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Reflections from a Canadian visiting South Africa: Advancing sepsis care in Africa with the development of local sepsis guidelines
Réflexions d'un Canadien lors d'un séjour en Afrique du Sud: Faire progresser la prise en charge du sepsis grâce à l'élaboration de directives locales sur le sepsis

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Abstract The objective of this article is to outline the key concepts in the care of the severely septic patient in the ED, and to provide ''lessons learned'' from an author of the Canadian Sepsis Guidelines. The goal for the African emergency physicians should be to develop local protocols and guidelines based on the resources and skill sets available in African communities in an attempt to provide timely and expert care for this patient population.
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Abstract L'objectif de cet article est de décrire les concepts clés de la prise en charge d'un patient atteint de sepsis sévère par le service des urgences (SU), et de fournir les ''leçons tirées'' d'un auteur des Directives canadiennes sur le sepsis. L'objectif des médecins urgentistes africains devrait être de développer des protocoles et directives locaux basés sur les ressources et compétences disponibles dans les communautés africaines afin de tenter de fournir une prise en charge opportune et professionnelle à cette population de patients.
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African relevance

- Sepsis is a major cause of morbidity and mortality in all parts of the world, including Africa.
- A sepsis guideline that addresses the unique challenges in Africa would benefit both African patients and health care providers.
- The principles of early sepsis management have been outlined in other guidelines, including the Canadian Association of Emergency Medicine's Sepsis Guidelines.
- Lessons learned during the creation of other sepsis guidelines may be of use in the development of African-specific guidelines.

What's new

- Early expert sepsis care can save lives.
- African-specific guidelines should be developed to address unique challenges within Africa.
- Other sepsis guidelines can serve as a resource for African Sepsis Guidelines.

Introduction

The management of patients with severe sepsis and septic shock is of paramount importance to emergency physicians from all over the world.[1] The burden of illness is extremely high, with mortality in western centres ranging from 30% to 50%.[1–4] The timeliness and expertise in the diagnosis and management of severe sepsis in the emergency centre (EC) phase of care have a significant impact on patient outcome.[5,6]

Several guidelines are available for the management of the severely septic patient.[7–9] For the most part, these guidelines do not consider the important differences in medical systems and, specifically, the unique challenges relevant to emergency physicians practicing in Africa.[8,9] The Canadian Association of Emergency Physicians (CAEP) Critical Care Committee (C4) had developed a national guideline for the management of patients with severe sepsis/septic shock in Canadian emergency centres, with special consideration of unique factors in the Canadian medical system.[7] Although some of the key concepts in these and other guidelines may be relevant to the management of severe sepsis/septic shock in African emergency centres, adoption of guidelines not specifically developed for African countries without consideration of local issues in medical care would unlikely be successful.[10–12] However, lessons learned during the development of these guidelines may aid in the production of local protocols and guidelines to improve sepsis care in Africa.

The goal of this article is to outline the key concepts in the care of the severely septic patient in the EC, and to provide ''lessons learned'' from an author of the Canadian Sepsis Guidelines. The goal for the African emergency physicians should be to develop local protocols and guidelines based on the resources and skill sets available in African communities in an attempt to provide timely and expert care for this patient population (see Table 1).[10]

Patient identification

The definition of sepsis is a combination of (1) the suspected presence of an infection and (2) two ($\geqslant 2$) or more of the systemic inflammatory response syndrome (SIRS) criteria.[13] The SIRS criteria include elevated (>38 °C) or low temperature (<36 °C); tachycardia (>90 beats/min); increased respiratory rate (>20 breaths/min); or a white count that is either high or low (>12 or <4). In the EC, defining a ''suspected'' infection may be challenging, as patient presentation can range from non-specific complaints to system specific indicators of infection (ex: decreased level of consciousness and meningismus in meningitis, and shortness of breath, hypoxia, and sputum production with pneumonia).

Clinicians should be aware that SIRS is the result of non-specific physiologic responses to cytokine release and may result from many non-infectious disease processes such as trauma, emotional liability, exercise, and burns.[7] Although the definition of sepsis may be non-specific, it provides a framework for patient identification (see Table 2).

Early administration of broad spectrum antimicrobials

Immediate administration of broad spectrum intravenous antimicrobial medications to patients with severe sepsis/septic shock is a cornerstone in optimal sepsis resuscitation.[7,8] Data indicate the time sensitive importance of antimicrobial administration, with a mortality increase of 7.6% per hour when appropriate antimicrobials are delayed in North American patients with septic shock.[14]

Antimicrobial regimes should be based on the presumed infected organ system (CNS, respiratory, abdominal, neurologic, cutaneous, etc.) and should also be based on local antimicrobial resistance patterns. It is important that all potential pathogens be susceptible to the antimicrobial administered, as insufficient or ineffective antimicrobial administration is

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