Conclusion. MRSA nasal PCR screening showed high NPV across blood and bone/soft tissue cultures. These results indicate the clinical utility of MRSA nasal PCR assays beyond respiratory infections and can further support antimicrobial stewardship activities.

Disclosures. All Authors: No reported disclosures

80. The Utility of Cultures for Isolated Fevers in Patients with Influenza or COVID-19 Receiving Extracorporeal Membrane Oxygenation

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Session: P-05. Antimicrobial Stewardship: Diagnostics/Diagnostic Stewardship

Background. Critically ill patients receiving extracorporeal membrane oxygenation (ECMO) are at elevated risk for nosocomial infection. Physiological responses to infection on ECMO are difficult to interpret as many clinical characteristics are controlled by the circuit including temperature. This study aimed to determine the culture positivity rates in patients receiving ECMO with influenza or COVID-19.

Methods. A single center retrospective study was performed on all patients who received ECMO support at a single institution between December 2014 and December 2020 with influenza or COVID-19. All cultures ordered were reviewed for indication. Patients with fever without specific clinical syndrome or signs of decompensation, such as increasing vasopressor requirement were included. Infections and contaminants were defined by treatment team.

Results. A total of 45 patients received ECMO with an admission diagnosis of influenza or COVID-19 during the study period. This cohort had a median age of 44 (interquartile range (IQR): 36-53) and was predominantly male (84%). The median time on ECMO was 360 hours (IQR: 183-666). 43/137 (31%) of infectious workups were ordered for isolated fever. The most common workup ordered for fever was combination blood cultures (RC) and urine cultures (UC) (13%, 26%), followed by combination BC, UC, and respiratory cultures (RC) (11%, 26%). Four (9%) infections were identified (3 blood stream, 1 respiratory) and five (12%) cultures grew contaminants (1 blood, 1 respiratory, 2 urine). Culture positivity rate was greatest for BC (3/35, 9%) followed by BC UC (1/19%, 5%), and lowest for UC (0/26, 0%).

Conclusion. Although cultures are commonly ordered for isolated fever in patients with influenza and COVID-19 receiving ECMO, culture positivity rate is low. In particular, no urinary tract infections were identified and the screening for urinary tract infection in patients receiving ECMO with isolated fever is not beneficial. Further work identifying signs and symptoms associated with infection is needed to improve diagnostic stewardship in this population that is high risk for nosocomial infections.

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81. Reducing Unnecessary Blood Cultures Through Diagnostic Stewardship

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Session: P-05. Antimicrobial Stewardship: Diagnostics/Diagnostic Stewardship

Background. At our institution, we learned the frequency of blood cultures was sometimes being changed from “Once” to “Daily” without a defined number of days. We hypothesized this led to unnecessary blood cultures being performed.

Methods. Over a 3 month period from 12/6/2019-3/6/2020, we retrospectively evaluated the charts of patients who had a blood culture frequency changed to “Daily”. We evaluated if there was an initial positive blood culture within 48 hours of the “Daily” order being placed and the number of positive, negative, or “contaminant” sets of cultures drawn with the order. Contaminant blood cultures were defined as a contaminant species, present only once in the repeat cultures, and not present in initial positive cultures.

Results. 95 unique orders were placed with 406 sets of cultures drawn from 89 adults. ~20% of the time (17 orders) the order was placed without an initial positive blood culture. This led to 62 sets of cultures being drawn, only 1 of which came back positive. 78/95 orders had an initial positive blood culture. The most common initial organisms were Staphylococcus aureus (SA) (38), Candida sp (10), Enterobacterales sp (10), and coagulase negative staphylococci (7). 43/78 (55%) orders with an initial positive set had positive repeat cultures. SA (26) and Candida sp (8) were most common to have positive repeats. Central line associated bloodstream infections (CLABSI) were found in 5 of the orders and contaminant species were found in 4 of the orders. 54% of the patients who had a “Daily” order placed did not have positive repeat cultures. The majority of the cultures were drawn from Surgical (40 orders) and Medical (35 orders) services. Assuming that SA and Candida sp require 48 hours of negative blood cultures to document clearance and other species require 24 hours, it was estimated that 51% of the cultures drawn using the “Daily” frequency were unnecessary. Cost savings over a year of removing the “Daily” frequency would be ~$14,000.

Results.