

ARE THE CLINICAL FEATURES OF LEPROSY AND AMERICAN TEGUMENTARY LEISHMANIASIS WORSE IN PATIENTS WITH BOTH DISEASES?



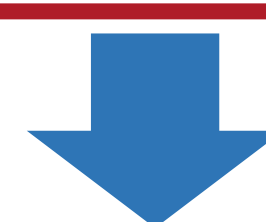
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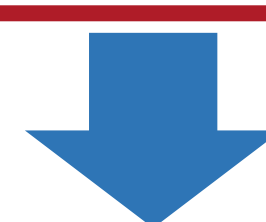
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INTRODUCTION

Leprosy and American tegumentary leishmaniasis (ATL) are neglected tropical diseases that share many biological, clinical, and epidemiological features.^{a,b}



The clinical aspects of patients affected by both diseases are poorly studied.^a



A better understanding of these characteristics may contribute to a better clinical management of patients and to support integrated surveillance and control measures aimed at early diagnosis and treatment.^b

This study aimed to compare clinical features of leprosy and ATL in patients diagnosed with both diseases (n=414) and in those diagnosed with only leprosy (n=27,790) or only ATL (n=24,357).

METHODS*

- This is a cross-sectional population-based study conducted in Mato Grosso State, which is a hyperendemic area for both diseases in Central-Western Brazil.
- All new cases of leprosy and ATL reported in the area from 2008 to 2017 were included.
- Patients diagnosed with both diseases were identified by a probabilistic linkage procedure applied to leprosy and ATL databases of the national reporting system.
- The distribution of the frequency of clinical features between groups was compared by the chi-square test, followed by a multivariate logistic regression.

