

## Gastrointestinal Bleeding and Transfusion Strategies in Patients with Hypoalbuminemia

Fatih Karaahmet · Sahin Coban · Ilhami Yuksel

Received: 11 November 2013 / Accepted: 10 December 2013 / Published online: 3 January 2014  
© Springer Science+Business Media New York 2014

To the editor,

We read the study of Cheng et al. [1] with great interest and congratulate the authors on this excellent piece of work. The authors found that intravenous albumin transfusion strategy has beneficial effects in patients with gastrointestinal bleeding and hypoalbuminemia. In patients with advanced hypoalbuminemia and ascites, hypervolemia occurs as a result of a decrease in effective circulating volume (ECV), profound hypoalbuminemia and activation of the renin–angiotensin–aldosterone system [2]. The ensuing loss of blood due to acute upper gastrointestinal bleeding will tend to cause a further reduction of ECV. This situation will cause systemic vasoconstriction, renal blood flow and a decrease of the granular filtration fraction, as well as renal water reabsorption by over-activation of the renin–angiotensin–aldosterone system. Also, more aggressive transfusion therapy without colloid oncotic pressure extenders will be locked in a vicious cycle of hypervolemia and ascites, and increased risk of adverse

events [3]. For these reasons, we agree with Dr. Cheng and colleagues that intravenous albumin transfusion strategy should be the main arm of therapy for management of advanced hypoalbuminemia.

**Conflict of interest** None.

### References

1. Cheng HC, Chang WL, Chen WY, et al. Intravenous albumin shortens the duration of hospitalization for patients with hypoalbuminemia and bleeding peptic ulcers: a pilot study. *Dig Dis Sci*. 2013;58:3232–3241.
2. Gines P, Cardenas A, Arroyo V, et al. Management of cirrhosis and ascites. *N Engl J Med*. 2004;350:1646–1654.
3. Karaahmet F, Coban S, Başar O, et al. Letter: vaptans for the treatment of hyponatraemia and ascites in patients with cirrhosis. *Aliment Pharmacol Ther*. 2012;36:1103–1104.

---

F. Karaahmet (✉) · S. Coban · I. Yuksel  
Department of Gastroenterology, Diskapı Yıldırım Beyazıt  
Educational and Research Hospital, 06080 Altındag, Ankara,  
Turkey  
e-mail: fatih\_ares@yahoo.com.tr

I. Yuksel  
Department of Gastroenterology, Yıldırım Beyazıt University  
School of Medicine, Ankara, Turkey