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Study of the Prevalence and Risk Factors of Parasite (Helminthes and Protozoa) amongst Labors in Al Ain District

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Abstract

Introduction: United Arab Emirates is a multicultural country and approximately 65% of the population are expatriates from low- and middle-income developing countries that have a high burden of intestinal parasitic infections (IPI).

Aim: The primary aim is to estimate the prevalence of, and factors associated with IPI in an occupational sample of expatriates in Al-Ain.

Methodology: This study utilized an observational analytical cross-sectional study and recruited a representative sample of expatriate employees. Participants completed a questionnaire; and provided a fresh stool sample. Fecal specimens were analyzed for a range of IPI species using microscopy, Ziehl–Neelsen stain, and polymerase chain reaction (PCR) techniques.

Results: 25% of participants harbored intestinal parasites; 15% with protozoa, while 10% had helminths infection according to microscopy diagnosis. Higher incidents of protozoa and helminths infection were identified using PCR.

Conclusion: IPI can be found in more than quarter of the survey population and this conclusion shed a light on the importance of this study in understanding the pattern of IPI infection and transmission in the UAE.

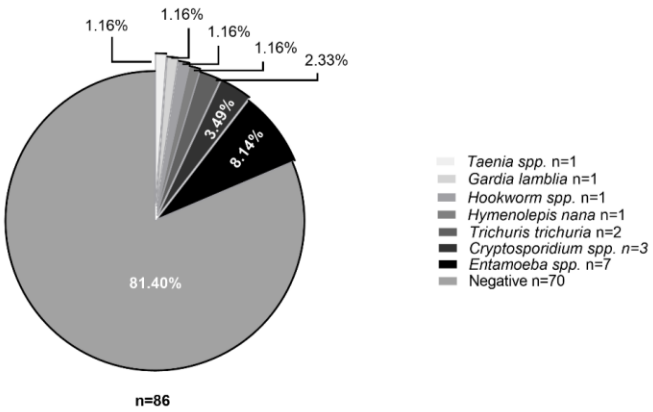


Figure 1: Prevalence of all-species infection using microscopy. Pie chart showing the percentage of intestinal protozoan and helminthes seen under the microscope in participants stool sample.

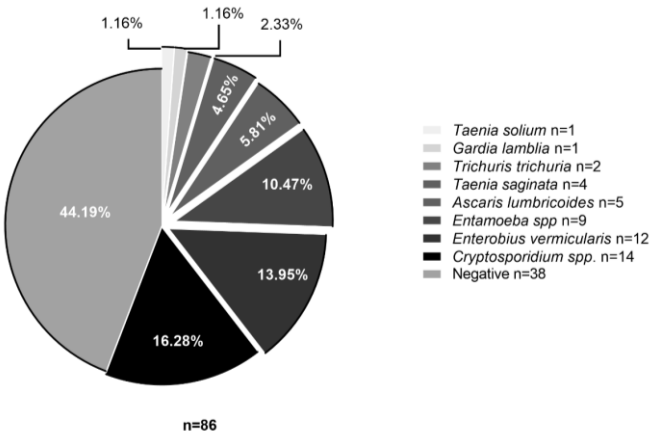


Figure 2: Prevalence of all-species infection using PCR. Pie chart showing the percentage of intestinal protozoan and helminthes by conventional PCR in participants stool sample.

Recent Publications

1. Study of the Prevalence and Risk Factors of Parasite (Helminthes and Protozoa) amongst Labors in Al Ain District. (forthcoming)
2. Berer K, Mues M, Koutrolos M, **Rasbi ZA**, Boziki M, Johner C, Wekerle H, Krishnamoorthy G. Commensal microbiota and myelin autoantigen cooperate to trigger autoimmune demyelination. Nature. 2011 Oct 26; 479(7374): 538-41.
3. **Z.Al-Rasebi**, A. Shahin, A, AL-Awadhi, N, saif, M, Al-Marzouqi, E.Mensah-Brown and M.L. Lukic, Galectin-3 is required for the induction of experimental allergic encephalomyelitis. Department of Microbiology and Immunology, Department of Anatomy Faculty of Medicine and Health Sciences, UAE University, Al-Ain, P.O.Box 17666, united Arab Emirates. (Poster)
4. Jiang HR, **Al Rasebi Z**, Mensah-Brown E, Shahin A, Xu D, Goodyear CS, Fukada SY, Liu FT, Liew FY, Lukic ML. Galectin-3 deficiency reduces the severity of experimental autoimmune encephalomyelitis. J Immunol. 2009 Jan 15; 182(2): 1167-73.
5. Mensah-Brown EPK**, Al Rasebi Z**, Shahin A, Al Shamsi M, Arsenijevic N, Hsu DK, Liu F-T, Lukic ML. (2008) Targeted disruption of the galectin-3 gene results in decreased susceptibility to multiple low dose streptozotocin- induced diabetes in mice. Clinical immunology. Volume 130, Issue 1, January 2009, Pages 83-88



Biography

Dr. Zakeya Al Rasbi works as Assistant Professor, in Department of Microbiology and Immunology, College of Medicine and Health Sciences at United Arab Emirates University the Emirates. Also, she is the Emirates Center for Happiness Research (ECHR) Director. Her research lab focuses on the connection between parasitology and immunology, and how recent studies link parasitic infection in gastrointestinal tract to autoimmune disorders.

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