



Evaluation of Cases Developing Sepsis Afteracute Gastroenteritis: A Single Center Experience

Akut Gastroenterit Sonrasında Sepsis Gelişen Vakaların Değerlendirilmesi:
Tek Merkez Deneyimi

Meryem Eroğlu¹(ID), Ayşe Şahin²(ID), Senem Behsat Ulukaya³(ID), Nazan Dalgıç³(ID)

¹ *Clinic of Pediatrics and Diseases, Burhaniye State Hospital, Balıkesir, Türkiye*

² *Clinic of Pediatrics, Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye*

³ *Clinic of Pediatric Infectious Diseases, Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye*

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Dear Editor,

We have reviewed the letter to the editor titled "Sepsis after acute gastroenteritis: an evaluation of antibiotic use, microbiota, and barrier integrity" written for our study titled "Evaluation of cases developing sepsis after acute gastroenteritis: A single-center experience."

We thank the authors for their interest in our study and their constructive contributions. Below, we respond to the four main points raised in light of our data and the current literature.

In the letter to the editor, the authors noted a striking difference between the antibiotic use rate and invasive pathogen detection rate, suggesting that this may indicate unnecessary antibiotic use. In our study, antibiotic treatment was initiated empirically with a presumptive diagnosis of sepsis, taking into account the patients' clinical and laboratory findings (such as clinical deterioration, changes in vital signs, persistent fever, and elevated acute phase reactants) (1). Culture positivity does not always correlate with the clinical picture,

especially in pediatric patients. Furthermore, initiating antibiotics before receiving culture results is a frequently preferred clinical approach in life-threatening conditions such as sepsis (1). However, we believe that discussing this issue and adopting targeted treatment strategies in the future, with the inclusion of new laboratory-supported markers in clinical practice, will enable clinicians to perform more clinically controlled patient follow-ups.

As in the study emphasized by our colleagues, in our study, high levels of inflammatory markers such as C-reactive protein and plateletcrit, when combined with clinical suspicion, have been an effective factor in starting antibiotics (1,2). However, the specificity levels of these markers are limited, they can lead to false positives, and they may be insufficient in guiding clinicians. At this point, we would like to express that we agree with the view that rapid molecular diagnostic panels can be useful in guiding antibiotic use (2,3).

As the authors also point out, the disruption of intestinal barrier integrity after acute gastroenteritis (AGE), especially in infants with immature immune systems and underdeveloped

Correspondence Address/Yazışma Adresi

Ayşe Şahin

Clinic of Pediatrics,
Şişli Hamidiye Etfal Training and Research Hospital,
İstanbul, Türkiye

E-mail: ayseturgutsahin@gmail.com

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intestinal barriers, may increase the risk of bacterial translocation and, as we also mentioned in our article, may constitute a risk factor for the development of sepsis (1,4). Further studies and the development of molecular tests are needed to detect this condition early or prevent its occurrence.

Data indicating that antibiotics negatively affect the microbiota and may weaken the intestinal barrier are valuable. Long-term effects of repeated antibiotic exposure are frequently discussed today (4,5). Therefore, as stated in our study, starting antibiotics should only be considered when necessary, and laboratory and clinical findings should be evaluated together in the decision-making process.

In conclusion, our study aims to draw attention to a critical clinical picture such as the development of sepsis after AGE and to highlight laboratory parameters that may help predict sepsis. The contributions of our colleagues are valuable in terms of increasing clinical awareness and diagnostic sensitivity in this field. We would like to thank them once again for their scientific contributions.

Sincerely

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