



# Efficacy and Pattern of Antibiotic Usage Among Patients with Cirrhosis and/or Chronic Liver Disease

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A prospective and observational study was conducted by Kamila *et al.*<sup>1</sup> to explore the effect of antibiotics in patients with cirrhosis and/or chronic liver disease.<sup>1</sup> This work compared the white blood cell count in ascites, serum glutamic pyruvic transaminase level, Child-Pugh score, and MELD score before and after antibiotic treatment in cirrhotic patients with bacteremia. The results suggested that antibiotic treatment might improve the Child-Pugh and MELD scores for patients with cirrhosis and/or chronic liver disease, and thereby improve survival. Kamila *et al.* also discussed an important topic in that bacterial infection is a common and life-threatening disease in patients with cirrhosis. Previously, a multicenter prospective intercontinental study showed that a high global prevalence of bacterial infection was observed in cirrhotic patients, which was significantly associated with a poor clinical outcome.<sup>2</sup> Antibiotics could not only effectively prevent/treat the development of bacterial infection, but could also decrease the incidence of further decompensation (*i.e.*, hepatorenal syndrome).<sup>3</sup> Importantly, patients with upper gastrointestinal bleeding were excluded in Kamila *et al.*'s study. As is well known, for upper gastrointestinal bleeding patients, the main cause of death can be the shock caused by excessive blood loss, which in turn induces multiple organ failure. Therefore, upper gastrointestinal bleeding might influence the conclusions of Kamila *et al.*'s study.

However, it should not be neglected that the use of antibiotics may also be associated with the clinically relevant risk of developing infections due to bacterial resistance. Indeed, a large scale prospective study in Europe showed that infection caused by bacteria that was resistant to the main antibiotic families was prevalent in patients with cirrhosis.<sup>4</sup> Although prophylaxis of bacterial infection with antibiotics can improve the prognosis in selected patients, the use of antibiotics should be limited to patients at high risk of developing infections.

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## Conflict of interest

The authors have no conflicts of interest related to this publication.

## Author contributions

Review of the literature and drafting of the manuscript: ZB, XZ;  
Critical revision of the manuscript: ZB, XZ.

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