

Novel relationships between oxidative stress and angiogenesis-related factors in sepsis: New biomarkers and therapies

Vera, Sergio

Martinez, Rolando

Gormaz, Juan Guillermo

Gajardo, Abraham

Galleguillos, Fernanda

Rodrigo, Ramon

© 2015 Informa UK, Ltd. Sepsis is a systemic uncontrolled inflammatory response in the presence of an infection. It remains a major cause of morbidity and mortality in hospitalized patients.

According to its severity, sepsis can progress to three different states: severe sepsis, septic shock, and multiple organ dysfunction syndrome, related to organ dysfunction and/or tissue hypoperfusion.

Different processes underlie its pathophysiology; among them are oxidative stress, endothelial and mitochondrial dysfunction, and angiogenesis-related factors. However, no studies have integrated these elements in sepsis. The main difficulty in sepsis is its diagnosis. Currently, the potential of inflammatory biomarkers in septic patients remains weak. In this context, the research into new biomarkers is essential to aid with sepsis diagnosis and prognostication. Furthermore, even though the current management of severe forms of sepsis has been effective, morbimortality remains elevated. Therefore, i