and understanding the potential risk factors is the key to improving outcomes in this population.

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Presentation Type:
Poster Presentation
Subject Category: COVID-19

Comparison of Outcomes in Candidemia Between COVID-19 and Non–COVID-19 Patients

Angela Beatriz Cruz; Jennifer LeRose and Teena Chopra

Background: Fungemia is associated with high rates of morbidity, mortality, and increase in length of hospital stay. Several studies have recognized increased rates of candidemia since the COVID-19 pandemic. **Methods:** Patients with candidemia during January through May 2020 were identified through Theradoc. Patient demographics, comorbidities, hospital management, and microbiology were extracted by medical chart review. Patients were divided into cohorts based on COVID-19 status. The Fisher exact and Satterthwaite tests were used for analyses of categorical and continuous variables, respectively. **Results:** Overall, 31 patients developed candidemia and 12 (38.7%) patients tested SARS-CoV-2 positive. *Candida glabrata* was the most prevalent causative organism in both groups. On average, COVID-19 patients developed fungemia 12.1 days from admission, compared to 17.8 days in the COVID-19 negative or untested cohort (P = .340). Additionally, COVID-19 patients with a fungemia coinfection were significantly more likely to expire; 10 COVID-19 patients (83.3%) died, compared to 7 (36.8%) in the COVID-19–negative or untested cohort (P = .025). The cohorts did not demonstrate statistically significant differences in terms of demographic, comorbidities, hospital management, or coinfections. **Conclusions:** The prevalence of fungemia in COVID-19 patients is significantly greater than historically reported figures. Known risk factors for candidemia, such as use of corticosteroid, use of central venous catheters, and prolonged ICU length of stay were higher in the SARS-CoV-2–positive cohort in this period, which likely contributed to increased fungemia rates, as these factors are also more pronounced in those with COVID-19. Patients who developed candidemia in the COVID-19 cohort had poorer outcomes than those who were SARS-CoV-2 negative or were untested. Further investigation should be conducted in larger studies.

	SARS-CoV-2 Negative/Untested N = 19	SARS-CoV-2 Positive N = 12	P – value
Female, n (%)	10 (52.6)	5 (41.7)	0.716
Age, mean (SD)	58.2 (15.9)	69.3 (13.1)	0.051
Ethnicity, n (%)			
African American	10 (52.6)	10 (83.3)	0.233
White	5 (26.3)	1 (8.3)	
Other/Unknown	4 (21.1)	1 (8.3)	
Expired, n (%)	7 (36.8)	10 (83.3)	**0.025**
Length of Stay, mean (SD)	35.1 (32.2)	21.8 (13.6)	0.125
Charlson Comorbidity Index, n (%)			0.660
0 – 2	6 (31.6)	2 (16.7)	
3 – 4	6 (31.6)	4 (33.3)	
≥ 5	7 (36.8)	6 (50.0)	
Hospital Management, n (%)			
Central Venous Catheter	14 (73.7)	11 (91.7)	0.363
Corticosteroids	7 (38.9)	9 (75.0)	0.072
Intensive Care Unit	16 (84.2)	12 (100.0)	0.265
Ventilation	12 (63.2)	10 (83.3)	0.418
Total Parenteral Nutrition	4 (21.1)	1 (8.3)	0.624
Vasopressors	12 (63.2)	10 (83.3)	0.418
Fungal Culture Organism, n (%)			
Candida albicans	6 (31.6)	5 (41.7)	0.529
Candida dublinensis	2 (10.5)	0 (0.0)	
Candida glabrata	10 (52.6)	6 (50.0)	
Candida parapsilosis	1 (5.3)	0 (0.0)	
Candida tropicalis	0 (0.0)	1 (8.3)	

Table 1. Characteristics of Candidemia patients in the SARS-COV-2 negative and SARS-COV-2 positive cohorts

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Poster Presentation
Subject Category: Decolonization Strategies

Decrease in MRSA Bacteremia After Implementation of Intranasal Mupirocin Decolonization Protocol

Angela Beatriz Cruz; Jennifer LeRose; Teena Chopra; Mara Cranis; Lori Cullen; Kenisha Evans; Monica Meyer; Lavina Jabbo; Judy Moshos and Rudolph Valentini

Background: Methicillin-resistant *Staphylococcus aureus* (MRSA) remains a key pathogen in burn patients and is associated with increased morbidity and mortality. Disruption of skin barrier exposes these individuals to a myriad of infections. Various decolonization approaches, including chlorhexidine baths and intranasal mupirocin, have shown favorable outcomes in preventing MRSA infections in this cohort. **Methods:** In August 2020, a mupirocin decolonization protocol was implemented in Michigan's largest trauma-level 1 burn intensive care unit. All patients admitted to the burn unit received daily intranasal mupirocin for the initial 5 days of hospitalization. We compared MRSA bacteremia rates per 1,000 patient days from January–July 2020 to those after August 2020. A hospital-acquired MRSA bacteremia infection was defined as a positive blood culture after hospital day 3. Patient characteristics and hospital course were collected through medical chart review. A 2-tailed t test was used for analysis. **Results:** We identified 5 cases of hospital-onset MRSA bacteremia and no cases of community-onset MRSA bacteremia. On average, there were 2.6 cases per 1,000 patient days before mupirocin implementation and 1.0 cases per 1,000 patient days after mupirocin implementation (P = .26) (Figure 1). In this patient cohort, the average total body surface area burned was 45.6% (range, 18%–90%), and 60% (n = 3) of patients had sputum culture positive for MRSA prior to developing bacteremia (Table 1). Also, 2 patients (40%) with MRSA bacteremia died. Notably, the patient in the postintervention cohort was admitted in July, prior to implementation. **Conclusions:** Implementation of a decolonization protocol with intranasal mupirocin in burn-surgery patients markedly decreased the incidence of MRSA bacteremia in this cohort. This is the first study to evaluate the use of mupirocin as a decolonizing agent in burn victims. Continued long-term surveillance is recommended, and this strategy has potential for application to other high-risk cohorts.

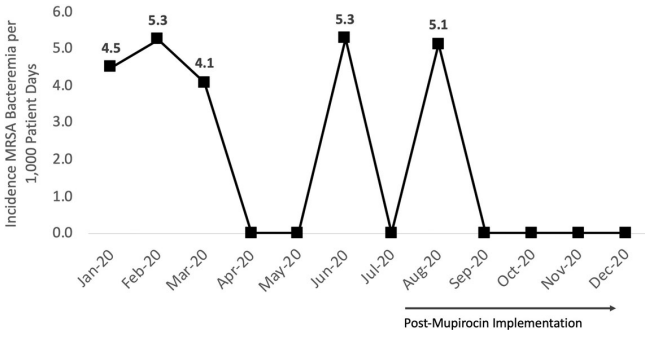

Figure 1.

COHORT	AGE	SEX	LENGTH OF STAY (DAYS)	%BSA	BURN TYPE	OTHER CULTURES MRSA POSITIVE	Discharge Disposition
Pre-intervention	68	M	81	18%	2nd degree	Sputum	Recovered
Pre-intervention	34	M	218	70%	2nd and 3rd degree	None	Recovered
Pre-intervention	71	M	10	30%	2nd degree	Sputum	Expired
Pre-intervention	72	F	12	90%	Steven Johnson Syndrome	None	Expired
Pre-intervention	33	F	67	20%	2nd and 3rd degree	Sputum	Recovered

Table 1. Characteristics and outcomes of burn patients prior to decolonization initiative

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