

SEPSIS BULLETIN

15 February 2018

Paediatric and Neonatal Sepsis

[Central-peripheral Temperature Monitoring as a Marker for Diagnosing Late-onset Neonatal Sepsis](#)

Leante-Castellanos, J.L. et al

The Pediatric Infectious Disease Journal.

36(12):e293–e297, DEC 2017

The prognosis for late-onset sepsis depends largely on a timely diagnosis. We assess central-peripheral temperature difference monitoring as a marker for late-onset neonatal sepsis diagnosis.

[Ochrobactrum anthropi: A Case Report and Review of Literature Fulminant Early-onset Neonatal Sepsis: A Case Report and Review of Literature](#)

Khasawneh, W. and Yusef, D.

The Pediatric Infectious Disease Journal.

36(12):1167–1168, Dec 2017

Ochrobactrum anthropi is Gram-negative bacteria that cause infection in humans, particularly immunocompromised patients and those with indwelling central venous catheters. O. anthropi is unlikely to cause fulminant sepsis in infected patients. A few cases of late-onset neonatal sepsis have been reported in preterm infants with congenital anomalies. Presents the first published case of fulminant early-onset neonatal sepsis in a premature newborn.

[Group B streptococcal infections: guidance, data and analysis](#)

UK Government

Updated 21 December 2017

Updated guidance covering: About group B streptococci, Diagnosis, Treatment and prevention, and Epidemiology

[Group B Streptococcus late onset sepsis in very low birth weight newborns: 10 years experience](#)

Adult Sepsis (continued)

[Enhancing Recovery From Sepsis: A Review.](#)

Prescott HC, Angus DC.

JAMA. 2018;319(1):62–75.

Emerging data suggest that patients who survive sepsis frequently experience new symptoms, long-term disability, and worsening of chronic health conditions. Reasons for deterioration of health after sepsis are multifactorial and include accelerated progression of pre-existing chronic conditions, residual organ damage, and impaired immune function. In the months after hospital discharge for sepsis, management should focus on (1) identifying new physical, mental, and cognitive problems and referring for appropriate treatment, (2) reviewing and adjusting long-term medications, and (3) evaluating for treatable conditions that commonly result in hospitalization, such as infection, heart failure, renal failure, and aspiration. For patients with poor or declining health prior to sepsis who experience further deterioration after sepsis, it may be appropriate to focus on palliation of symptoms.

[Sepsis – thoughtful management for the non-expert](#)

Tidswell, R. and Singer, M.

Clinical Medicine 2018 Vol 18, No 1: 62–8

A sound understanding of sepsis is crucial for optimal care. Although general guidelines are available for management, here we provide a foundation of understanding to encourage thoughtful, personalised management of sepsis during the acute phase. We provide an overview of the epidemiology, the new Sepsis-3 definitions, pathophysiology, clinical presentations, and investigation and management of sepsis for the non-expert.

Risso, F. et al

The Journal of Maternal-Fetal & Neonatal Medicine
Volume 31, 2018 - Issue 1

The incidence of late-onset neonatal infection (LONS) group B streptococcus (GBS) in very low birth weight (VLBW) is still matter of debate. In the present 10-years retrospective study we investigated the epidemiology of GBS LONS in VLBW neonates. On a total of 13 747 infants 975 (7%) were VLBW and in seven cases of GBS LONS was observed with an incidence of 7.2/1000 live births.

[Is procalcitonin to C-reactive protein ratio useful for the detection of late onset neonatal sepsis?](#)

Hahn, W-H, et al

The Journal Of Maternal-Fetal & Neonatal Medicine.
Volume 31: Number 6 (2018); pp 822-826

Procalcitonin (PCT) has been reported as a sensitive marker for neonatal bacterial infections. Recently, small numbers of studies reported usefulness of PCT/C-reactive protein (CRP) ratio in detection of infectious conditions in adults. Thus, we conducted this study to evaluate PCT/CRP ratio in late onset neonatal sepsis. In conclusion, CRP and PCT showed good performance in discrimination between sepsis and healthy controls. However, PCT/CRP ratio seems to be helpful in distinguishing proven sepsis from suspected sepsis together with PCT. Further studies are warranted to elucidate the efficacy of PCT/CRP ratio with enrolment of enough numbers of infants.

