important decrease in prevalence of parasites. But intestinal parasites are still important problems.

doi:10.1016/j.ijid.2008.05.1013

65.026

Seroepidemiology of Toxoplasma gondii in Workers of Slaughterhouse in Zapopan, Jalisco

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Background: Toxoplasma gondii was discovered by Nicolle and Manceaux in 1908, and it is the causal agent of human and animal toxoplasmosis. Slaughterhouse workers can acquire the infection inadvertently through wounds when they handle raw meat contaminated with Toxoplasma gondii. In Mexico there is no previous study of slaughterhouse workers; The aim of this study was to find the prevalence of anti-Toxoplasma antibodies in these workers and to evaluate risk factors.

Methods: IgG antibodies were identified through the ELISA immunoassay (Biotik) in 145 workers of the Municipal Slaughterhouse in Zapopan, Jalisco, Mexico.

Results: The prevalence of anti-Toxoplasma IgG antibodies was found in 104 (72%). The antibody levels were positively related to the time spent working in the slaughterhouse. The data analysis showed no statistically significant difference in the prevalence of anti-Toxoplasma antibodies when we compare other risk factors such as the habit of eating raw meat, consuming unwashed vegetables, or having cats, for which we consider the principal risk factor is working in the slaughterhouse and being in contact with raw meat contaminated by T. gondii.

Conclusion: The prevalence of anti-Toxoplasma IgG antibodies was greater than that found in other study populations in Mexico, suggesting a considerable occupational risk in slaughterhouse workers.

doi:10.1016/j.ijid.2008.05.1014

65.027

Analysis of PGF2α Synthase in Old and New World Species of Leishmania

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Background: Leishmaniasis is characterized by an increase in prostaglandin (PG) levels in the host, which accounts for some of the symptoms of the disease. The molecular mechanisms for the up-regulation of PGs during infection are poorly understood. Identification of the enzymes which catalyze the production of PGs provides a basis for better understanding of PGs’ role in Leishmaniasis.

Methods: To investigate the distribution of Prostaglandin F2α (PGF2α) synthase in Leishmania, isolates of L. major, L. donovani, and L. tropica (Old World species) and L. amazonensis, L. braziliensis, L. mexicana, and L. chagasi (New World species) were cultured in vitro. Promastigotes were harvested by centrifugation, washed with Phosphate buffered saline and genomic DNA (gDNA) extracted. The PGF2α synthase gene was amplified using LmPGF5 gene specific primers. 25 μg of total protein was extracted from each species, analyzed on 13% SDS-PAGE gels, and transferred onto an Immun-Blot PVDF membrane.

Results: We detected the PGF2α synthase gene in the Old World species (855 bp) but failed to detect it in any of the New World species except for a 2 Kb fragment corresponding to L. braziliensis. The Western Blot analysis detected the PGF2α synthase enzyme exclusively in the Old World strains.

Conclusion: The PGF2α synthase gene was only detected in one of the New World species, and none expressed the synthase enzyme even though most species of New World Leishmania retain the ability to synthesize PGF2α. Evidently, different genes and enzyme systems have evolved to synthesize PGF2α in the Old and New World species. This divergent evolution of the synthase genes in disparate geographical locations may suggest an important role for PGF2α in differing Leishmania vector compatibility between the Old and New Worlds.

doi:10.1016/j.ijid.2008.05.1015

65.028

Diarrhoeagenic Protozoan Parasites in Rural Persons and Links to HIV Infection and Drinking Water Sources

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Diarrhoea accounts for most of the global morbidity and mortality. It is mostly waterborne and causes an estimated 2.2 million deaths yearly. Ninety percent (90%) of HIV/AIDS patients in developing countries suffer from episodic diarrhoea.

This study enrolled 113 subjects who volunteered in a rural community in Zimbabwe. Thirty-four (30%) were males, 79 (70%) were females whose ages ranged from 2—89 years. HIV counseling and testing was done. Stool samples were collected from 104 subjects as well as 1 litre water samples from their drinking water sources. Examinations for parasitic infections were done on all samples using the standard parasitology operating procedures for processing samples.

Methods used were wet preparations, formal ether concentration method, gomori/trichrome staining and the cold Ziehl Neelson staining. The same methods as described above were also done for water samples, except the formal ether method was replaced by the zinc sulphate technique.

Twenty-nine (25.7%) of the study subjects were HIV positive and 84 (74.3%) were negative by 2 rapid serology tests.