

### Research Article

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#### [Contemplating Catheter Induced Blood Stream Infections and Associated Risk Factors in Diverse Clinical Settings: A Comprehensive Review](#)

Catheter-Related Bloodstream Infections (CRBSIs) are severe healthcare-associated complication that occurs when bacteria enter the bloodstream through a catheter. The risk of CRBSIs is influenced by various factors. Prolonged catheter placement increases the risk, as each day increases the potential for bacterial colonization and bloodstream infection. Proper aseptic technique and a sterile environment during catheter insertion are essential to minimize infection risk. Stringent infection control measures during insertion, including sterile gloves, thorough hand hygiene, and appropriate skin disinfection, are crucial. Inadequate catheter site care and suboptimal catheter management can contribute to CRBSIs. Regular cleaning, disinfection, and dressing changes are necessary to reduce the risk of infection. The type of catheter used also affects infection risk. Central Venous Catheters (CVCs) and arterial catheters, especially those inserted into the jugular or subclavian vein, carry a higher risk of CRBSIs compared to peripheral venous catheters. Individuals with compromised immune systems, such as chemotherapy patients, organ transplant recipients, and those with HIV/AIDS, are more susceptible to CRBSIs. Patients with existing infections, like pneumonia or urinary tract infections, are at a heightened risk of acquiring CRBSIs due to potential cross-contamination. Healthcare professionals who fail to practice thorough hand hygiene before and after catheter-related procedures can introduce pathogens into the bloodstream. Leaving catheters in place when no longer necessary or using them unnecessarily elevates the risk of infection. To prevent CRBSIs, strict infection control protocols, including effective hand hygiene, sterile catheter insertion techniques, routine site care, and prompt catheter removal when no longer needed, are imperative. Healthcare facilities often implement specific protocols to mitigate CRBSI risk and enhance patient safety.

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### Research Article

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#### [Peripheral perfusion index in critically ill COVID-19 and its association with multiorgan dysfunction](#)

**Introduction:** Severe cases of COVID-19 presented a high incidence of multi-organ dysfunction syndrome (MODS) during their evolution. This was attributed to a theoretical cytokine storm, where microcirculatory disorders would play a fundamental role, causing these patients to present a sepsis-like pattern as observed in sublingual microcirculation studies. The evidence in this regard is controversial. The Peripheral Perfusion Index is a reliable method to continuously and non-invasively assess the microcirculatory bed, which assesses the pulsatile (PPI) component of the plethysmographic pulse curve.

**Methods:** We conducted a prospective observational study to evaluate the behavior of the PPI in patients with severe respiratory failure due to SARS-CoV-2 and its association with SDOM.

**Results:** We evaluated 60 patients with APACHE II  $14.6 \pm 4.4$  and SOFA  $4.7 \pm 2.1$ . 55% of the patients presented SDOM. Perfusion monitoring showed IP values of  $5.32 \pm 1.87$  that were associated with normal lactate levels of  $1.49 \text{ mmol/L}$  (min  $0.89$ / max  $2.20 \text{ mmol/L}$ ). The PPI values between the living and the dead did not show a significant difference ( $p = 0.854$ ) or the presence of SDOM.

The PPI values between the patients who presented renal failure, hemodynamics, or perfusion disorders were determined by the presence of hyperlactatemia, and for those who did not present these characteristics, no statistical difference was found; neither when stratified by PaFiO<sub>2</sub> ratio. Mortality was 55%.

**Conclusion:** In our series of patients with severe pneumonia due to COVID-19, we found high PPI values, which would correspond to a pattern of capillary recruitment, and the associated organ injury could not be substantiated by this phenomenon.

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### Opinion

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#### [Dalbavancin and moleculight in the COVID-19 pandemic](#)

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The COVID-19 Pandemic, which began in March 2020, and its associated surges, had an immense impact on our medical staff and their ability to perform their daily duties.

The COVID-19 Pandemic necessitated hospital modifications, including the expansion of the Emergency Department, ICU, and Isolation units. The overwhelmed staff and overburdened ER and ICU required adjustments to deal with the Inpatient impasse. For example, temporary patient care rooms needed to be set up for the overflow of patients. The tsunami of the Pandemic almost overwhelmed our hospital.

With the challenges presented to our hospital during the Pandemic, we needed a fresh perspective to our multi-disciplinary approach. Thus, we fathomed that the use and cost-effectiveness of both Dalbavancin, a long-acting lipoglycopeptide antibiotic combined with the diagnostic Moleculight Imaging Device would be a sound decision.

We hypothesized that with the use of this cost-effective antibiotic in conjunction with the use of the Moleculight Imaging Device, with its fluorescent imaging, we could detect the presence of bacteria and assist our wound treatment and decision-making.

A shift in patients from the Emergency Room/Inpatient Department to the Outpatient Department/Wound Care Center was made possible with the use of these two novel products.

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