

Septic? Avoid Constipation and Condition will be Better

Carlos Sanchez

Keywords: Constipation, Gastrointestinal tract, ICU, Sepsis.

Journal of Acute Care (2022): 10.5005/jp-journals-10089-0005

Gastrointestinal motility is a complex process, which is often altered during critical illness, an effect that can lead to constipation. Although the American Society of Gastroenterology has issued criteria for defining constipation,¹ these are not adequate for the critically ill patient. This is perhaps because constipation as such is usually at least a subacute process and most patients are somewhat chronic. That is why perhaps the term “paralysis of the lower gastrointestinal tract” is more accurate.²

What is certain is that constipation alters the quality of life of the sufferer, but what happens when the patient cannot speak because the sufferer is in a serious condition, under sedation, on mechanical ventilation, etc.?

Although a constipated patient can develop complications that in very few cases could lead him to the ICU, what usually happens is that severe patients develop constipation, mainly in those who have undergone abdominal surgery or any type of surgery in which the intestine is manipulated importantly, electrolyte alterations, in those under anesthesia for a long time, those who use deep sedation, those who are under great metabolic stress as burned patients, with brain injury or sepsis.^{3,6}

There are some studies that have sought to identify some other factors that could lead to the development of this alteration in the evacuation rhythm, fasting, change of diet, and the use or not of prokinetics and laxatives play an important role.⁴

In this issue of the *Journal of Acute Care* Jacob and Col present a study recently conducted in India, in which 61 patients with sepsis were included, it was a prospective observational study of adult patients admitted with sepsis to tertiary care, referral to ICU Bengaluru, over the period of 12 months from January to March 2018, who stayed three or more days. Patients with gastrointestinal bleed/disorders and those who underwent major gastrointestinal surgery and failure to feed within 72 hours of ICU admission are excluded, it was observed that 26% of such patients developed constipation, and these had higher mortality, more days on mechanical ventilation, and stayed more days in ICU and hospital.⁵

There are no specific statistical data that tells us what percentage of patients admitted to the ICU develop constipation, but according to several publications we know that this figure can range from five to over 80%, of course, this is also conditioned by the type of patients received in the ICU.³

For some years now we have known the relationship between patients who are mechanically ventilated in an invasive manner and constipation, causing these patients to stay more days on mechanical ventilation and in the ICU, although it is still difficult to know if this is a cause or a consequence.

We understand that the digestive system can also experience organ failure, as can the kidney, lung, heart, brain, etc. And that the

Department of Critical Services, Hospital General IESS Quevedo, Quevedo, Ecuador

Corresponding Author: Carlos Sanchez, Department of Critical Services, Hospital General IESS Quevedo, Quevedo, Ecuador, Phone: +593980559779, e-mail: dr.carlossanchez@hotmail.com

How to cite this article: Sanchez C. Septic? Avoid Constipation and Condition will be Better. *J Acute Care* 2022;1(1):2–3.

Source of support: Nil

Conflict of interest: None

spectrum of manifestations for this system is large and can range from diarrhea to constipation, therefore, a severe patient with constipation should raise an alert of failure of this organ, and this is very important because the diagnosis of sepsis is based on the appearance of organ failure associated with an infection, but we remember that so far none of the scales used to diagnose sepsis considers the digestive system. This gains weight when in the different studies on the subject, we see these patients presented a higher score on the APACHE II scale.^{6,10,12}

Based on this, perhaps regulating the rate of bowel movements using prokinetics, stool softeners and laxatives in patients may improve their chances of survival when they have sepsis and even more so if they are on mechanical ventilation, in fact, Azevedo et al. found that treating this condition resulted in a return of the SOFA scale to the baseline score.^{7,11}

The worst part of all this is that almost no one is aware of these things in the ICU, so to a large extent, such a situation could go unnoticed, even when the patient may concomitantly have a condition of increased intra-abdominal pressure. That is why all our patients should have their bowel sounds explored at least once a day and if 24 hours pass with the absence of these sounds, we should initiate actions aimed at their correction, this starts with the identification of the cause, correction of the same and specific pharmacological measures that may even include the use of antibiotics since these patients frequently develop bacterial translocation. Hence the need to work on the development of protocols to help prevent and adequately treat constipation in critically ill patients.^{8,13,14}

