



Editorial

Respiratory and Gastrointestinal systems; friends or foes?

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The article by Obeidat and Randhawa in this issue “Gastrointestinal complications in critical care patients and effects of mechanical ventilation on the gastrointestinal tract”¹ is a great reminder of this important topic and a must read for ICU clinicians.

The interaction between the gastro-intestinal system and the respiratory system is a tight yet not fully understood complex one, and unfortunately gets overlooked.

In this comprehensive review, the authors detail the effects of the mechanical ventilation exert on the gastro-intestinal system and reciprocally the effect of the gastro-intestinal system on the respiratory system in the critically ill and mechanically ventilated patients. They delineate the patho-physiology, symptomatology, possible preventive strategies, and treatments of such complications. They detail the research and the evidence very nicely and concisely.

References

1. Obeidat AE, Randhawa S. Gastrointestinal complications in critical care patients and effects of mechanical ventilation on the gastrointestinal tract. J Mech Vent 2021; 2:17-32.
2. Bramley K, Puchalski JT. Defying Gravity Subdiaphragmatic Causes of Pleural Effusions. Clin Chest Med 2013; 34: 39–46.

The respiratory and gastro-intestinal system are not only anatomically neighbors separated by a diaphragm, but the connection goes beyond that as they explain.

Fluid shifts between the pleura and the peritoneal cavity occurs frequently and can cause either ascites or pleural effusions.² Additionally, almost 20% of the cases of acute respiratory distress syndrome (ARDS) are related to intra-abdominal causes second only to primary lung infections.³

Over the last decade, special interest in the gut microbiome and its effect on health has been more understood.⁴ Recently the effect of the gut microbiota and the role it plays on the respiratory system has been more defined and emphasized.⁵

Special attention to this topic and that complex relation in the critically ill and mechanically ventilated patient can prevent complication and might lead to a better outcome.

3. Sheu CC, Gong MN, Zhai R, et al. The influence of infection sites on development and mortality of ARDS. Intensive Care Med. 2010; 36(6):963-970.
4. Valdes AM, Walter J. Role of the gut microbiota in nutrition and health. BMJ 2018;361:k2179.
5. Li Chunxi, Liu Haiyue, Lin Yanxia, et al. The Gut Microbiota and Respiratory Diseases: New Evidence. Journal of Immunology Research 2020; 1-12.