Background. Obesity is linked to increased risk of complications and is reported to be the most common underlying condition for severely ill SARS-CoV-2 infected individuals. Therefore, we aim further to explore the clinical outcomes of obese children with COVID-19.

Methods. Data were from the Pediatric COVID-19 Case Registry, which includes any patient < 21 years of age diagnosed with COVID-19 at 170 instructions across the United States. A total of 778 COVID-19 positive non-immunocompromised hospitalized patients aged 24 months or older were included. Patients were assigned as obese or non-obese based on BMI as reported from medical records referenced to CDC BMI by gender and age classification (https://www.cdc.gov/growthcharts/clinical_charts.htm).

Results. Patients meeting inclusion criteria included 56% not obese and 44% obese. Compared to matched US population, obese children and adolescents appeared in this database at a rate of 2.3 times their frequency in the population. Obese patients were more likely to be Hispanic and older, symptomatic, have abnormal radiological findings, and require oxygen and ICU admission. Mortality, in this analysis, was similar across the groups.

Demographic and clinical characteristics. NS: Not significant *within seven days of COVID diagnosis ***mild: no need for supplemental oxygen; moderate: need for supplemental oxygen and severe: need for mechanical ventilation.

	Non-Obese	Obese	P-value
N (%)	442(56)	336 (43)	
Age, mean (years)	10.9	13.2	
Hispanic ethnicity (%)	34	45	0.002
Lower respiratory tract infection (%)	29	51	<0.001
COVID-19 symptoms* (%)	65	76	0.001
Abnormal chest x-ray* (%)	75	87	0.001
Oxygen requirement (%)	39	60	<0.001
Received COVID-directed treatment (%)	34	50	<0.001
ICU admission (%)	43	51	<0.001
Severity**:			
Mild (%)	61	40	<0.001
Moderate (%)	31	47	<0.001
Severe (%)	8	13	<0.001
Steroid (%)	40	47	0.054
Remdesivir (%)	12	28	<0.001
Death, n	5	4	NS

NS: Not significant *within seven days of COVID diagnosis ***mild: no need for supplemental oxygen; moderate: need for supplemental oxygen and severe: need for mechanical ventilation.

Conclusion. The incidence of obesity in hospitalized COVID children is higher than that of the general population (34% vs. 19%), highlighting obesity as an important risk factor for hospitalization associated with SARS-CoV-2 infected. Therefore, obese children and adolescents with COVID should be prioritized for COVID immunization and managed aggressively, given their significant COVID morbidity.

Disclosures. All Authors: No reported disclosures

316. Use of (1-3)-β-D-Glucan Assay for Diagnosis of Candidemia in Patients Hospitalized with SARS-CoV-2 Infection

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Background. Candidemia is a rare but serious complication of SARS-CoV-2 hospitalization. Combining non-culture and culture-based diagnostics allows earlier identification of candidemia. Given higher reported incidence during COVID-19 surges, we investigated the use of (1-3)-β-D-glucan (BDG) assay at our institution in those who did and did not develop candidemia.

Methods. Retrospective study of adults admitted to The Mount Sinai Hospital between March 15-June 30 2020 for SARS-CoV-2 infection, with either ≥1 BDG assay or positive fungal blood culture. Data was collected with the electronic medical record and Vigilanz. A BDG value ≥ 80 was used as a positivity cutoff. Differences in mortality were assessed by univariate logistic regression using R (version 4.0.0). Statistical significance was measured by *P* value < .05.

Results. There were 75 patients with ≥1 BDG assay resulted and 28 patients with candidemia, with an overlap of 9 between the cohorts. Among the 75 who had BDG assay, 23 resulted positive and 52 negative. Nine of 75 patients developed candidemia. Of the 23 with a positive assay, 5 developed candidemia and 18 did not. Seventeen of the 18 had blood cultures drawn within 7 days +/- of BDG assay. Four patients with candidemia had persistently negative BDG; 2 had cultures collected within 7 days +/- of BDG assay. With a cut-off of >80, the negative predictive value (NPV) was 0.92. When the cut-off increased to >200, NPV was 0.97 and positive predictive value (PPV) was 0.42. Average antifungal days in patients with negative BDG was 2.6 vs. 4.2 in those with a positive. Mortality was 74% in those with ≥1 positive BDG vs. 50% in those with persistently negative BDGs. There was a trend

towards higher odds of death in those with positive BDG (OR = 2.83, 95% CI: 1.00-8.90, p < 0.06).