Every day new horizons are opening up and there are more and more elements on which we can act to improve the prognosis of septic patients. If we understand sepsis as an organic multisystemic affection, so must be our response and no aspect can go unnoticed.⁹

Monitoring the frequency of bowel movements in ICU patients admitted with sepsis and avoidance of constipation can decrease the duration of mechanical ventilation and mortality rate in ICU. Given the relevance of the issue, further epidemiological and clinical studies should be conducted and will be very welcome.

REFERENCES

1. Locke GR 3rd, Pemberton JH, Phillips SF. American Gastroenterological Association Medical Position Statement: guidelines on constipation. *Gastroenterology* 2000;119(6):1761–1766. DOI: 10.1053/gast.2000.20390
2. Vincent JL, Preiser JC. Getting critical about constipation, nutrition issues in gastroenterology, series #144, practical gastroenterology • august 2015.
3. Nassar Jr AP, da Silva FM, de Cleva R. Constipation in intensive care unit: incidence and risk factors. *J Crit Care* 2009;24:630–12. DOI: 10.1016/j.jcrc.2009.03.007
4. Reintam Blaser A, Malbrain ML, Starkopf J, et al. Gastrointestinal function in intensive care patients: terminology, definitions and management. Recommendations of the ESICM Working Group on Abdominal Problems. *Intensive Care Med* 2012;38:384–394.
5. Jacob et al. Stool output as a prognostic marker in Sepsis: A Prospective study.
6. Blaser AR, Preiser J, Fruhwald S, et al. Gastrointestinal dysfunction in the critically ill: a systematic scoping review and research agenda proposed by the Section of Metabolism, Endocrinology and Nutrition of the European Society of Intensive Care Medicine. *Crit Care* 2020;24(1):224. DOI: 10.1186/s13054-020-02889-4
7. de Azevedo RP, Freitas FG, Ferreira EM, et al. Daily laxative therapy reduces organ dysfunction in mechanically ventilated patients: a phase II randomized controlled trial. *Crit Care* 2015; 19(1):329. DOI: 10.1186/s13054-015-1047-x
8. Shimizu K, Ogura H, Asahara T, et al. Gastrointestinal dysmotility is associated with altered gut flora and septic mortality in patients with severe systemic inflammatory response syndrome: a preliminary study. *Neurogastroenterol Motil* 2011;23(4):330–335, e157. DOI: 10.1111/j.1365-2982.2010.01653.x
9. Singer P, Cohen Fox L, Aperstein Y, et al. Gastrointestinal organ failure symptoms included in sofa scores improve mortality prediction in the ICU: A mathematical approach. *Clin Nutr* 2016;36(suppl 1):S24.
10. Reintam Blaser A, Poeze M, Malbrain ML, et al. Gastrointestinal symptoms during the first week of intensive care are associated with poor outcome: a prospective multicentre study. *Intensive Care Med* 2013;39(5):899–909. DOI: 10.1007/s00134-013-2831-1
11. Debaveye Y, Van den Berghe G. Risks and benefits of nutritional support during critical illness. *Annu Rev Nutr* 2006;26(26):513–538. DOI: 10.1146/annurev.nutr.26.061505.111307
12. Reintam A, Parm P, Kitus R, et al. Gastrointestinal failure score in critically ill patients: a prospective observational study. *Crit Care* 2008;12(4):R90. DOI: 10.1186/cc6958
13. Smonig R, Wallenhorst T, Bouju P, et al. Constipation is independently associated with delirium in critically ill ventilated patients. *Intensive Care Med* 2016;42(1):126–127. DOI: 10.1007/s00134-015-4050-4
14. Oczkowski SJW, Duan EH, Groen A, et al. The use of bowel protocols in critically ill adult patients: a systematic review and meta-analysis. *Crit Care Med* 2017;45(7):e718–e726. DOI: 10.1097/CCM.0000000000002315