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ABSTRACT BOOK

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sociated with irritable bowel syndrome and food intolerances. This study investigates schools to estimate the asymptomatic carriage of enteropathogenic protozoa in Spain.

Methods:

We performed a cross-sectional study in schools in Leganés, inviting children (4-14 years), their siblings 0-16 years, parents and teachers. We collected stool samples and demographics; excluding symptomatic individuals, defined as diarrhoea in the past week (N=43). We analysed samples with Real-Time PCR and (semi-)nested PCR. Positive samples were sequenced and genotyped. We calculated carriage and odds ratios (aOR) adjusted for family clusters with logistic regression.

Results:

School response rates varied between 15-47%. After exclusion, we studied 623 individuals from 491 families or teachers. The carriage risk for any protozoa was 21%, 95% Confidence interval (95%CI):18-25%, (N=133); Blastocystis: 13% 95%CI:11-16% (N=81); G. duodenalis: 9% 95%CI:7-12% (N=55); Cryptosporidium: 3% 95%CI:2-5% (N=18). One person was infected with all three protozoa, 19 had two protozoa, only seven had another family member with infection. The odds of Blastocystis infection increased with age; 6-9 years: aOR 2.8 (95%CI:1.5-5.1); 10-16 years: aOR 3.5 (95%CI:1.6-7.7), >30 years: aOR 6.1 (95%CI:2.0-18.5); compared to 0-5 years. The odds of Cryptosporidium infection increased in females (aOR 3.9, 95%CI:1.2-12.5) compared to males and children 10-16 years (aOR 5.4 95%CI:1.5-19.1) compared to 0-5 years.

Conclusions:

We detected sizeable asymptomatic infection, increasing with age, in those accepting screening. Considering possible implications, we reiterate the importance of good hygiene measures throughout all ages to protect from protozoal infections. Furthermore, we recommend further testing and analytical studies to deduce associated risk factors and outcomes.

Subject: Microbiology

Keywords: Giardia duodenalis, Cryptosporidium spp, Blastocystis spp., asymptomatic infection

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Track 5: Influenza, TB and other respiratory viruses (1): Surveillance, Incidence and Burden

Moderator:
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Abstracts

5.1. Evaluation of ECDC Influenza-like illness (ILI) case definition to detect respiratory syncytial virus (RSV) infection through the Influenza Surveillance System in Portugal

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Background:

One of the main challenges for the implementation of a global Respiratory syncytial virus (RSV) surveillance system is the lack of a suitable case definition for RSV disease. In Portugal, RSV cases are detected through the Influenza Surveillance System (ISS) using the ECDC Influenza-like illness (ILI) case definition. The aim of this study was to evaluate the suitability of this case definition to detect RSV infections in Portugal.

Methods:

We conducted a retrospective and observational cross-sectional study of 4,711 cases with individual clinical symptoms and laboratory-confirmed result for respiratory virus between October 2010 and May 2017. Association between clinical characteristics and RSV detection using bivariate and multinomial logistic regression was carried out. The ILI case definition accuracy was assessed by its sensitivity, specificity, and area under the receiver operating characteristic curve (AUC). A 0.05 significance level was accepted.

Results:

A total of 141 (3%) samples were laboratory-confirmed RSV positive cases, being highly significant (P < 0.0001) among children less than 5 years old (12/141,8.5%) and adults more than 65 years old (32/141,23%). Cough (OR=2.71;95CI1.19-6.18) and difficulty breathing (OR=2.16;95CI1.53-3.06) were best predictors for RSV infections. However, fever or feverishness (OR=0.4;95CI0.27-0.59), headache (OR=0.65;95CI0.46-0.93) and myalgia (OR=0.34;95CI0.23-0.5) were negatively associated with RSV disease although were significantly associated with influenza positive cases (RRR=3.62; 95CI2.95-4.45, RRR=1.53;95CI1.33-1.75, and, RRR=1.95;95CI1.61-2.37, respectively). The ILI case definition was not significant and showed a sensitivity of 80.9% (73.4-87), specificity of 19.7% (18.6-20.9) and an AUC of 0.623.

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Conclusions:

We demonstrated that ILI case definition was not accurate for RSV detection in Portugal. Therefore, the case definition should be adapted within the ISS or a specific RSV surveillance system should be implemented in Portugal.

5.2. Performance of ECDC ILI case definition and ICPC R80 code for influenza surveillance based on the Portuguese Influenza Surveillance System

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Background:

Swift and accurate identification of influenza epidemics can reduce epidemic-related morbimortality and economic burden. It relies upon a sensitive and specific influenza-like illness(ILI) case definition. The impact depends on the virus subtype, individual age group and vaccination status. In this study we took advantage of the Portuguese Influenza Surveillance System(ISS) database to study the clinical factors associated with the laboratory confirmed diagnosis of influenza and to assess and compare the performance of the two main case definitions used in Portugal: the European Centre for Disease Prevention and Control(ECDC) ILI case definition and the International Classification of Primary Care(ICPC) R80 code.

Methods:

We conducted a retrospective, observational cross-sectional study using the ISS database of 6,769 cases with individual clinical symptoms of both case definitions, vaccination status and a nasopharyngeal swab result with virus subtype collected between October 2010 and April 2017. The performance of both case definitions were assessed by their sensitivity, specificity and area under the receiver operating characteristic curve(AUC). We tested the association between a positive result for influenza infection and sex, vaccination status and clinical symptoms stratified by age group using logistic regression. The significance level was 0.05.

Results:

Cases corresponded mostly to the 18-64 years-old group(mean 39.9±21.2) and non-vaccinated adults(86.4%). The ECDC ILI case definition was the most sensitive(84.1%). The ICPC R80 code was the most specific(47.6%), with the highest AUC(0.551). The most associated symptoms with a positive result were fever(OR:4.16; 95CI:3.38-5.12), cough(OR:3.17;

95CI:2.57-3.90) and shivers(OR:1.98; 95CI:1.71-2.28) while the sudden onset of symptoms was not associated significantly.

Conclusions:

We suggest using the most sensitive case definition complemented with a specific laboratory test since case definitions per se are not accurate enough to predict influenza infection.

5.3. Burden of respiratory syncytial virus associated hospitalisation in the first year of life in a major urban city, Lyon, France 2010 to 2016

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