



## Short Communication

## Survey of Cutaneous Neoplastic and Nonneoplastic Lesions of Horses From Central-West Brazil



ClaudioMiro Silva do Nascimento<sup>a</sup>, Glauco José Nogueira de Galiza<sup>b</sup>,  
Armando de Mattos Carvalho<sup>c</sup>, Karla Moraes Rocha Guedes<sup>b,1</sup>,  
Luciano da Anuniação Pimentel<sup>b,2</sup>, Marcelo Diniz dos Santos<sup>c</sup>, Selwyn Arlington Headley<sup>b,d,\*</sup>

<sup>a</sup> Programa de Mestrado em Biociência Animal, Universidade de Cuiabá, Mato Grosso, Brazil

<sup>b</sup> Laboratory of Animal Pathology, Faculty of Veterinary Medicine, Universidade de Cuiabá, Mato Grosso, Brazil

<sup>c</sup> Department of Large Animal Production and Internal Medicine, Faculty of Veterinary Medicine, Universidade de Cuiabá, Mato Grosso, Brazil

<sup>d</sup> Department of Veterinary Preventive Medicine, Universidade Estadual de Londrina, Paraná, Brazil

## ARTICLE INFO

## Article history:

Received 16 July 2015

Received in revised form 6 January 2016

Accepted 7 January 2016

Available online 14 January 2016

## Keywords:

Pythiosis

Squamous cell carcinoma

Sarcoid

Skin disease

Equine

## ABSTRACT

A retrospective study was designed to determine the occurrence of cutaneous neoplastic and nonneoplastic lesions in horses from Central-West Brazil by examining the hospital records of horses submitted for biopsy at the Universidade de Cuiabá, Mato Grosso, during January 1998 to December 2013. During this 15-year period, biopsy specimens of 133 horses were received for histopathological diagnosis; most of these (69.9%; 93/133) were cutaneous biopsies. No significant difference was observed between the genders of horses with a cutaneous diagnosis; 51.6% (44/93) were males, 47.3% (44/93) females, and the sex of one animal was unspecified. Mixed-breed horses were predominant (35.3%; 33/93), followed by the Quarter Horse and Pantaneiro breeds (25.8%; 24/93). A definite seasonal pattern relative to the occurrence of cutaneous disease was not observed. Cutaneous diseases were more frequent in horses that were more than 1 year of age. Nonneoplastic cutaneous lesions (73.1%; 68/93) were more predominantly diagnosed relative to neoplastic disease (19.4%; 18/93). Pythiosis was the most frequent (50%; 34/68) nonneoplastic lesion and represented 36.5% (34/93) of all cutaneous lesions diagnosed. Squamous cell carcinomas (44.4%; 8/18) and sarcoids (38.9%; 7/18) were the most frequently diagnosed neoplastic lesions. These findings suggest that cutaneous lesions are common in horses from the Central-West region of Brazil, and the age, gender, and breed per se of the affected horse were not determinant factors relative to the occurrence of skin lesions in horses from this geographical region.

© 2016 Elsevier Inc. All rights reserved.

\* Corresponding author at: Selwyn Arlington Headley, Laboratory of Animal Pathology, Department of Veterinary Preventive Medicine, Universidade Estadual de Londrina, Rodovia Celso Garcia Cid, PR 445 Km 380, Campus Universitário, PO Box 10.011, 86057-970, Londrina, Paraná, Brazil.

E-mail address: [selwyn.headley@uel.br](mailto:selwyn.headley@uel.br) (S.A. Headley).

<sup>1</sup> Present address: Embrapa Pantanal, Corumbá, Mato Grosso do Sul, Brazil.

<sup>2</sup> Present address: Laboratório de Patologia Veterinária/HUMV, Universidade Federal do Recôncavo da Bahia, Cruz das Almas, Bahia, Brazil.

0737-0806/\$ – see front matter © 2016 Elsevier Inc. All rights reserved.

<http://dx.doi.org/10.1016/j.jevs.2016.01.005>

## 1. Introduction

Cutaneous lesions are frequently diagnosed in equine medicine [1]. The knowledge of the distribution of these manifestations within a specific geographical region is important because the epidemiology of these lesions can vary due to differences in climate, season, age of the affected animal, and the biological cycle of pathogens [2]. Most epidemiologic studies to understand the dynamics of cutaneous lesions in horses were done in North America [2–6] and Australia [7,8] and were focused on the

distribution of cutaneous neoplasms [3,5,7,8] or nonneoplastic lesions [2,4,6] of horses.

