RESUMO - PROTOZOOLOGIA E PATÓGENOS TRANSMITIDOS POR VETORES

DETECTION OF GIARDIA SPP. IN GOATS FROM NORTHERN PARANÁ, BRAZIL

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Giardia spp. is a protozoan parasite with zoonotic potential that infects the gastrointestinal tract of several domestic animal species, including goats. Infection may lead to diarrhea, malabsorption and reduced weight gain

especially in young animals. In addition to its impact on animal health and productivity, giardiasis is considered a public health concern due to the potential transmission of zoonotic assemblages to humans. Information regarding the occurrence of Giardia in caprine herds in Brazil remains limited. This study aimed to investigate the occurrence of Giardia spp. in goats from northern Paraná State, Brazil, by molecular detection using nested PCR. Fecal samples (n = 228) were collected directly from the rectum of goats raised on farms in the municipalities of Apucarana, Londrina, Maringá, Ortigueira, and Paiçandu. To assess epidemiological factors associated with Giardia spp. infection, a questionnaire was applied considering the production system (semi-intensive or intensive), animal age, and the type of flooring in the pens (dirt or slated floor). Genomic DNA was extracted using the NucleoSpin Tissue® kit (Macherey-Nagel). Detection of Giardia spp. was performed through nested PCR (nPCR) targeting the 18S rRNA gene, followed by the amplification of the beta-giardin (bg), triose phosphate isomerase (tpi), and glutamate dehydrogenase (gdh) genes. Amplified products were subjected to electrophoresis in 1.5% agarose gel stained with SYBR Safe®. Out of the 228 fecal samples analyzed, 20 were positive for Giardia spp. by nested PCR (nPCR) targeting the 18S rRNA gene. Positive animals were identified on farms located in the municipalities of Apucarana, Ortigueira, Paiçandu, and Londrina. Most positive samples were obtained from adult goats (n = 16), raised under a semi-intensive production system (n = 20) and housed on dirt floors (n = 13). Among the samples positive for the 18S rRNA gene, only 7 amplified for the triose phosphate isomerase (tpi) gene, 2 for the glutamate dehydrogenase (gdh) gene, and 2 for the beta-giardin (bg) gene. One sample successfully amplified for all analyzed molecular markers. The results demonstrate the occurrence of Giardia spp. in goats from northern Paraná State, reinforcing the importance of molecular surveillance of this parasite in caprine herds. Most positive animals were adults raised under a semi-intensive system (n=20) and housed on dirt floors (n=11), suggesting that management and environmental conditions may influence the transmission in farms. Further epidemiological studies are needed to better understand the distribution and transmission dynamics of Giardia in caprine populations.

Palavras-chave: giardiasis; caprine; molecular diagnosis; epidemiology.