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of REBOA initiated in the emergency department (ED) for OHCA using an Food and Drug Administration (FDA) investigational device approval with an exception from informed consent. During this study we are evaluating the feasibility of using disposable pressure transducers to determine MAP during CPR and REBOA placement. Our goal is to enroll 20 patients as part of this feasibility study.

Results: Two of the initial twenty patients were enrolled between January and February 2020, with a temporary pause in enrollment due to the COVID pandemic from March to July 2020. A disposable pressure transducer was used to obtain continuous MAPs in both patients. Our initial patient was a 77-year-old man who presented in refractory ventricular fibrillation and we were able to obtain pre- and post-REBOA inflation MAPs. After inflation of the aortic balloon, investigators noted immediate improvements in mean aortic pressure (MAP) (37 to 50 mmHg). The second patient, a 63-year-old man, underwent successful REBOA placement with similar improvements in MAP (22 to 50 mmHg). Investigators were also able to identify large differences in MAPs generated between individuals performing CPR, noting MAPs between 34 and 50 between multiple CPR providers despite visually adequate chest depth compressions.

Conclusion: The use of disposable pressure transducers during CPR and REBOA in OHCA to rapidly obtain MAP may be feasible. Further, use of these transducers may assist in guiding CPR to achieve target MAPs during cardiac arrest. More research is needed to determine what impact a targeted MAP has on patient outcomes, and whether or not it correlates with changes in end-tidal carbon dioxide (ETCO₂).

177 Emergency Department Observation Unit Utilization for the Care of Patients with Left Ventricular Assist Devices



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Study Objectives: Emergency Department Observation Units have traditionally been utilized for protocol driven care for lower risk patients needing additional time for diagnostic or therapeutic interventions with a high likelihood of eventual discharge from the ED. In this study, we look at a very high risk population of those patients with Left Ventricular Assist Devices (LVADs) who were placed into the ED Observation Unit.

Methods: We conducted a retrospective review of all ED Observation Patients in our quaternary academic medical center (40,000 annual census) for a twenty-four-month period from May 1, 2017 until Nov 30, 2019 with an observation unit census of 4310 patients. During this time period we cared for 67 LVAD patients in ED Observation for various complaints such as chest pain, lab abnormalities, etc. For all LVAD patients, care was in conjunction with an advanced heart failure service.

Results: Of the 67 LVAD patients placed in the ED observation Unit, 41 (62.1%) patients were discharged home with 26 (38.8%) patients being admitted to the Cardiology Advanced Heart Failure Service. 22 patients (32.8%) were placed in ED Observation for lab abnormalities such as hyperkalemia and INR abnormalities (subtherapeutic or supratherapeutic).

Conclusion: Caring for complex patients in an ED based observation unit is discouraged and can lead to poorer outcomes. LVAD patients represent some of the most complex and chronically ill patients we see in our ED. They often represent hospital readmissions which health systems are trying to reduce. With a strong relationship with the advanced heart failure team and ED staff comfortable with the care of the LVAD patient, a significant percentage of these patients can be safely observed in the ED and discharged home avoiding a hospital admission and the risks associated with an inpatient stay.

178 Pattern of Skin Infection Presentations in the Maritime Environment



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Study Objectives: There is little known on the epidemiology and management of injury and illness at sea, an environment, which is distant from definitive care and defined by limited on-site medical resources. Worldwide, there are tens of thousands of ships engaged in shipping, fishing, construction, pleasure cruising, and other activities. The cost of time lost to illness and the cost of mariner evacuation can be substantial, as can the cost to maintain unexpired medicines and supplies on a vessel. We sought to characterize skin infections presentation on commercial vessels.

Methods: This is a retrospective chart review of adult patients evaluating the incidence and types of skin infections occurring on ships. Data was abstracted from a maritime practice chart review that provides emergency telemedical care to vessels globally. Charts from January 2018 through December 2019 were reviewed by emergency physicians who collected data regarding demographics, type of skin infection, and patient management. This study was approved by the IRB.

Results: We enrolled 1558 patients, of which 39 (2.5%) were diagnosed with a skin or soft tissue infection. The lower extremity was the most common site of infection (48.7% of cases), followed by the upper extremity (30.7% of cases). The remaining 20.5% of cases were distributed among the chest, abdomen, back, buttocks, neck, and face. 15.3% of infections had a preceding cut or puncture injury. 20 of 39 cases had an associated abscess. Antibiotics were recommended in 89.7% of cases while the remaining cases were treated with I&D only. Treatment failures, defined as lack of improvement or worsening after initiation of antibiotic therapy, occurred in 7/39 (17.9% of cases). Of these, 3/7 (42%) occurred in patients for whom antibiotics were started prior telemedical physician consultation. The most commonly recommended antibiotic treatment was monotherapy with Cephalexin (n=12, 34.3%), followed by dual therapy with cephalexin and Trimethoprim / Sulfamethoxazole (n=8, 20%). The remaining 45.7% of cases were treated with other monotherapies (Amoxicillin/Clavulanic acid, Trimethoprim / Sulfamethoxazole, Clindamycin, Doxycycline, or Vancomycin) or dual therapies (Trimethoprim / Sulfamethoxazole /Azithromycin, Ciprofloxacin/Clindamycin, Ceftriaxone/Vancomycin). 2 of 35 cases managed with antibiotics were treated with IV antibiotics. 3 of 39 (7.6%) cases required evacuation from the vessel for further medical care.

Conclusions: The majority of skin infections can be managed aboard a commercial vessel without patient evacuation, though expert telemedical consultation may reduce treatment failure. Because nearly one fifth of skin infections are a result of injury, injury prevention interventions may provide an opportunity for infection reduction. Further analysis of the rationale behind antibiotic choices and the presence or absence of first line recommended antibiotic on the vessel is needed to improve recommendations for vessel pharmacy stocking.

179 Ethnicity and Symptom Onset in the Emergency Department during the SARS-CoV-2 Pandemic at the “Epicenter of the Epicenter”



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Study Objective: New York City Health + Hospitals/Elmhurst located in Queens, New York, has one of the most diverse patient populations in the United States, and likely the world, and was deemed the “epicenter” of the Covid-19 pandemic in 2020. Given its unique population, high number of Covid-19 cases and growing concern that Covid-19 disproportionately affects minority patients, this study seeks to examine the correlation between ethnicity and time from symptoms onset to ED presentation to further understand this disparity.

Methods: This is a retrospective chart review of 2216 patients who tested positive for SARS-CoV-2 (COVID-19) with 2254 unique ED visits. Preliminary analysis was conducted on 212 of these patients with data extracted from Epic through chart review for time from symptom onset to ED presentation and documented ethnicity, defined for this study as Hispanic or non-Hispanic. Symptom onset to ED presentation was defined as one of seven categories: one through seven days or >1 week. The data were analyzed using statistical analysis software to assess for correlation between ethnicity and time of symptom onset to ED presentation.

Results: Results demonstrated that 37.5% of Hispanics presented to the ED after one week of symptoms as compared to 34.9% of non-Hispanics (p>0.05). Of non-Hispanics, 22.2% presented after one day of symptoms. While not, statistically significant, this demonstrates a trend toward Hispanics having a delay from symptom onset to ED presentation. Further analysis of available data is pending.

Conclusion: Based on preliminary data, ethnicity does not seem to predict symptom onset to ED presentation. This aids in determining causes of high mortality rates of COVID-19 minority populations. Several media outlets have suggested that COVID-19 has disproportionately affected minorities and this paper sought to examine possible confounders to this statement. Further research and analyses are underway and it is hypothesized that other social determinants of health care likely play a role in this disparity.