objective was to analyze if antibiotics and PPI/H2B (Proton Pump Inhibitors and H2 blockers) affected severity of CDI.

Methods: Retrospective analysis of all adult patients admitted to a tertiary medical center with diarrhea and a positive C *difficile* antigen test from 01/2017-12/2017. From more than 2000 stool samples submitted to the lab, C diff antigen was positive in 265 patients. 191 were diagnosed with CDI based on the 2-step algorithm. Clinical data was available for 168 patients. Severity of CDI was determined based on published guidelines. Fischer's exact test was used for statistical analysis.

Results: The mean age at diagnosis was 55.96. Toxin B was detected in 34% (57/168) patients and Toxin NAAT positive in 66% (111/168) patients. 57% of CDI was health care onset compared to 43% with community onset. 42% (72/168) were classified as severe out of which 40.2% (29) were toxin B positive, and 59.8% (43) were NAAT positive. There were no significant differences in severity of CDI based on toxin B and NAAT status (50.9% vs 38.4%, p=0.14). 46% of cases from community vs 39.6% from hospitals were classified as severe CDI (p=0.415). 72% of cases had antibiotic use in the last 30 days. Use of antibiotics was significantly associated with severe CDI (82% vs 64%, p=0.015). 62.5% (105) patients had history of PPI/H2B use and severity was not significantly associated with its use (p=0.872).

Conclusion: Our study shows that the presence of toxin did not significantly impact the clinical severity of CDI. The use of antibiotics did not affect the presence of toxin although the total number of CDI cases with previous antibiotic exposure was high. Patients who had recent antibiotic exposure were more likely to have severe clinical presentation. More toxin positive cases were health care onset but the effect was not pronounced. Severity of CDI did not significantly depend on health care onset or on exposure to PPI/H2B.

Disclosures: Atul Kothari, MD, Ansun Biopharma (Consultant)

731. The Emergence of Mobile Colistin Resistance (mcr) Genes among Enteric Pathogens in the United States — 2008–2019

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Session: P-29. Enteric Infection

Background: Colistin, once seldom used clinically, has resurged as a "last resort antibiotic" for multidrug-resistant infections and is still used in animal agriculture in countries outside the United States. During 2015–2018, 8 plasmid-mediated, mobile colistin resistance genes (*mcr*-1 to *mcr*-8) were each found in one or more clinical, animal, food, and environmental bacterial sources. We describe the epidemiology of *mcr* genes in enteric pathogens from US patients.

Methods: State public health laboratories have performed whole-genome sequencing on enteric bacterial pathogens since 2015, and some have sequenced older isolates. We screened sequences of isolates collected through 2019 for *mcr* genes using a workflow based on ResFinder 3.0. State health officials interviewed patients for clinical and epidemiologic information, including demographics, hospitalization, and travel history.

Results: We identified 41 patient isolates with *mcr* genes collected from stool, urine, and blood during 2008–2019. These included 37 nontyphoidal *Salmonella* (31 *mcr*-1, 6 *mcr*-3), 2 *Vibrio* (both *mcr*-4), and 2 Shiga toxin-producing *E. coli* (both *mcr*-1). The median patient age was 34 years (interquartile range: 24–54) and 54% were female. Of 23 patients with comorbidity data, 2 (9%) had immunodeficiency, 2 (9%) had past abdominal surgeries, and 1 (4%) had cancer. Patients sought care at doctor's offices (46%), emergency rooms (35%), and urgent care clinics (19%); 24% were hospitalized for the enteric illness. None died. Among 36 with information, 35 (97%) travelled internationally in the 12 months before illness; 30 (94%) of 32 traveled in the 7 days before. Only 4 (15%) of 27 had contact with a healthcare setting during their trip; common destinations were the Dominican Republic (35%), Vietnam (24%), Thailand (15%), and China (12%).

Conclusion: The data strongly suggest that many patients acquired infection abroad. Nearly one in four were hospitalized, raising concerns that plasmids carrying *mcr* genes could spread among patients hospitalized with infections caused by multidrug-resistant pathogens for which colistin is the only available treatment. The acquisition of *mcr* genes by US travelers highlights the need for a global approach to antimicrobial stewardship.

