

705. Community Acquired Gastrointestinal Infections among Transplant Recipients

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Session: P-33. Enteric Infection

Background. Community-acquired gastrointestinal (cGI) infections carry a significant risk of mortality and morbidity. Transplant patients are at increased risk of infectious complications. We aimed to study the risks and outcomes of cGI infections in this population.

Methods. After the institutional review board's approval, a multi-center retrospective study was conducted. Data was collected from inpatient admission for patients with a history of hematopoietic stem transplantation or solid organ transplantation. Data regarding patient demographics, gastrointestinal polymerase chain reaction (GIPCR), clinical presentation, medications, discharge, and length of stay were collected. Chi-square test was performed to compare categorical data, and student's t-test and Wilcoxon test were used to compare parametric and non-parametric variables accordingly.

Results. From 10/01/2017 to 07/14/2020, there were 445 encounters with GIPCR tests ordered. 48% were female, 53% were non-Hispanic White, and the mean age was 58 (SD ±14.6). Of the 445 encounters, 66 had a positive test. 40/66 had kidney transplants. The most common detected organisms were Norovirus (36%), Enteropathogenic *E. coli* (26%), *Campylobacter* species (9%), and Enterococcal *E. coli* (9%). The most common symptoms were abdominal pain and diarrhea, with 26% reported an exposure or a recent travel. There was no difference in the mortality rates between positive and negative GIPCR (3% versus 2.4%, p=0.7), during the study period. There was a significant difference in the mean length of stay between positive GIPCR with 7.5 (SD ±10.5) days versus 12.4 (SD ±18.3) days in negative GI PCR, p=0.036.

Conclusion. The majority of GIPCR tests were negative. Patients with positive GIPCR had shorter length of stay compared to negative GIPCR transplant recipients. There was no difference in mortality between positive and negative GIPCR among transplant patients. Future studies are required to evaluate the impact of cGI infections on transplant patients.

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706. Effect of the Covid-19 Pandemic on Rates of Recurrent *Clostridioides difficile* Infection in the Veterans Affairs System

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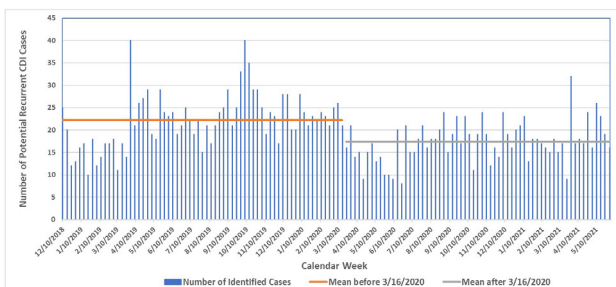
Session: P-33. Enteric Infection

Background. *Clostridioides difficile* infection (CDI) is common and classified as an urgent threat by the US Centers for Disease Control and Prevention. Recurrence (rCDI) occurs in 30% of cases and increases with subsequent episodes. As part of a trial of fecal microbiota transplantation vs. placebo for the prevention of rCDI, rCDI is identified using a case-finding algorithm that screens for potential cases across all Veterans Affairs facilities, a key component of which is a stool test confirming the presence of *C. difficile*. With the emergence of Covid-19 in the United States in early 2020, study personnel observed a decreasing number of rCDI cases. We hypothesized that Covid restrictions and fear of transmission prevented patients from coming to a VA facility to submit a confirmatory stool sample, the standard method of diagnosing rCDI. Accordingly, the algorithm was modified to also identify cases where rCDI was empirically treated, without confirmatory testing. Here we report on the prevalence of empiric treatment of rCDI during the Covid pandemic and changes in lab-confirmed cases over time.

Methods. Cases of potentially rCDI are identified by a weekly query of VA data, using an algorithm that includes laboratory testing results, diagnostic codes, and prescriptions. The source database is updated daily from every VA facility, encompassing over 8 million Veterans. Potential cases are reviewed by research coordinators using the medical record to determine study eligibility. Beginning June 2020, the algorithm was adjusted to also identify patients with lab confirmation of their first CDI episode but none for their recurrence and identified those who were prescribed treatment for rCDI.

Results. We observed a reduction in both the number of weekly cases (22.2 vs. 17.4; P < 0.001) which is a 22% decrease after the Covid-19 emergency declaration (figure). Post-declaration, empiric treatment was prescribed to 159 Veterans (mean, 3.3/week).

