1190. Relationship Between Enteropathogen and Acute Gastroenteritis Disease Severity: A Prospective Cohort Study

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Background. Little is known about the association between specific enteropathogens and disease severity in outpatient children with acute gastroenteritis. Recent advances in diagnostics enabling the rapid and simultaneous detection of common enteropathogens have become readily available. While such knowledge can be used to optimize therapy it also has the potential to predict disease severity. Such knowledge can aid clinical decision making, can clarify guidance and expectations provided to families, and can guide public health policy.

Methods. We conducted a prospective cohort study of children with acute gastroenteritis who were brought for emergency department care. The primary outcome measure was the 20-point Modified Vesikari Scale (MVS) score calculated from symptom onset until day14 of follow-up (total MVS score). Stool and/or rectal swab specimens were collected and analyzed for 18 unique pathogens by molecular diagnostic assays (in-house 5 virus panel, Luminex xTAG Gastrointestinal Pathogen Panel) and/or bacterial culture. An enteropathogen was deemed to be present if a candidate pathogen was identified in the rectal swab or stool specimens by any testing method. Binary logistic regression was performed to assess the association between pathogens (including all pathogens as present or not) and disease severity with the dependent variable being the total MVS score categorized as severe (11–20 points) vs.. non-severe (0–10 points).

Results. The mean total MVS score (SD) was 12.8 (3.2) and 73.0% (807/1102) of participants experienced severe disease. A pathogen was identified in 72.8% (802/1102) of study participants. Rotavirus, norovirus GII and adenovirus were identified in 26.6% (293/1102), 23.0% (253/1102) and 16.0% (176/1102) of participants respectively. After adjusting for other pathogens significant predictors of severe disease were: rotavirus (OR=8.0; 95% CI: 4.8, 13.2), *Salmonella* (OR=5.4; 95% CI: 1.2, 24.4), adenovirus (OR=2.1; 95% CI: 1.3, 3.3), and norovirus GII (OR=1.8; 95% CI: 1.3, 2.6). *Clostridium difficile* (OR=1.6; 95% CI: 0.96, 2.6) and *Aeromonas* (OR=0.97; 95% CI: 0.2, 4.7) were not significantly associated with severe disease.

Conclusion. In children with acute gastroenteritis, the enteropathogens associated with severe disease included rotavirus, *Salmonella*, adenovirus and norovirus GII.

Disclosures. **All authors:** No reported disclosures.

1191. Comparison of Antibiotic Regimens in Intra-abdominal Infections

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Background. Appropriate antimicrobial therapy and sometimes urgent surgery are life-saving in intra-abdominal infections (IAI).

Methods. We performed a retrospective case control study to evaluate the efficacy of ceftriaxone, ceftriaxone plus metronidazole, tigecycline, and ertapenem regimens in IAI. Patients aged >18 years and diagnosed with IAI between 2015 and 2017 are included in the study. Definitions are based on IDSA IAI guideline. Significant resolution of all signs and symptoms of IAI with no further need for antimicrobial therapy or surgical intervention for infection is accepted as clinical response (CR). Microbiological response (MR) is assessed among patients with positive culture and defined as documented or presumptive microbiological eradication of pathogen.

Results. 659 patients are included in the study. Mean age was 56 years. Source control was maintained in 45.5% of patients. Among 54 patients with available culture specimen, *E.coli* was the most isolated pathogen (81% ESBL +). Comparisons of antibiotics in all patients and in complicated IAI are shown in Table 1 and 2, respectively.

Conclusion. Ertapenem, and especially tigecycline are good options in IAI in the era of high antimicrobial resistance.

Table 1. Comparison of antibiotic regimens in all patients (n (%), n ± SD)

	Ceftriaxone (343)	Ceftriaxone/ Metronidazole (230)	Tigecycline (27)	Ertapenem (59)	P
APACHE II ≥15,	5 (1.5)	14 (6)	2 (7.4)	10 (16.9)	**<0.05**
Complicated IAI	14 (4)	121 (52.6)	15 (55.6)	39 (66)	**<0.05**
Source control	93 (27.3)	162 (70.4)	16 (59.3)	29 (50)	**<0.05**
Length of therapy, days	7.5 ± 3.6	9.0 ± 5.0	12.4 ± 5.4	13.4 ± 6.8	**<0.05**
Length of stay, days	7.3 ± 4.9	9.4 ± 6.7	15.7 ± 9.4	22.2 ± 17.9	**<0.05**
CR	338 (98.8)	217 (94.3)	25 (92.6)	49 (83)	**<0.05**
MR	4/5 (80.0)	10/12 (83.3)	7/7 (100)	15/15 (100)	0.23
Mortality	1 (0.3)	4 (1.7)	1 (3.7)	4 (6.8)	**<0.05**

Table 2. Comparison of antibiotics in complicated IAI (n (%), n±SD)

	Ceftriaxone/ Metronidazole (121)	Tigecycline (15)	Ertapenem (39)	P
Efficacy of empirical therapy to isolated microorganism	3/15 (20)	3/4 (%75)	9/13 (69.2)	0.016
Length of therapy, days	10.4 ± 5.6	15.7 ± 4.1	14.1 ± 7.2	< 0.05
Length of stay, days	11.2 ± 7.4	19.9 ± 9.6	25.4 ± 20.7	< 0.05
CR	110 (90.9)	14 (93)	31 (79.5)	0.12
MR	7/9 (77.8)	5/5 (100)	12/12 (100)	0.12
Mortality	3 (2.5)	0 (0.0)	3 (7.7)	0.22

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1192. Microbiology of Infected Walled-off Necrosis Following Severe Acute Pancreatitis

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Background. Formation of fluid collection occur in about 15–20% following severe acute pancreatitis. These fluid collections could become infected with bacterial and fungal organisms and form infected walled-off necrosis (WON). Management options for WON have evolved over the last decade from invasive surgical intervention to combined percutaneous and endoscopic approach (dual modality drainage (DMD). We describe the culture result of WON obtained with DMD.

Methods. The study was performed at Virginia Mason Medical Center, a tertiary medical center located in Seattle. We used a prospective, institutional review board-approved database which include onset of pancreatitis, size of WON, timing of drainage, duration of drain, culture result, antibiotics given, and patient information (gender, age and BMI). The data from December 2007 to December 2016 were analyzed. SAS was used for analysis.

Results. A total of 182 patients underwent DMD for symptomatic and infected walled off necrosis of which 76 grew organism with culture. Forty-two were monomicrobial while 34 were polymicrobial. For the monomicrobial isolates, coagulase negative staphylococcus was isolated most frequently (6), followed by *Staphylococcus aureus* (4) and viridans streptococcus (3). WON was significantly more likely to be seen in older patients ($P = 0.008$) and in obese patients ($P = 0.06$). The longest diameter of WON nor sex of the patient did not significantly factor into whether the culture grew no organism, one organism, or multiple organisms.