Good Quality Research in Sepsis: A Need of Low and Middle-income Countries

Gentle Sunder Shrestha, [1] Pragya Acharya, [2] Tamanna Bajracharya[3]

[1]Department of Anaesthesiology, Tribhuvan University Teaching Hospital, Kathmandu,Nepal, [2]Department of Critical Care Medicine, Norvic International Hospital, Kathmandu, Nepal [3]Department of Anaesthesiology, KIST Medical College and Teaching Hospital, Lalitpur, Nepal.

We read with great interest, the article by Lamichhane S, et al.[1] Significant evidence practice gaps exists about the management of sepsis in this part of the world and good quality research are lacking.[2]

The authors have well quoted the new definition of sepsis, however, they have defined and categorized the patients with sepsis as per the old definition. Sepsis 3 considers the term "severe sepsis" as redundant and proposed to use SOFA (Sequential Organ Failure Assessment) score to define organ dysfunction.[3] However, Sepsis 3 has been criticized and questioned for its applicability in low- and middle-income countries (LMICs).[4] Authors have opted to adapt the older definition and to use APACHE II as a severity of scoring system for their study.

Protocolized resuscitation of patients with sepsis using the early goal-directed therapy (EGDT) had once been considered the standard of care. However, over the past decades, the concept of early resuscitation has shifted from EGDT towards the usual care. Of note, there are also evidences of possible harm of adapting protocolized resuscitation in LMICs.[5]

Antimicrobial resistance has been a big threat in LMICs. It is recommended to consider the local microbial and resistance pattern while selecting the empirical antimicrobials for patients with sepsis. We would be interested to know if the center involved in the study had local antimicrobial data and policy for rationale selection of antibiotics. Delay in starting appropriate antimicrobials is strongly related to poor outcome. We would be eager to know when the empirical antimicrobials were initiated in their study population. In addition to bacterial infection, rickettsial, malarial and viral infections do contribute significantly to sepsis in LMICs.[2]

Sepsis 3 recommends the use of qSOFA score to identify the patients with sepsis, outside ICU, who can be at risk of poor outcome.[3] qSOFA is based on three simple clinical parameters, which is fairly feasible for use even in LMICs.

REFERENCES

1. Lamichhane S, Manandhar N, Dhakal S, Shakya YL. Management and Outcome of Severe Sepsis and Septic Shock Patients. J Nepal Health Res Counc. 2018;16(39):165-71.[JNHRC] [PubMed]

2. Shrestha GS, Kwizera A, Lundeg G, Baelani JI, Azevedo LCP, Pattnaik R, et al. International surviving sepsis campaign guidelines 2016: the perspective from low-income and middle-income countries. Lancet Infect Dis. 2017;17(9):893-5.[PubMed]

3. Singer M, Deutschman CS, Seymour CW, Shankar-Hari M, Annane D, Bauer M, et al. The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). JAMA. 2016;315(8):801–10.[PubMed]

4. Shrestha GS. Composition of the sepsis definitions task force. JAMA. 2016;316(4):459-60.[PubMed]

5. Maitland K, Kiguli S, Opoka RO, Engoru C, Olupot-Olupot P, Akech SO, et al. Mortality after fluid bolus in African children with severe infection. N Engl J Med. 2011;364(26):2483-95.[PubMed]

Correspondence: Gentle Sunder Shrestha, Department of Anaesthesiology, Tribhuvan University Teaching Hospital, Kathmandu,Nepal, Email: gentlesunder@hotmail.com, Phone: +9779841248584.