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defined by the requirement of vasopressor support, is the most severe form of sepsis with a significantly high rate of morbidity and mortality. Patients with septic shock requiring vasopressor support necessitate intensive care unit (ICU) admission. This study evaluates frequency of ICU versus general care (GC) admission and outcomes in patients with septic shock that were managed in an emergency department-based ICU (ED-ICU).

Study Design/Methods: This is a retrospective review of 369 patients in septic shock who presented to a single academic quaternary care center that required ICU level care from 2/2015 to 2/2021. All patients received initial care in the main ED and the ED-ICU. These patients were ultimately admitted to an inpatient ICU or GC floor. The primary outcome is the number of patients able to avoid an inpatient ICU admission. Secondary outcomes include the ED-ICU and hospital length of stay (LOS), fluid resuscitation between groups, the rate of ICU short stay admissions (ICU admission with transfer to GC/moderate care within 48 hours) and floor escalations of care to ICU within 24 hours. Statistical analysis was performed using the student's T-test and chi-squared test and where appropriate, $p<0.05$ was considered significant.

Results/Findings: Mean age of patients was similar, 65.5 vs 63.2, for ICU and GC admission respectively ($p>0.05$). There were similar numbers of males to females ($p>0.05$). The Charlson score for baseline comorbidities was similar between the GC and ICU patients (7.12 vs 6.63, $p=0.284$). Initial lactate for inpatient ICU admissions was higher than for GC (3.84 vs 2.79, $P=0.003$). After receiving care in an ED-ICU, 100 patients (27.1%) were able to avoid inpatient ICU admission and were admitted to GC. 269 patients (72.9%) necessitated ICU admission. ED-ICU LOS was longer for GC patients (12.49 vs 7.25 hours, $p<0.001$). Overall mortality was significantly greater for patients admitted to inpatient ICU (32.3% v 8.0%, $p<0.001$). Hospital LOS was shorter for patients admitted to GC but not statistically significant (9.05 vs 11.82 days, $p=0.141$). Fluid resuscitation was similar between patients admitted to ICU and GC (1774.2 vs 1927.7 mL, $p=0.116$). At study conclusion, 16.18% of patients de-escalated from the ICU to the floor within 48 hours after admission from ED- ICU and 1.47% de-escalated to moderate care. 5% of patients required escalation to inpatient ICU from GC within 24 hours.

Conclusion: This study demonstrates that an ED-ICU serves as an appropriate intermediary care modality for patients with septic shock requiring vasoactives. Patients receiving initial care in the ED-ICU ultimately admitted to GC have low incidence of mortality, few incidences of subsequent escalation to ICU level of care, and shorter hospital length of stay. Care between groups, Inpatient ICU and GC, appears similar as both received similar amounts of fluid resuscitation and initiation of vasopressors in the emergency department and ED-ICU.

No, authors do not have interests to disclose

208 Performance Assessment of Electronic Nose Device for Detection of COVID-19 in Breath Samples

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Study Objectives: Novel methods of rapid and large-scale testing for COVID-19 infection are necessary during the ongoing pandemic. Although common test samples are nasopharyngeal and oral specimens, breath analysis has also been proposed for COVID-19 detection. Our study objective was to evaluate the performance of the electronic nose (eNOSE), a portable breath testing device developed by the National Aeronautics and Space Administration (NASA) for the diagnosis of COVID-19 infection. The eNOSE sensor is approximately 6 inches by 3 inches by 3 inches and analyzes breath samples to detect combinations of volatile organic compounds (VOCs) diagnostic of SARS-CoV-2 virus infection.

Methods: Following Institutional Review Board and Biosafety Committee approvals, we recruited adults with a previous positive COVID-19 nasopharyngeal reverse transcription polymerase chain reaction (RT-PCR) test and volunteers with unknown infection status. During the study visit, we collected breath samples and introduced it to the eNOSE device for VOC sensing. Concurrently, participants provided anterior nares samples for RT-PCR testing for COVID-19. Cases were those who had a positive RT-PCR and the controls were those who had a negative RT-PCR at the time of breath sample collection. The sensitivity and specificity of the eNOSE device were calculated using the concurrent RT-PCR test as the gold standard.

