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Paper Poster Session I

Clinical and diagnostic parasitology

Increased cases of helminthiasis in a tertiary-care hospital in Parma (Italy) during the summer 2014

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Objectives. The epidemiology of intestinal helminthiases in Europe is underestimated since they are usually not notified. The aim of this study was to describe the increasing of these parasitoses observed in our area during the summer (3rdJune-3rdOctober 2014) compared to winter and spring (1stJanuary-2ndJune 2014) in patients with suspected intestinal parasitoses both Italians and Foreigners.

Methods. 1,928 faecal samples of 1,355 patients analysed in a tertiary-care hospital (Parma, Italy) in the period 1stJanuary-3rdOctober 2014 were subjected to macroscopic and microscopic examination (direct and after formaline-ethilacetate method) according to standard procedures to search for the presence of helminths (adult/larval stages, ova) and protozoa (trophozoites, cysts), to an immunochromatographic assay for the detection of *Giardia intestinalis* and *Cryptosporidium* spp. specific antigens, and to cultures for protozoa and larvae of nematodes. Selected samples were also subjected to Real-time PCR assays for the identification of *Entamoeba histolytica*, *E. dispar*, *Dientamoeba fragilis,* and intestinal spirochaetes.

Results. Among the 1,355 patients, for 21 (0.6%), 5 Italians (23.8%) and 16 Foreigners (76.2%), intestinal helminthiasis were diagnosed, 14 (66.6%) out of which were observed in the summer period. Eleven single infections by *Strongyloides stercoralis* (3), *Ancylostoma duodenale* (2), *Enterobius vermicularis* (2), *Hymenolepis nana* (1), *Diphyllobothrium latum* (1), *Dicrocoelium dendriticum* (1)*, Taenia saginata* (1), were diagnosed. In the remaining 10 cases mixed infections by helminths (*S. stercoralis*, *A. duodenale*, and *H. nana*) associated with protozoa (*G. intestinalis*, *Blastocystis hominis*, *D. fragilis*, *E. dispar*, and *E. coli*), were found. The diagnosis of helminthiasis was achieved by culture-concentration method for larvae nematodes and by microscopic examination including concentration.

Clinical data regarding the patients whose samples were found containing helminths indicated that the most reported symptoms and signs included abdominal pain, diarrhoea, rectal bleeding, and/or perianal pruritus.

Conclusion. Even though our laboratory is located in an area where intestinal helminthiases are not frequently diagnosed, they are particularly associated to immigration, travels, and adoption of children from developing countries. Our results showed in our area an increase of about 50% of helminthiases during the summer period (3rdJune-3rdOctober 2014): 12 patients were from Africa/Asia and they were arrived in Italy for the first time or came back from their country of origin after the summer holidays. Knowledge about the epidemiology of parasitic infections, including the intestinal one, is advocated in non-endemic areas in order to make an accurate diagnosis, realize an adequate patient care, and adopt appropriate control measures.