Abstract

Introduction: Eight Giardia duodenalis genotypes (A-H) have been described to date. Genotypes A and B have been isolated from humans and a wide range of mammals; however, genotypes C-H have shown greater host specificity. Objective: Identifying G. duodenalis genotypes from cysts in faeces obtained from children attending the Instituto Colombiano de Bienestar Familiar (ICBF) day care centres and from dogs in Ibagué by PCR-RFLP targeting both the -giardin and glutamate dehydrogenase genes. 

Materials and methods: Cysts from G. duodenalis positive samples were concentrated, DNA was extracted and the -giardin and glutamate dehydrogenase genes were analysed by PCR-RFLP. The MHOM/CO/04/G40 strain was used as positive control (this was obtained from the Grupo de Parasitología at the Instituto Nacional de Salud). Results: Of the total human samples, 11/23 (48%) were genotyped as A and 12/23 (52%) as B; PCR- RFLP revealed that four canine samples were genotypes C and D, these being host-specific. Conclusions: Only genotypes associated with human infection (AII, BIII and BIV) were found in the children and host-specific genotypes were observed in canines (C and D). No interaction could be established between animal and human transmission cycles due to the small canine sample size and as the former did not come into contact with children attending ICBF day-care centres.

Keywords

Giardia duodenalis, glutamate dehydrogenase, child, dogs.

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Genotipos de Giardia duodenalis en muestras de niños de las guarderías del Instituto Colombiano de Bienestar Familiar y de perros en Ibagué, Colombia

Biomédica, vol. 34, núm. 2, 2014, pp. 271-281

Instituto Nacional de Salud

Bogotá, Colombia

Available in: http://www.redalyc.org/articulo.oa?id=84330907013