

Seroprevalence of *Toxoplasma gondii* in horses in Portugal

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Introduction

The consumption of raw or undercooked meat containing *T. gondii* tissue cysts poses a risk of infection to humans. However, though horsemeat is consumed raw or underdone in many countries, the role of horses in the transmission of *T. gondii* to humans has been poorly addressed. The present study aimed to investigate the seroprevalence of *T. gondii* in horses from Portugal.



Material and Methods

A total of 385 animals from different geographical areas in Portugal were screened by an *in-house* Indirect Fluorescent Antibody Test (IFAT) at the cut-off dilution 1:50 and positive and doubtful results were confirmed by ELISA (ID Screen® Toxoplasmosis Indirect Multi-species) and the Modified Agglutination Test (MAT) (bioMérieux). Sera with a known origin (n=323) were from a total of 50 municipalities located in the North, Centre and South of Portugal.

Results and Discussion

Seroprevalence confirmed by:

2nd test (ELISA or MAT) - 3.4% (95% CI: 2.0-5.7%)

2nd + 3rd test - 2.7 % (95% CI: 1.1-4.0%)

The present results indicate a low prevalence of *T. gondii* in horses in Portugal. However, since equids have been shown to harbour viable *T. gondii* parasites, the role of this meat-producing animal species as a source of infection should not be overlooked.

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Table 1: IFAT, ELISA and MAT positive results and antibody titres

Analysis nr.	IFAT	ELISA	MAT	IFAT titres	MAT titres
159	P	P	P	200	60
335	P	P	P	200	1620
349	P	P	P	200	40
42	P	P	P	200	1620
158	P	P	P	100	60
101	P	P	P	50	40
346	P	P	P	100	1620
306	P	P	D	50	D
213	P	P	N	100	N
294	P	P	N	100	N
360	P	N	N	200	N
105	D	P	P	D	40
332	D	P	D	D	D
319	D	P	N	D	N



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