Results: There were 64 participants enrolled, with a mean age of 42 years (SD +13 years) and of whom 44 (69%) were female. We recruited 54 previously COVID-19 positive participants and 10 participants with unknown infection status. At the time of breath collection, there were 32 RT-PCR positives, 31 RT-PCR negatives, and one untestable sample. Of those with a RT-PCR positive result, 21 had a positive eNOSE result and 11 had a negative eNOSE result. Of those with RT-PCR negative result, 21 had a negative eNOSE result and 10 had a positive eNOSE result. The eNOSE device was 66% sensitive and 68% specific for the detection of COVID- 19 infection. The mean time from recruitment to enrollment was 7 days (SD +7 days).

Conclusions: From the limited data set collected to date, the eNOSE device had moderate sensitivity and specificity for the diagnosis of COVID-19 infection. Both parameters are expected to improve as more samples are analyzed. Our next step is to include cycle threshold (Ct) values in the analysis to learn if the eNOSE response is correlated with vira

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209 Combined Hepatitis B Virus and Hepatocellular Carcinoma Screening Using Point-of-Care Testing and Ultrasound in a Tanzanian Emergency Department: A Preliminary Report

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Study Objectives: Sub-Saharan Africa has a disproportionate burden of hepatitis B virus (HBV) and hepatocellular carcinoma (HCC). The World Health Organization aims to detect 90% of global cases of HBV by 2030 – novel screening strategies will be needed to achieve this goal. In this study, we sought to assess the utility of an emergency department (ED)-based, combined HBV and HCC screening program in Arusha, Tanzania.

Methods: We conducted a preliminary analysis of patients who participated in a combined HBV and HCC screening program at a regional referral hospital ED in Arusha, Tanzania, between April 19, 2022 and May 4, 2022. We prospectively enrolled patients who presented primarily to the ED, as well as those who were referred to the ED from clinic. All patients underwent informed consent and completed a study questionnaire. HBV testing was conducted using a rapid ($\sim$5 minutes) point-of-care (POC) immunochromatographic assay, which detects hepatitis B surface antigen. We used capillary blood samples obtained via fingerstick, for rapid assessment and minimization of risk. Patients who were HBV positive were screened for HCC via POC ultrasound (POCUS). Local ED and critical care providers with POCUS experience were trained on how to systematically screen the liver parenchyma for masses. The primary outcome was the number of new HBV diagnoses. The secondary outcome was the number of patients who had a new mass detected by POCUS that was concerning for HCC. Data were analyzed with descriptive statistics.

Results: A total of 435 patients were tested for HBV (primary ED: 355, clinic-referral: 80). The median age of patients was 45 $\pm$ 15 years, and 67% were female. Only 26% of patients reported having a primary care doctor. Fourteen percent of patients had been previously vaccinated for HBV. Sixty-six percent of patients did not know how HBV is transmitted. Six percent of patients had a family member with a known HBV infection. There were 9 new HBV diagnoses (primary ED: 8, clinic-referral: 1), which corresponds to a seroprevalence of 2.3% [95% CI 1.0, 3.9]. No patients had masses detected that were concerning for HCC. All positive patients were scheduled for follow-up visits to assess the need for HBV treatment.

Conclusion: We found that an ED-based, combined HBV and HCC screening protocol can be feasibly implemented. This pilot study could serve as a model for HBV/HCC screening in regions with high HBV endemicity and low rates of community screening.

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210 Emergency Department Point-of-Care Echocardiography and Lung Ultrasound in Predicting COVID-19 Severity

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Study Objectives: Point-of-care ultrasound (POCUS) may reveal findings that can impact the diagnosis, monitoring, and prognosis of COVID-19 in the emergency department (ED). POCUS in cases of COVID-19 may reveal lung findings (B-lines and pleural abnormalities) as well as cardiac findings including left ventricular dysfunction (either pre-existing or from COVID induced myocarditis) or right