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## Clinical profile and outcomes of hemoperfusion in patients with sepsis and severe & critical covid 19 infection admitted at Notre Dame Hospital - March 2020-2022

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The World Health Organization declared COVID-19 as a Global Pandemic last 2020, often associated with respiratory failure. Sepsis is a dysregulated host response to infection that leads to acute organ dysfunction. Hemoperfusion is an extracorporeal blood purification method commonly used in sepsis, which proposed to improve outcomes by removing inflammatory mediators via highly biocompatible sorbents and microporous resins. Inflammatory cytokines with COVID-19 patients are high, therefore, hemoperfusion may improve patients' condition. The study is to determine the demographic profile and outcomes of Hemoperfusion on Sepsis and COVID-19 Patients. Methods: An observational cross-sectional study design wherein Descriptive statistics and Inferential mode of analysis were used. Results: 66 patients were studied. A mean age of 63, predominantly males were found. The most common co-morbidity was Hypertension. Among demographic profiles, there were no significant association with COVID-19 and Sepsis. Remarkably, there is a significant association between Sepsis and COVID-19 with regards to initiating Hemoperfusion and their outcome. Improvement and Mortality after Hemoperfusion were both at 50% respectively. Critically Ill COVID-19 patients had the highest mortality rates, while higher survival rate was noted for COVID-19 Severe and Non-COVID Septic patients. There was significant Improvement after Hemoperfusion with regards to Creatinine, Ferritin, CRP and IL-6 levels in Severe COVID 19 and Sepsis patients. Ferritin, D-Dimer, LDH markers, the need for mechanical ventilation were found to have no significance to the entire population of the study. Conclusion: Hemoperfusion has a noteworthy outcome on Septic and COVID-19 Severe patients, aiding in clinical improvement. Majority of the inflammatory markers were noted to improve. Hemoperfusion had no significant correlation for age, gender, co-morbidities, and need for mechanical ventilation.

### Recent Publications:

1. Bos and Abara et al. Knowledge, attitudes and Practice patterns among health care providers in the prevention of recurrent kidney stone in Northern Ontario. 2013
2. Binsaleh and Habous et al. Knowledge, attitudes, and practice patterns of recurrent urinary stones prevention in Saudi Arabia. August 2015
3. American Urological Association Medical Management of Kidney Stones Guidelines Available at: [http://www.auanet.org/guidelines/medical-management-of-kidney-stones-\(2014\)](http://www.auanet.org/guidelines/medical-management-of-kidney-stones-(2014)). Accessed May 22, 2018.
4. Anjapfau, MD and Felix Knauf, MD. Update on Nephrolithiasis: Core Curriculum 2016. Am J Kidney Dis. 2016.
5. Goka and Copelovitch et al. Prevention of Recurrent Urinary Stones. 2019 Wolters Kluwer Health, Inc

### Biography

Lynette Marielle M Ritos completed her residency training and research at Notre Dame de Chartres Hospital. She is set to embark her fellowship journey to specialize in Nephrology. Research has been a passion since her undergraduate course in Nursing with previous works presented internationally, and she continues to hope for future works of publication and presentation.

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