2177. The Impact of the BioFire® FilmArray Gastrointestinal Syndromic Panel on the Management of Infectious Gastroenteritis due to Diarrheagenic E. coli Strains in a Large Community Hospital

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Background. PCR-based rapid diagnostic tests (RDTs) provide rapid and accurate infectious gastroenteritis (IGE) etiologies within hours. However, there are limited data evaluating the impact of these panels on the appropriate management for diarrheagenic E. coli strains (DECS). This study evaluated the impact of the BioFire® FilmArray® GI panel on the appropriate antimicrobial management of DECS.

Methods. A retrospective analysis was conducted at a large community hospital in San Antonio, TX. Patients with a positive infectious diarrhea diagnostic panel (IDDP) for DECS from October 1, 2015 to September 30, 2016 were included. A total of 4520 patients were included. Overall, the IDDP detected 876 cases of DECS. Of these cases, 374 patients were included for analysis. Overall, the IDDP did not lead to a change of therapy in 96% of cases. However, the IDDP resulted in 84 antimicrobial changes including initiation of appropriate antibiotics (n = 48) and de-escalation/discontinuation (n = 22), primarily in special populations, such as ICHs. The IDDP led to appropriate therapy optimization in 63%, 17%, and 9% of enteroinvasive E. coli (IEC), enterohemorrhagic E. coli (EHEC), enteropathogenic E. coli (EPEC), and enterotoxigenic E. coli (ETEC) cases, respectively. In contrast, 33% of Shiga toxin-producing E. coli (STEC) cases were inappropriately managed with antibiotics, and 33% developed HUS. Only 14% of all DECS cases generated an ID consult, and incidence of hemolytic uremic syndrome (HUS) were evaluated.

Results. A total of 374 patients were included for analysis. Overall, the IDDP did not lead to a change of therapy in 290 cases. However, the IDDP resulted in 84 antimicrobial changes including initiation of appropriate antibiotics (n = 48) and de-escalation/discontinuation (n = 22), primarily in special populations, such as ICHs. The IDDP led to appropriate therapy optimization in 63%, 17%, and 9% of enteroinvasive E. coli (IEC), enterohemorrhagic E. coli (EHEC), enteropathogenic E. coli (EPEC), and enterotoxigenic E. coli (ETEC) cases, respectively. In contrast, 33% of Shiga toxin-producing E. coli (STEC) cases were inappropriately managed with antibiotics, and 33% developed HUS. Only 14% of all DECS cases generated an ID consult, and incidence of hemolytic uremic syndrome (HUS) were evaluated.

Conclusion. Of note, this study found that the IDDP did not lead to a change in the management of most pathotypes. However, it was associated with positive changes in the management of DECS in specific patients, particularly ICHs. RDTs assist providers in the timely identification and treatment of IGE pathogens, but both antimicrobial and diagnostic stewardship remain critical for the optimal management of DECS.

Disclosures. All authors: No reported disclosures.

2179. Detection of Group A Streptococcus in the Saliva of Children Presenting With Pharyngitis Using the cobas®LIAT® PCR System

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Background. CLIA waived polymerase chain reaction (PCR) has recently become available as a point of care test for Group A Streptococci (GAS) in individuals presenting with pharyngitis, enabling rapid and accurate diagnosis. However, swabbing the pharynx results in discomfort and is often dreaded by young children which may result in poor quality sampling.

Objective. In order to assess the viability of saliva as a sample specimen for GAS, this study compared saliva samples with pharynx swabs of children with sore throat, using swabs inoculated by children sucking on them as they would a lollipop in the context of newly available very sensitive techniques.

Methods. We enrolled children ages 5–15 years presenting with sore throat and known to have a positive rapid streptococcal antigen detection test (RADT) performed on a posterior pharyngeal swab, at the discretion of the primary care provider. The RADT used was the SureVue® (Fisher Scientific) system. A second swab was obtained by having the child suck on the swab in the anterior mouth for 30 seconds and a third swab was obtained from the posterior pharynx, PCR was performed on these two additional swabs using the cobas®LIAT® (Roche) system according to the manufacturer’s instructions.

Results. Seventeen children were enrolled in the study between January and April 2019. The mean age of enrollment was 9.6 years (range 6–15). By design all children were known to have a positive RADT for GAS. The LIAT posterior pharynx swab was positive in all 17 subjects. In addition, the LIAT saliva swab was positive in all 17 subjects.

Conclusion. In this small pilot study, there was 100% concordance between the RADT for GAS and both the posterior pharyngeal and saliva swab using the