Potential cases of rCDI/week pre- and post Covid-19 pandemic declaration



Conclusion. There was a significant drop in laboratory-confirmed rCDI associated with Covid-19. Recurrent CDI was frequently empirically treated during the Covid-19 pandemic, potentially exposing many patients with non-CDI diarrhea to unnecessary antimicrobial use and its attendant risks.

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707. Hospital-Onset *Clostridioides difficile* Infection Rates During COVID-19 Pandemic in the ICU Patients

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Session: P-33. Enteric Infection

Background. Due to COVID-19 gastrointestinal microbiome alterations, COVID-19 can be complicated by *Clostridioides difficile* infection (CDI). This retrospective cohort study aimed to evaluate the prevalence of *Clostridium difficile* infection in patients with COVID-19 pneumonia

Methods. A retrospective cohort study was conducted on PCR Covid-19 positive patients admitted in the ICU from September, 2020 to 30th April 2021. All patients in the cohort study were on mechanical ventilation, or at some point during their ICU admission required mechanical ventilation. Hospital-onset (HO-CDI), defined as a positive *C. difficile* test over 3 days after admission.

Results. Overall, during the study period, a total of 240 PCR Covid-19 patients were admitted to the ICU; of these, 11 (4.5%) were COVID-19 CDI positive. Nine were males (81%). The mean hospital stay for these COVID-19 patients was 12 days (range 1-59 days). HO-CDI median day of identification was 12 days. All patients received ≥2 antibiotics and dexamethasone at admission. Compared to historical controls, COVID-19 patients did not have a higher overall CDI positive rate. However, mortality among COVID-19 HO-CDI patients was increased 7/11 (63%).

Conclusion. Whether COVID-19 itself increases an individual's risk for CDI remains unclear. Multiple contributing factors drive CDI incidence, severity, and recurrence. Although protective measures such as gowns and gloves during COVID-19 increased, CDI cases in the hospital setting should continue to emphasize the importance of antimicrobial stewardship.

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708. Evaluation of Fungal Culture versus Bacterial Culture for the Identification of Various Mold Species

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Session: P-34. Eukaryotic Diagnostics

Background. Invasive mold infections are challenging to diagnose and in part relies on fungal cultures. A large proportion of mold isolates are recovered on routine bacterial cultures in our medical center, thus we sought to define the utility of bacterial versus fungal cultures for isolation of mold from clinical specimens.

Methods. Routine bacterial and fungal culture results from wound, tissue, body fluid, and respiratory specimens from Jan 2019-Dec 2020 from Keck Medical Center of USC (Los Angeles, CA) were retrospectively reviewed. Cases were excluded if specimens were collected specifically for dermatophyte recovery or for blood culture. Cultures in which mold, including dimorphic fungi, were isolated were included in the evaluation.

Results. Mold was isolated from 612 specimens from 408 patients, with recovery from 329 bacterial and 450 fungal cultures. Among the 329 bacterial cultures, fungal cultures were not requested in 119 (36.2%) while the remaining 210 had concurrent fungal cultures which recovered mold in 167 cases (79.5%). Of 450 fungal cultures recovering mold, a corresponding bacterial culture was performed in 445, isolating mold in 181 (38.8%) of these cases. Two or more molds were found in 28 fungal cultures and in 5 bacterial cultures. Of positive specimens with both fungal and bacterial cultures performed (n=488), mold was isolated in fungal cultures in 446 (91.4%) and in bacterial cultures in 209 (42.9%) (Table).

Yield of molds in 488 specimens with concomitant bacterial and fungal cultures

Organism (N)	Bacterial Culture (%)	Fungal Culture (%)
<i>Aspergillus</i> spp. (296)	150 (50.7)	238 (80.4)
<i>Penicillium</i> spp. (64)	2 (3.1)	63 (98.4)
Other hyaline molds (23)	6 (26.1)	23 (100)
Zygomycetes (17)	6 (35.3)	14 (82.4)
Dematiaceous mold (101)	45 (44.6)	95 (94.1)
<i>Coccidioides immitis/posadasii</i> (21)	10 (47.6)	20 (95.2)

Conclusion. Although a significant number of molds are recovered in routine bacterial cultures, over half would be missed without concomitant fungal cultures. Conversely, recovery of clinically relevant mold species was optimal when both bacterial and fungal cultures were requested on a specimen. This may be related to increased specimen sampling and incubation conditions allowing for broader organism recovery.

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