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732. Evaulation of Micafungin Treatment at Pediatric Patients: A cross-sectional Study from Tertiary Pediatric Centre

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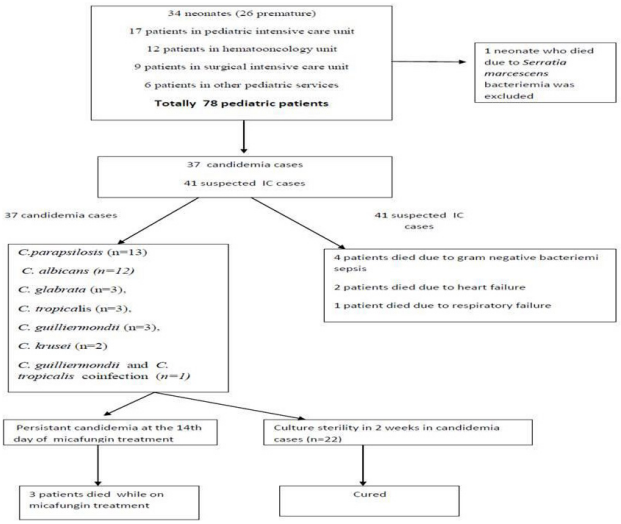
Session: P-30. Eukaryotic Diagnostics

Background: Micafungin is one of three currently available echinocandin for treatment of candidiasis and candidemia.

Methods: **C**hildren who were treated for micafungin for possible or proven invasive *Candidia* infection between May 2017 and October 2019 were included.

Results: In this cross-sectional study, totally 78 children with a median age of 3 months (8 days -17 years), 50 (64.1%, F/M: 0.56) male were included. Thirty four (43.6%) patients were neonate, 26 (76 %) of them were premature. Thirty seven patients (47.4%) received micafungin for candidemia and 41 (52.6%) patients received micafungin empirically for IC. Twelve (32.4%) *Candida spp* cultured were *C. albicans*, the rest twenty five (67.6%) *Candida spp* were non-albicans *Candida spp*. The most commonly cultured *Candida spp* was *Candida parapsilosis (C. parapsilosis)* (n=13) followed by *C. albicans* (n=12), *C. glabrata* (n=3), *C. tropica*lis (n=3), *C. guilliermondii* (n=3), *C. krusei* (n=2) respectively. Resistance rate of C. *parapsilosis* (n=13) isolates to fluconazole, voriconazole, amphotericin B, caspofungin, micafungin were as follows respectively; 66.7%, 100%, 69.2%, 90.9%, 37.5% respectively. Resistance rate of C. *albicans* (n=11) isolates to fluconazole, voriconazole, amphotericin B, caspofungin, micafungin were as follows respectively; 50%, 50%, 12.5%, 42.9%, 0% respectively. None of the C. *tropicalis*, C. *guilliermond*ii and C. *krusei* isolates were resistant to micafungin. Culture negativity could not be achieved at the end of 14th day of micafungin treatment in the 15 (16.9%) candidemia episodes. The most commonly isolated *Candida spp* in patients with treatment failure was *C. parapsilosis* (n=7), the other species were; *C. albicans* (n=5), *C. guilliermondii* (n=1), *C. tropicalis* (n=1) and *C. tropicalis* and *C. guilliermondii* coinfection (n=1) respectively. Median serum AST, ALT and creatinin levels didn't increase during and at the end of micafungin therapy. None of these patients had experienced an anormal kidney or liver function tests due to micafungin usage.

Characteristics of patients who received micafungin.and cultured Candida spp



Antifungal resistance patterns of Candida spp.

Table 3. Antifungal resistance patterns of *Candida spp.*

Antifungal	C. *parapsilosis* (n=13)	C. *albicans* (n=11)	C. *glabrata* (n=3)	C. *guilliermondii* (n=3)	C. *tropicalis* (n=3)	C. *krusei* (n=2)
Fluconazole*	8(66.7)	4 (50)	3 (100)	0(0)	1 (50)	1 (100)
Voriconazole*	3 (100)	2 (50)		0 (0)	1 (50)	
Amphotericin B*	9 (69.2)	1 (12.5)	2 (66.7)	0 (0)	2 (100)	0(0)
Caspofungin*	10 (90.9)	3 (42.9)	1 (33.3)	1 (50)	1 (100)	1 (100)
Micafungin*	**3 (37.5)**	**0 (0)**	**1 (33.3)**	**0 (0)**	0(0)	0(0)