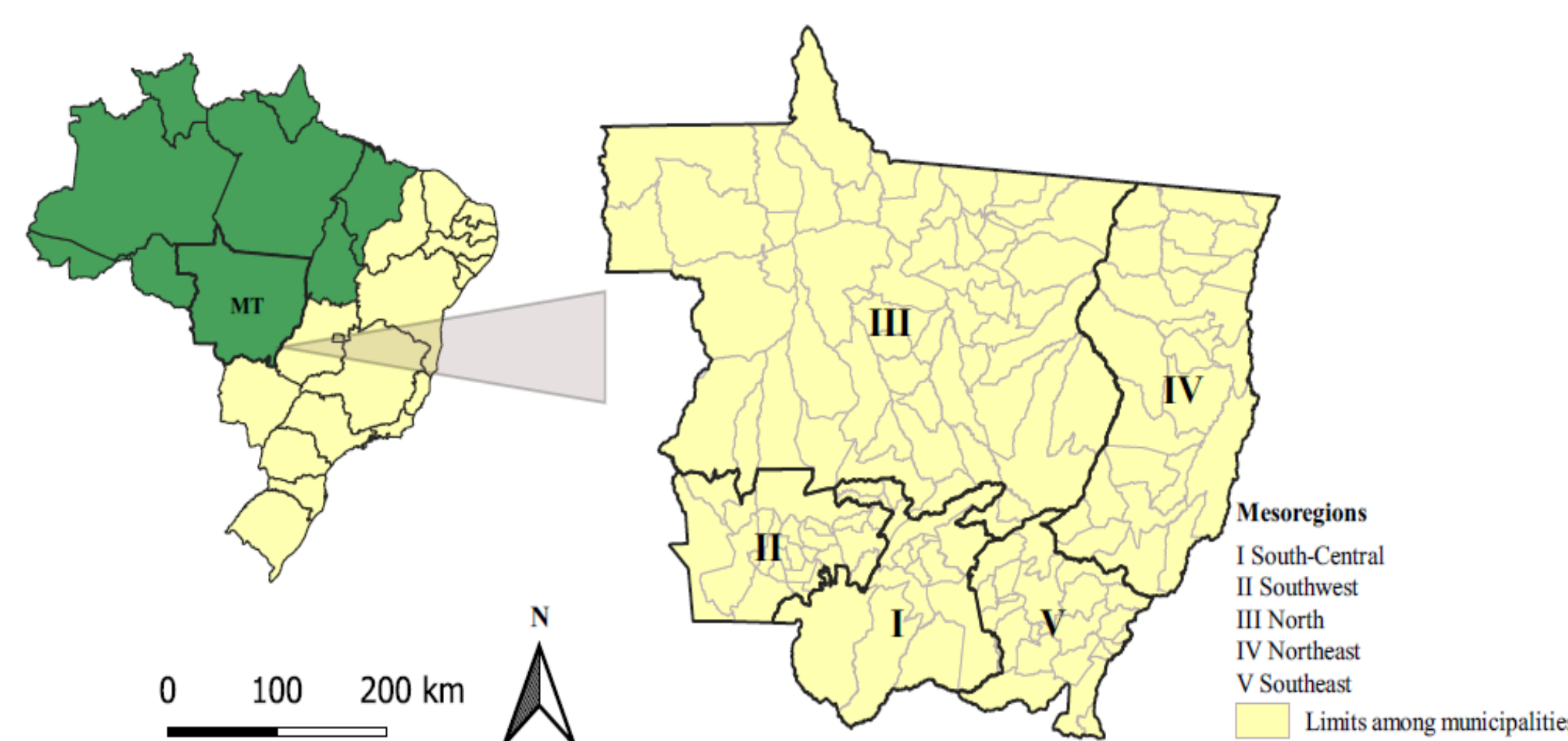


Figure 1. Geographic characterization of the study area.

*Ethical approval was obtained from the Ethical Committee for Human Research of the Federal University of Rondonópolis (CAAE Nº 01735018.6.0000.8088).

RESULTS

Table 1. Adjusted multivariate logistic regression models corresponding to clinical characteristics of leprosy (model I – L + ATL group vs. L group) and American tegumentary leishmaniasis (model II – L + ATL group vs. ATL group), Mato Grosso State, Brazil, 2008–2017.

Model I - L + ATL group vs. L group			
Variable	Adjusted OR	95% CI	p-value
Sex			
Female	1	-	
Male	4.13	3.19-5.35	< 0.001*
Age group (years)			
0 - 31	1	-	
32 - 43	1.27	1.02-1.57	0.031*
Operational classification			
Paucibacillary	1	-	
Multibacillary	0.93	0.72-1.19	0.547
Nerve damage			
No	1	-	
Yes	1.34	1.09-1.66	0.006*
Leprosy reactions			
No	1	-	
Yes	1.35	1.04-1.76	0.026*
Missing	1.38	1.05-1.81	0.020
Model II - L + ATL group vs. ATL group			
Age group (years)			
0 - 23	1	-	
24 - 34	2.34	1.58-3.47	< 0.001*
35 - 48	3.31	2.27-4.80	< 0.001*
> 48	4.34	3.01-6.25	< 0.001*
Clinical form			
Cutaneous	1	-	
Mucocutaneous	2.29	1.74-3.00	< 0.001*

L: leprosy; ATL: American tegumentary leishmaniasis; OR: odds ratio; 95% CI: confidence interval at 95%.

➤ Patients diagnosed with both leprosy and ATL presented higher odds of having nerve damage (OR: 1.34; 95% CI: 1.09–1.66) and leprosy reactions (OR: 1.35; 95% CI: 1.04–1.76) compared to patients diagnosed only with leprosy (Table 1).

➤ Mucocutaneous leishmaniasis (OR: 2.29; 95% CI: 1.74–3.00) was more frequent among patients with both diagnoses when compared to patients who only had ATL (Table 1).

CONCLUSION

➤ Patients diagnosed with both leprosy and ATL present more severe clinical features of such diseases.

➤ Our data can be useful for designing health policies aimed at timely and integrated management of leprosy and ATL in co-endemic areas.

KEYWORDS

➤ Coinfection, Comorbidity, Cutaneous leishmaniasis, Leprosy, Mucocutaneous leishmaniasis.

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- ^bMitja O, Marks M, Bertran L, Kollie K, Argaw D, Fahal AH, et al. Integrated control and management of neglected tropical skin diseases. PLoS Negl Trop Dis. 2017;11:e0005136.

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