

## O0358 Unrecognised giardiasis and cryptosporidiosis in Denmark

Gitte Nyvang Hartmeyer<sup>\*4</sup>, Marianne Nielsine Skov<sup>1</sup>, Silje Vermedal Hoegh<sup>1</sup>, Elisa Knudsen<sup>1</sup>, Ming Chen<sup>2</sup>, Ram B. Dessau<sup>3</sup>, Michael Kemp<sup>1</sup>

<sup>1</sup>Odense University Hospital, Clinical Microbiology, Odense, Denmark, <sup>2</sup>Hospital of Southern Jutland, Clinical Microbiology, Sønderborg, Denmark, <sup>3</sup>Slagelse Hospital, Clinical Microbiology, Slagelse, Denmark, <sup>4</sup>Odense University Hospital, Department of Clinical Microbiology

**Background:** The prevalence of diarrhoea-causing intestinal parasites such as *Giardia duodenalis*, *Cryptosporidium* species, and *Entamoeba histolytica* in a low risk country as Denmark is poorly described. In this prospective study the occurrence of these three parasites was established in southeast, southwest and the central part of Denmark, using stool samples referred by General practitioners and hospitals submitted for testing for bacteria and viruses.

**Materials/methods:** Stool samples from 1298 patients (one sample each) were collected the last week in every month during one year from, September 1<sup>st</sup> 2015 to August 31<sup>st</sup> 2016. Each month approximately 25 samples from children aged sixteen or younger and approximately 25 samples from all other age groups were collected randomly, from the three areas. The samples were stored at -80°C before DNA extraction and real-time PCR analysis for *G. duodenalis*, *Cryptosporidium* spp. and *E. histolytica*. Samples found positive for *Cryptosporidium* spp. were subsequently tested by *Cryptosporidium hominis/parvum* real-time PCR.

**Results:** *G. duodenalis* was detected in 4 (0,3%) and *Cryptosporidium* spp. in 17 (1,3%) of the samples (identified as *C. hominis* in 2 samples and *C. parvum* in 13, while species identification failed in 2). *E. histolytica* was not detected. Twelve (70,6%) of the patients with *Cryptosporidium* spp. were children <17 years old, four (23,5%) were patients between 30 and 40 years old, and one (5,9%) was more than 50 years old. One sample with *G. duodenalis* was also positive for rotavirus and *Campylobacter* spp. was cultured from another. *Aeromonas* spp. was cultured from one sample positive for *Cryptosporidium* spp.

**Conclusions:** We investigated almost 1300 stool samples submitted for testing for bacteria and viruses and detected *G. duodenalis* in 0,3% and *Cryptosporidium* spp. in 1,3% of patients. The prevalence of *Cryptosporidium* spp. in children was 2,2%. The results confirm and extend a recently published study, where we detected *Cryptosporidium* spp. in 1,3% in samples from another cohort of children less than sixteen years old. The results suggest that routine testing for agents of diarrhoea should include *Cryptosporidium* spp. and maybe even *G. duodenalis*, especially in children.