Adult Sepsis

[Utility of quick sepsis-related organ failure assessment \(qSOFA\) to predict outcome in patients with pneumonia](#)

Müller M, et al

PLoS One. 2017 Dec 21;12(12):e0188913

In a retrospective analysis, admission data from the ED of the Bern University Hospital, Switzerland, were screened to identify patients admitted for pneumonia. In addition to clinical characteristics, qSOFA and CURB-65 scores and SIRS criteria were assessed and evaluated with respect to the defined study outcomes. The qSOFA score is associated with in-hospital mortality, ICU admission and length of hospitalisation in ED patients with pneumonia. Subgroup analysis revealed that qSOFA is superior to CURB-65 in respect to prognostication of ICU admission.

[Quick Sequential \[Sepsis-Related\] Organ Failure Assessment \(qSOFA\) and St. John Sepsis Surveillance Agent to Detect Patients at Risk of Sepsis: An Observational Cohort Study](#)

Amland, R.C. et al

[Effect of a machine learning-based severe sepsis prediction algorithm on patient survival and hospital length of stay: a randomised clinical trial.](#)

Shimabukuro, D.W. et al.

BMJ Open Respir Res. 2017 Nov 9;4(1)

Several methods have been developed to electronically monitor patients for severe sepsis, but few provide predictive capabilities to enable early intervention; furthermore, no severe sepsis prediction systems have been previously validated in a randomised study. Tests the use of a machine learning-based severe sepsis prediction system for reductions in average length of stay and in-hospital mortality rate.

[Intravenous antibiotics, administered over 3 hours, are linked to lower death rates in sepsis](#)

NIHR Signal

Published on 31 January 2018

Gives an expert review of the study *Prolonged versus short-term intravenous infusion of antipseudomonal beta-lactams for patients with sepsis: a systematic review and meta-analysis of randomised trials* by Vardakas et al.

[Immunoglobulins and sepsis](#)

Shankar-Hari, M. et al

Intensive Care Medicine Published online 18 January 2018

Intravenous immunoglobulins are considered as potential adjuvant therapy in sepsis patients. We present a narrative review of recent research into the associations between immunoglobulins and sepsis.

[One hospital's journey to create a sustainable sepsis program](#)

Moore, A. et al.

Nursing2018: February 2018 - Volume 48 - Issue 2 - p 1–3

The sepsis program at Medical Center Health System in Odessa, Tex., was created in 2008 due to increasing numbers of patients with sepsis. In 2011, the sepsis program was expanded and a sepsis coordinator position was added. For the first time, a full-time medical-surgical educator would spend part of his or her time managing the sepsis program for the facility. In 2011, the CDC reported a dramatic increase in hospital admissions for patients with sepsis from 621,000 in 2000 to 1,141,000 in 2008.¹ The sepsis program evolved along with this increased incidence: The sepsis coordinator role was added to monitor

American Journal of Medical Quality. 2018, Vol. 33(1) 50–57

The 2016 Sepsis-3 guidelines included the Quick Sequential [Sepsis-related] Organ Failure Assessment (qSOFA) tool to identify patients at risk of sepsis. The objective was to compare the utility of qSOFA to the St. John Sepsis Surveillance Agent among patients with suspected infection. The St. John Sepsis Surveillance Agent, when compared to qSOFA, activated earlier and was more accurate in predicting patient outcomes; in this regard, qSOFA fell far behind on both objectives.

patients throughout the hospital who were potentially septic.

[The New York Sepsis Severity Score: Development of a Risk-Adjusted Severity Model for Sepsis](#)

Phillips, G.S. et al

Critical Care Medicine: December 4, 2017 - Volume Publish Ahead of Print

The New York Sepsis Severity Score accurately estimated the probability of hospital mortality in severe sepsis and septic shock patients. It performed well with respect to calibration and discrimination. This sepsis-specific model provides an accurate, comprehensive method for standardized mortality comparison of adult patients with severe sepsis and septic shock.

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