In Brazil, epidemiologic studies were based on the occurrence of neoplastic cutaneous lesions of horses [9,10] and cutaneous lesions of equids [11] and were done in the southern [10] and northeastern [9,11] regions of the county. Epidemiologic investigations have suggested that pythiosis is the most predominant nonneoplastic lesion in horses from northeastern Brazil [11] and the Pantanal region [12] with a comparatively reduced prevalence in the south [10]. Alternatively, sarcoids were the most frequently occurring neoplasm of horses in southern [10] and northern Brazil [9]. These data might suggest a predominance of specific neoplastic and nonneoplastic lesions within particular geographical regions. This study investigated the frequency of neoplastic and nonneoplastic cutaneous lesions of horses from Central-West Brazil in an attempt to identify regional trends.

## 2. Material and Methods

### 2.1. Study Location

A retrospective study was done by using the hospital records of the Veterinary Teaching Hospital (VTH), Universidade de Cuiabá, Mato Grosso, Central-West Brazil, during January 1998 to December 2013 to determine the frequency of cutaneous lesions in horses. The state of Mato Grosso forms part of the Brazilian Pantanal region. The VTH receives animals from all regions of this and neighboring states for clinical evaluation and diagnosis. The city of Cuiabá has a tropical and humid climate with elevated rainfall being concentrated from October to March, where there is an average of 11 to 19 rainy days/mo; there is also a severely dry period that extends between May and

September, when there are only an average of 1 to 4 rainy days month [13]. Consequently, there are two well-defined seasons in Cuiabá: one wet (spring–summer) and the other dry (autumn–winter).

### 2.2. Data Collection and Statistical Analysis

The records of all horses submitted to the VTH for the histopathological diagnosis of biopsy specimens were reviewed, analyzed, and tabulated. The number of cutaneous lesions was then extracted from the total number of equine cases seen during this period. Histopathological lesions were divided into the principal morphological diagnoses given in the pathology reports, and these were stratified according to the breed, gender, and the age-related groups of the affected horses. The age groups used in this study was based on previous investigation [14]. In addition, the month of entry was used to determine the seasonality of the occurrence of all lesions; frequencies were then determined based on the number of horses with a determined lesion relative to the total number of horses with cutaneous lesion.

The seasons were determined as follows: summer, 21 December to 21 March; autumn, 21 March to 21 June; Winter 21 June to 21 September; and spring, 21 September to 21 December. Climatic information was obtained from the online database of the National Meteorological Institute, Ministério da Agricultura, Pecuária e Abastecimento based on 10-year monthly averages from the Cuiabá Meteorological Station [13].

When possible, statistical differences were calculated by the analysis of variance, and averages were compared by the *F* test at 5% probability; in addition, analyzes of correlations and averages were compared by the *t*-test. Statistical analyses were done with the statistical software R version 3.0.3 [15].

**Table 1**

Age-related distribution of cutaneous lesions in horses from Central-West Brazil.

Morphological Diagnoses	Age Groups				NI	Number of Horses	
	<1	1–5	6–14	>15		Total	%
<b>Nonneoplastic</b>							
Eosinophilic dermatitis (5.9)			3		1	4	4.3
Epithelial hyperplasia (1.5%)			1			1	1.1
Granulation tissue (19.1%)	1	2	6	1	3	13	14.0
Granulomatous folliculitis (1.5%)		1				1	1.1
Habronemiasis (5.9)	1	1	2			4	4.3
Necrotizing dermatitis (1.5)			1			1	1.1
Purulent dermatitis (1.5)					1	1	1.1
Pyogranulomatous dermatitis (13.2%)		4	1	1	3	9	9.7
Pythiosis (50%)	2	15	10	0	7	34	36.6
Subtotal	4	23	24	2	15	68	73.1
<b>Neoplastic</b>							
Sarcoid (38.9%)		3	2		2	7	7.5
Squamous cell carcinoma (44.4%)	1	5	2			8	8.6
Other tumors (16.7%)			2		1	3	3.2
Subtotal	1	8	6		3	18	19.4
<b>Others</b>							
No significant pathological alteration			2			2	2.2
Unknown	2	0	3			5	5.4
Subtotal	2	0	5	0	0	7	7.5
<b>Total</b>	<b>7</b>	<b>31</b>	<b>35</b>	<b>2</b>	<b>18</b>	<b>93</b>	<b>100.0</b>

Abbreviation: NI, not informed.

Download English Version:

<https://daneshyari.com/en/article/2394593>

Download Persian Version:

<https://daneshyari.com/article/2394593>

[Daneshyari.com](https://daneshyari.com)