ICU MANAGEMENT & PRACTICE

Sepsis-3 - Towards Earlier Recognition and Management

The Third International Consensus Definitions For Sepsis and Septic Shock (Sepsis-3)

The updated definitions and clinical criteria for sepsis have been welcomed by Professor Jean-Louis Vincent, *ICU Management & Practice*'s Editor-in-Chief, who says: "we are finally back to reason – the new recommendations fit the current language." The new definitions are published in the 23 February issue of JAMA, and aim to facilitate earlier recognition and more timely management of patients with sepsis or at risk of developing sepsis as well as offer greater consistency for epidemiologic studies and clinical trials. Because no gold standard diagnostic test exists, the joint Society of Critical Care Medicine and European Society of Intensive Care Medicine task force sought definitions and supporting clinical criteria that were clear and fulfilled multiple domains of usefulness and validity.

The report of the Task Force is published along with two supporting reports that outline the evidence for the new definitions (Seymour et al. 2016; Shankar-Hari et al. 2016). Of note is the use of analyses in large cohorts to provide quantitative information in support of the revised criteria. The Task Force's review of the evidence found that previous definitions included an excessive focus on inflammation, that the continuum model was misleading and that severe sepsis is a redundant term. In addition the criteria for systemic inflammatory response syndrome (SIRS) lacked adequate specificity and sensitivity. Multiple definitions and terminologies are in use for sepsis, septic shock, and organ dysfunction, leading to discrepancies in reported incidence and observed mortality.

Key Points from the Recommendations

- Sepsis should be defined as life-threatening organ dysfunction caused by a dysregulated host response to infection.
- Septic shock should be defined as a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities are associated with a greater risk of mortality than with sepsis alone.
- In out-of-hospital, emergency department, or general hospital ward settings, adult patients with suspected infection can be rapidly identified as being more likely to have poor outcomes typical of sepsis if they have at least 2 of the following clinical criteria that together constitute a new bedside clinical score termed quick Sequential (Sepsis-related) Organ Failure Assessment (qSOFA):

1. respiratory rate of 22/min or greater
2. altered mentation (mental activity), or
3. systolic blood pressure of 100 mm Hg or less.

The Task Force write: "Although qSOFA is less robust than a SOFA score of 2 or greater in the ICU, it does not require laboratory tests and can be assessed quickly and repeatedly. The task force suggests that qSOFA criteria be used to prompt clinicians to further investigate for organ dysfunction, to initiate or escalate therapy as appropriate, and to consider referral to critical care or increase the frequency of monitoring, if such actions have not already been undertaken."

See Also: SIRS and sepsis: an unhappy marriage

The updated definitions have been through a rigorous voting and consultation process, and are endorsed by 31 societies. The task force write that they want to encourage debate: "Aspects of the new definitions do indeed rely on expert opinion; further understanding of the biology of sepsis, the availability of new diagnostic approaches, and enhanced collection of data will fuel their continued reevaluation and revision."

They conclude: "Hopefully, the next iteration of this consensus process will take full advantage of the rapidly advancing understanding of molecular processes that lead from infection to organ failure and death so that sepsis and septic shock will no longer need to be defined as a syndrome but rather as a group of identifiable diseases, each characterised by specific cellular alterations and linked biomarkers. Such evolution will be required to truly transform care for the millions of patients worldwide who develop these life-threatening conditions."

In an accompanying editorial, Edward Abraham, MD, of the Wake Forest School of Medicine, Winston-Salem, NC, USA, suggests that more information about the molecular and cellular characterisation of sepsis may have been helpful to assist with segmenting patients into subgroups based on underlying microbiology, pathophysiology or cellular alterations. He suggests that while the new definitions may help in facilitating early identification of patients with this condition, they will be of only limited help in directing specific therapies to individual patients or in designing clinical trials focused on specific mechanisms of sepsis-induced organ dysfunction.

© For personal and private use only. Reproduction must be permitted by the copyright holder. Email to copyright@mindbyte.eu.

Source: JAMA

Published on : Mon, 22 Feb 2016

© For personal and private use only. Reproduction must be permitted by the copyright holder. Email to copyright@mindbyte.eu.