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BOOK OF ABSTRACTS

Toxoplasma gondii in Northeastern Portugal: A Narrative Review of a Neglected Zoonotic Infection in a One Health Context

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Toxoplasmosis is a zoonosis caused by *Toxoplasma gondii*, a protozoan parasite that infects warm-blooded animals, including humans[1]. Despite its global distribution and considerable impact on public health, animal production, and the environment, it remains overlooked, exemplifying a One Health issue[2,3]. Transmission occurs mainly through ingestion of infective stages: sporulated oocysts, via contaminated water, soil, or food, tissue cysts in undercooked meat, or tachyzoites, through transplacental transmission or unpasteurized dairy products[1,4]. Though often asymptomatic, toxoplasmosis can cause severe outcomes in immunocompromised individuals and during pregnancy. Small ruminants are particularly susceptible, with infection linked to reproductive losses and zoonotic transmission via meat[5]. In Portugal,

T. gondii infection, and toxoplasmosis, remains underreported and poorly studied. The Northeastern region (Trás-os-Montes) is especially relevant due to the high density of small ruminant farming and close human, animal and environment interactions[6]. A narrative review of the literature on the epidemiological status of *T. gondii* infection in Northeast Portugal was carried out. Sources included PubMed, Scopus, Web of Science, Google Scholar, and institutional reports (EFSA, ECDC, INE). The EFSA/ECDC/2023[7] report a 4.2% rise in congenital toxoplasmosis and a 29% positivity in small ruminants, the highest in five years. In Portugal, according to the only national survey (1979–1980)[8], seroprevalence was 47%, with the North presenting the highest percentage (51%). Subsequent studies revealed regional fluctuations[8–12] and more recently, a 72.8% value was reported amongst workers with occupational exposure[13]. In the Northeastern region (2004–2010)[14–17], active circulation of *T. gondii* was demonstrated in various animal species including wild and livestock, particularly small ruminants, as well as in women of childbearing age. The detection of genotype II, associated with moderate virulence, in meat intended for consumption reinforces the zoonotic risk[18]. These findings highlight the urgent need for updated and integrated epidemiological studies, supported by a One Health approach.

Key words

Northeastern Portugal, One Health, Toxoplasma, Zoonosis

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