1491. Active Norovirus Surveillance in Children Under 5 Years with Diarrhea after Rotavirus Vaccine Introduction in Argentina (2017–2019)
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Background. Acute diarrhea is one of the leading causes of infant morbidity and mortality. Argentina introduced massive rotavirus vaccination in 2015. In several countries, this introduction has changed the distribution of enteropathogens. The decrease in the prevalence of rotavirus has been described at the expense of an increase in Norovirus (NoV) activity worldwide. The aim of this study was to analyze the role of NoV in acute diarrhea cases in outpatient children under 5 years of age and their epidemiological profile.
Methods. A prospective and cross-sectional study in ≤5 years outpatients attended for acute diarrhea in Children’s Hospital “Dr. Ricardo Gutierrez” in Buenos Aires, Argentina, from July 2017 and March 2019 was conducted. Active epidemiological surveillance was performed with a specific case reporting form. Stool samples were tested for NoV (RT-qPCR). Clinical and epidemiological data were recorded.
Results. A total of 252 patients were enrolled and 235 stools samples were tested. Median of age was 22.3 months (IQR: 11–30), 58.7% were male. The most frequent symptoms were fever and vomiting in 63.1% and 53%, respectively; 52% had watery diarrhea, 45.2% had moderate diarrhea according to Vesikari Scale, 95.6% were nor-mocompromised children. A 72% had received rotavirus vaccine, 86% of them with full scheme. From samples tested, 27% (n = 63) were NoV positive. NoV was found throughout the year and the frequency of detection was higher in January and June (summer and winter in Argentina). Regarding genetic diversity the most frequent genogroup was GII (65%: G1/G2/3) and genotype GILF16-GIL4 Sydney (48%; 20/41). Bacterial co-infection was observed in 35%. Compared with negative cases, NoV were younger (18 vs. 20 months; P < 0.0001) and were associated with higher prevalence of rotavirus vaccination (88% vs. 66%; P = 0.02). No statistically difference was found regarding to gender, clinical outcome and severity.
Conclusion. NoV was detected at high frequency (27%) in children presenting moderate acute diarrhea, mainly in those who received rotavirus vaccine. Regarding sporadic acute diarrhea cases in children, it is important to consider NoV as a frequent etiological agent.
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We used the eHOST abstraction software to abstract 6 clinical variables from patient documentation in reviewed clinical charts. The remaining 23 variables were ranked by random forest (RF) variable importance and utilized in both an RF and stepwise logistic regression. Of the above variables with having a positive C. difficile PCR test, if multiple tests were ordered during a single hospital encounter, only the first test was included in our analysis.

Results. 3,070 tests were performed; of these, 72% were ordered in the first 72 hours of admission. Overall, 19% of tests were positive. After adjusting for clinical variables, patients with a prior history of C. difficile or who had received antibiotics in the past 24 hours were significantly less likely to have a positive test [OR 2.295 CI (1.54, 3.38) P < 0.0001] and [OR 16.95 CI (8.22, 31.41) P < 0.0001], respectively. Patients who used laxatives were significantly less likely to have a positive test [OR 0.75 CI (0.61, 0.91) P = 0.004]. The number of stools and presence of fever or leukocytosis were not significantly associated with a positive test.

Conclusion. Prior history of C. difficile and antibiotics use was highly associated with a positive C. difficile test, while laxative use was associated with a negative test. The number of stools was not significantly associated with a positive C. difficile test, suggesting this may be less important clinical factor than previously believed; however, restricting testing in patients receiving laxatives is likely warranted.

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1494. Fluoroquinolone as an Alternative Regimen for Klebsiella pneumoniae Liver Abscess
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Background. Klebsiella pneumoniae liver abscess (KPLA) is an endemic disease in East Asia. KPLA is usually caused by hypervirulent strains that are susceptible to all kinds of antibiotics except ampicillin. Patients with KPLA are commonly treated with β-lactams and need prolonged duration of intravenous therapy. Fluoroquinolone has high oral bioavailability and has the potential to shorten the duration of intravenous therapy, but studies regarding fluoroquinolone use in KPLA are limited. We aimed to compare the outcomes of patients with KPLA treated with β-lactams and fluoroquinolones.

Methods. Consecutive patients with KPLA in a tertiary medical center of Taiwan between 2011 and 2018 were enrolled retrospectively. Clinical characteristics and treatment outcomes were compared between cases treated with β-lactams and fluoroquinolones. Logistic regression was performed to identify risk factors of prolonged hospitalization (defined as > 30 days). Caspular genotypes and presence of rmpA or rmpA2 genes were analyzed among K. pneumoniae strains collected after July 2012. Hypervirulent strains were defined as those had rmpA or rmpA2 genes.

Results. A total of 330 KPLA patients identified, and the in-hospital mortality was 0.9% (n = 3). Nearly all K. pneumoniae strains were hypervirulent strains (97.1%). Caspular type K1 (n = 176) and K2 (n = 63) were the most common capsular types. Most patients received β-lactams (n = 296, 89.7%), and only 34 (10.3%) patients received fluoroquinolones as the main antibiotics (levofloxacin = 17; moxifloxacin = 10, ciprofloxacin = 7). The duration of intravenous antibiotics use in fluoroquinolones group was shorter than β-lactams group (20.12 ± 9.23 vs. 26.81 ± 16.10; P = 0.001). Prolonged hospitalization was more common in β-lactams group than fluoroquinolones group (32.1% vs. 11.8%, P = 0.014). The in-hospital mortality, duration of antibiotic use, and recurrence rate were similar between the two groups. Fluoroquinolones was independent protective factor for prolonged hospitalization (hazard ratio, 0.28; P = 0.026).

Conclusion. Fluoroquinolone is able to shorten the duration of intravenous antibiotic use and beneficial in prolonged hospitalization in patients with KPLA.

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