



Editorial

An Eighteen Year Study of Intestinal Protozoans in the Los Angeles Area Between 1996 and 2013

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Introduction

Parasitological studies of large patient populations are rare in the United States compared to third-world countries where endemic parasitosis are more frequently reported (1). We routinely monitor and report the patterns and trends of human parasitosis in the US at the Parasitology Center, Inc. (PCI), in Scottsdale, Arizona. It was revealed that 916 (32%) of 2896 examined patients from 48 states were infected with 19 species of intestinal parasites in the year 2000 (2). In that study, 314 of 859 examined patients (36%) from California were found to be infected (2). Infections with helminth parasites such as *Ascaris lumbricoides* and non-pathogenic protozoans were rare; therefore, they were not included in the present study. The seven reported species of protozoan parasites constituted 91.5% of infections reported in the United States. Multiple infections with 2-4 parasitic species constituted 10% of the infected cases (2). We also investigated the epidemiology of *Blastocystis hominis* in 48 states and the District of Columbia in 2002-2004 and included trends in annual, seasonal, geographical and host distribution and symptomology by age, gender, and season (3). In that report, 16% of 10582 fecal specimens from 5291 patients tested positive for *B. hominis*; in California, 263 of 1,328 examined patients (20%) were also positive for *B. hominis*. In a similar 3-year epidemiological study of 9856 fecal specimens from 4,928 patients from all states and the District of Columbia that we tested between 2003 and 2005, 279 (6%) were positive for *Cryptosporidium parvum* infection. Studies of this magnitude have not been performed in the US. Few studies have been done on relatively large patient populations in the US (4,5) or more geographically limited populations, which report the prevalence of *B. hominis* infection only in California (6) and Ontario (7). The present investigation is the first to cover a span of 18 years. Evaluating the patterns and trends of parasitic infections in studies of such a long duration is a great tool for understanding the epidemiological characteristics and disease burden, improving the reporting of cases, planning preventive

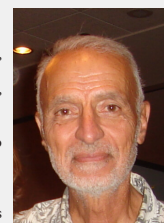
Brief Bio of Dr. Omar M. Amin

Education

DNM. Dr. of Natural Medicine, Univ. of Natural Medicine, Kihei, HI, 2002
Ph. D. Zoology & Parasitology, Arizona State University (ASU), Tempe, 1968.
M. Sc. Medical Entomology, Cairo University, Egypt, 1963.
B. Sc. Agricultural Sciences (Zoology & Botany), Cairo University, 1959.

Employment and Experience

1992- present: Director and owner, Institute of Parasitic Diseases (IPD) & Parasitology Center, Inc. (PCI), Scottsdale, AZ 85259.
At PCI, we diagnose parasitic agents of infectious diseases as well toxic elements causing NCS (Neuro-cutaneous Syndrome) and recommend herbal and botanical remedies, vitamins, and nutritional supplementation for treatment and rehabilitation We have also developed our own herbal anti-parasitic remedy: Freedom-Cleanse-Restore which is working magnificently. At IPD, we continue our active research on wildlife helminthology with a special emphasis on the Acanthocephala but with side interest in the cestodes (tape worms), nematodes and trematodes (flukes).
1971-92: Professor of Parasitology, Allied Health, and Biology, University of Wisconsin, WI.
1969-70: Visiting Fellow, Virology Sect., Center for Disease Control, Atlanta, GA. Research on Rocky Mountain spotted fever & tick disease vectors.
Earlier employment at the US Naval Medical Research Unit # 3 (NAMRU-3), Cairo



Research interests and experience

Nationally and internationally recognized authority in Parasitology, (Protozoology, Helminthology, Arthropod ecto-parasitology) and Infectious Diseases with over 290 major publications including ones on Herbal Remedies for Parasitic Infections and a 5-part video series on Parasite Infections in Humans (used in medical schools); considerable worldwide field/research and teaching experience. A recent book on "OF PARASITES AND MEN (2 vol., 1700 pp.) was just published, Eliva Press, <https://www.amazon.com/dp/9975347568>;

Scholarships and Grants

Institutional grants in support of research and international seminars and workshops annually, 1992-present.
Foreign Senior Exchange Scholar (USIS), conduct workshops on Epidemiology & Parasitic Diseases of Wildlife/Man, Univ. of Bahrain, Persian Gulf, 1989.
Fulbright Scholar, Health Ministry, Bahrain, malaria epidemiology/control, 1986-87.
Many other prior grants and scholarships and annual institutional grants from PCI.

Worldwide lecturing

Practically on perpetual worldwide lecture tours averaging 6-15 presentations/year, not including US-based lectures. Locally, have lectured at the Southwest School of Naturopathic Medicine, AHIMA (Arizona Homeopathic & Integrative Medical Assoc.), National Naturopathic Medical Assoc. meetings, and many society meetings, etc.; with appearances on local and national news media re NCS. Recently, lectures in Mexico, Peru, Ukraine, North Africa, Czech Rep., Slovakia, and Egypt. A list of lectures and publications can be provided upon request.

Active Membership in Professional Societies

Includes 12 professional societies in the USA and abroad; board member of most.

strategies, and designing therapeutic and public health measures in the management of these infections. Nevertheless, an overview of studies of shorter duration from comparable urban/suburban area in developing and developed nations are included.

In this study, seasonal and annual prevalence rates of intestinal protozoans were studied for a period of 18 years in an urban/suburban Los Angeles area for the first time in the world. A total of 7766 fecal specimens from 3883 patients in the Los Angeles County, from 1996 to



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2013 were tested at PCI, Scottsdale, Arizona. During this period, 1629 (41%) patients were found to be infected with one or more protozoan parasites. The most prevalent parasites were *Blastocystis hominis* (19%), *Entamoeba histolytica*/*E. dispar* (6%), *E. hartmanni* (6%), and *Cryptosporidium parvum* (5%). *Blastocystis hominis* made up 45% of all infections. The prevalence of *Blastocystis hominis* infection progressively declined through 2013 while that of *C. parvum* infection increased. Infections with *B. hominis* were more prevalent in colder weather and the lowest prevalence was observed in August and September. Infections with *C. parvum* were the most prevalent from March to June and the lowest prevalence was observed in August. The overall monthly prevalence for all protozoan parasites varied between 34% in August and 51% in February. The composition of the parasitic fauna diagnosed, annual prevalence rates, and seasonality were discussed in comparison with other studies.

Conflict of Interests

The authors declared that no competing interests exist.

Ethical Issues

Not applicable.

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