

Publication

Addressing unmet clinical needs in the early diagnosis of sepsis

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The incidence of sepsis and the number of sepsis-related deaths are increasing, making sepsis the leading cause of death in critically ill patients in Europe and the U.S.A. Delayed recognition of sepsis and inappropriate initial antibiotic therapy are associated with an increase in mortality and morbidity. Rapid and accurate identification of sepsis and its causative organisms are a prerequisite for successful therapy. The current gold standard for the diagnosis of sepsis is culture of blood and other body fluids or tissues. However, even in severe sepsis, blood cultures (BC) yield the causative microorganism in only 20-40% of patients. Moreover, at least 24 hours are needed to get preliminary information about the potential organism. Therefore, novel laboratory methods for the diagnosis of sepsis, such as multiplex real-time polymerase chain reaction (PCR), matrix-assisted laser desorption ionisation (MALDI) time-of-flight (TOF) mass spectrometry (MS) (MALDI-TOF MS) and calorimetry, have been developed and evaluated.

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