Conclusion. There was substantial use of BDG to diagnose candidemia at the peak of the COVID-19 pandemic. Blood cultures were often drawn at time of suspected candidemia but not routinely. When cultures and BDG were drawn together, BDG had a high NPV but low PPV. High NPV of BDG likely contributed to discontinuation of empiric antifungals. The candidemic COVID-19 patients had high mortality, so further investigation of algorithms for the timely diagnosis of candidemia are needed to optimize use of antifungals while improving mortality rates.

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317. Invasive Fungal Infections in Critically-ill Patients with COVID-19 in Mexico City

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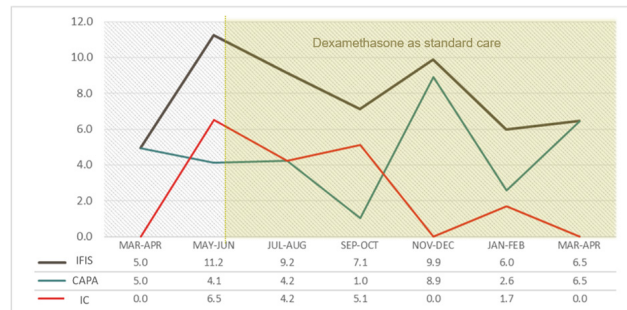
Background. *Invasive fungal infections (IFI) are emergent complications in SARS-CoV-2 infection. We aimed to describe the epidemiology, characteristics and outcome of IFI during the pandemic.*

Methods. Between March 2020 and April 2021, patients admitted to the Intensive Care Unit (ICU) in a COVID-19 center in Mexico City who developed IFI were included. COVID-19 associated pulmonary aspergillosis (CAPA) was defined according to the ECMM/ISHAM criteria. Demographic and clinical data were obtained from the electronic medical record. Descriptive analysis was made. The study was approved by the Institutional Review Board.

Results. Sixty-seven (67/743, 9%) patients with COVID-19 developed IFI during ICU stay, of which 37 (55%) had CAPA, 24 (36%) had Invasive Candidiasis (IC), 3 Cryptococcosis and 3 pulmonary Mucormycosis. The median age was 57.5 (IQR 48-68) and 46 (69%) were male. Thirty-six (54%) had obesity and 20 (30%) type 2 diabetes. Sixty-two received COVID-19 directed therapy: 48/67 (72%) steroids, 4/67 (6%) tocilizumab and 8/67 (12%) were included in clinical trials. Among 24 patients with IC, 13 (54%) were fluconazole-resistant *C. parapsilosis*, 11 (46%) *C. albicans* and 2 *C. glabrata*. Twenty-two received antifungal treatment, 20 with echinocandins and 2 fluconazole. Among 37 CAPA, 8 (22%) were probable and 29 (78%) possible. Serum galactomannan was positive in 8 (22%), 33 respiratory cultures grew *Aspergillus* (31 tracheal aspirates and 2 bronchoalveolar lavage). *Aspergillus fumigatus* was the most frequent isolate in 18/33 (55%). Chest CT showed ground glass opacities in 21 (57%). Most received voriconazole (26/37, 70%). The median time from ICU admission to IFI was 9.5 (IQR 3-14) days. The median ICU and hospital stay length were 30 days (IQR 16-41) and 40 days (IQR 23-49), respectively. In-hospital mortality was 48%. The incidence rate of IC was higher early in the pandemic, due to Infection Control breaches, while higher CAPA incidence may have occurred later due to ventilation system gaps (Figure 1).

Bi-monthly Invasive Fungal Infection incidence rate/100 ICU admissions.

	MAR-APR	MAY-JUN	JUL-AUG	SEP-OCT	NOV-DEC	JAN-FEB	MAR-APR
IFIS	5.0	11.2	9.2	7.1	9.9	6.0	6.5
CAPA	5.0	4.1	4.2	1.0	8.9	2.6	6.5
IC	0.0	6.5	4.2	5.1	0.0	1.7	0.0

Conclusion. We found 9% incidence of IFIs in critically-ill COVID-19 patients with high mortality. The majority received steroids, had obesity and had a prolonged hospital stay. Most had possible CAPA. An outbreak of fluconazole-resistant *C. parapsilosis* was found.

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318. Description of Patients Readmitted within 30 Days from COVID-19 Hospitalization

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