ignorado — 13 Raça/Cor 1-Branca 2-Preta 3-Amarela 4-Parda 5-Indígena 9- Ignorado

14 Escolaridade
0-Analfabeto 1-1ª a 4ª série incompleta do EF (antigo primário ou 1º grau) 2- 4ª série completa do EF (antigo primário ou 1º grau)
3-5ª à 8ª série incompleta do EF (antigo ginásio ou 1º grau) 4-Ensino fundamental completo (antigo ginásio ou 1º grau) 5-Ensino médio incompleto (antigo colegial ou 2º grau)
6-Ensino médio completo (antigo colegial ou 2º grau) 7-Educação superior incompleta 8-Educação superior completa 9-Ignorado 10- Não se aplica

15 Número do Cartão SUS — 16 Nome da mãe

Dados de Residência

17 UF — 18 Município de Residência — Código (IBGE) — 19 Distrito

20 Bairro — 21 Logradouro (rua, avenida,...) — Código

22 Número — 23 Complemento (apto., casa, ...) — 24 Geo campo 1

25 Geo campo 2 — 26 Ponto de Referência — 27 CEP

28 (DDD) Telefone — 29 Zona 1 - Urbana 2 - Rural 3 - Periurbana 9 - Ignorado — 30 País (se residente fora do Brasil)

Dados Complementares do Caso

Antecedentes Epidemiológicos

31 Ocupação

32 Tipo de Exposição ao Vírus Rábico 1 - Sim 2 - Não 9 - Ignorado — Contato Indireto — Arranhadura — Lambedura — Mordedura — Outro

33 Localização 1 - Sim 2 - Não 3 - Desconhecida — Mucosa — Cabeça/Pescoço — Mãos/Pés — Tronco — Membros Superiores — Membros Inferiores

34 Ferimento 1 - Único 2 - Múltiplo 3- Sem ferimento 9 - Ignorado — 35 Tipo de Ferimento 1 - Sim 2 - Não 9-Ignorado — Profundo — Superficial — Dilacerante

36 Data da Exposição — 37 Tem Antecedentes de Tratamento Anti-Rábico? 1 - Sim 2 - Não 9 - Ignorado — Pré-Exposição — Pós-Exposição

38 Se Houve, quando foi concluído? 1 - Até 90 dias 2 - Após 90 dias — 39 Nº de Doses Aplicadas

40 Espécie do Animal Agressor 1 - Canina 2 - Felina 3 - Quiróptera (Morcego) 4 - Primata (Macaco) 5 - Raposa 6 - Herbívoro doméstico (especificar) 7 - Outra

41 Condição do Animal para Fins de Conduta do Tratamento 1 - Sadio 2 - Suspeito 3 - Raivoso 4 - Morto/ Desaparecido — 42 Animal Passível de Observação? (Somente para Cão ou Gato) 1 - Sim 2 - Não

Tratamento Atual

43 Tratamento Indicado 1 - Pré Exposição 2 - Dispensa de Tratamento 3 - Observação do animal (se cão ou gato) 4 - Observação + Vacina 5 - Vacina 6 - Soro + Vacina 7 - Esquema de Reexposição

Vacina

44 Laboratório Produtor Vacina 1 - Instituto Butantan 2 - Instituto Vital Brasil 3 - Aventis Pasteur 4- Outro Especificar

45 Número do Lote — 46 Data do Vencimento

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47 Datas das Aplicações da Vacina (dia e mês)

Data da 1ª dose   Data da 2ª dose   Data da 3ª dose   Data da 4ª dose   Data da 5ª dose

48 Condição Final do Animal (após período de observação)
1 - Negativo para Raiva (Clínica)   2 - Negativo para Raiva (Laboratório)   3 - Positivo para Raiva (Clínica)   4 - Positivo para Raiva (Laboratório)   5 - Morto/ Sacrificado/ Sem Diagnóstico   9 - Ignorado

49 Houve Interrupção do Tratamento
1 - Sim   2 - Não

50 Qual o Motivo da Interrupção
1 - Indicação da Unidade de Saúde   2 - Abandono   3 - Transferência

51 Se houve Abandono do Tratamento, a Unidade de Saúde Procurou o Paciente
1 - Sim   2 - Não

52 Evento Adverso à Vacina
1 - Sim   2 - Não   9 - Ignorado

53 Indicação do Soro Anti-Rábico
1 - Sim   2 - Não   9 - Ignorado

54 Peso do Paciente
Kg.

55 Quantidade de Soro Aplicada
ml   1 - Heterólogo   2 - Homólogo

56 Infiltração de Soro no(s) Local(is) do(s) Ferimento(s)
1 - Sim   2 - Não   Total   Parcial

57 Laboratório Produtor do Soro Anti-Rábico
1 - Instituto Butantan   2 - Instituto Vital Brasil   3 - Aventis Pasteur   4 - Outro (Especificar)

58 Número da Partida

59 Evento Adverso ao Soro Anti-Rábico
1 - Sim   2 - Não   9 - Ignorado

60 Data do Encerramento do Caso

Tratamento Atual

Observações:

Investigador

Município/Unidade de Saúde

Cód. da Unid. de Saúde

Nome   Função   Assinatura

Atendimento Anti-Rabico Humano   Sinan Net   SVS   27/09/2005