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EDITORIAL

Clinical impact of serum albumin on nonvariceal upper gastrointestinal bleeding☆,☆☆

Impacto clínico de la albúmina sérica en la hemorragia de tubo digestivo alto no variceal

Nonvariceal upper gastrointestinal bleeding (NVUGIB) continues to be a diagnostic and therapeutic challenge. Annual NVUGIB incidence is estimated at approximately 100 cases per 100,000 inhabitants and the mortality rates range from 6% to 15%.[1] Despite the advances in NVUGIB management, particularly in endoscopic technology, there has been no significant decrease in mortality in this group of patients.

On the other hand, serum albumin levels have been shown to have predictive capacity for morbidity and mortality in different clinical scenarios, from elective and emergency surgeries to cerebrovascular events.

In this issue of the *Revista Mexicana de Gastroenterología*, González-González et al.[2] describe how low levels of serum albumin are associated with a higher mortality rate in patients with NVUGIB. They defined hypoalbuminemia as levels < 3.5 g/dl and it was present in more than 70% of the NVUGIB patients evaluated over a 4-year period. Levels < 3.2 g/dl had an appropriate predictive capacity for mortality (area under the curve [AUC]: 0.74), slightly better than the Rockall index (AUC: 0.72). Furthermore, the mortality rate was 11% in the patients with albumin < 3.2 g/dl, compared with only 1% in the patients with albumin ≥ 3.2 g/dl (p = 0.009; odds ratio: 9.7). As was expected, the group of patients between the sixth and seventh decades of life, an independent risk factor for mortality in NVUGIB, was the most affected in relation to comorbidities. Likewise, a significantly higher percentage of hypoalbuminemia was detected in that age group.

Initially, hypoalbuminemia had been described as a predictive factor for mortality mainly in patients with gastrointestinal bleeding associated with portal hypertension.[3] However, the same group of authors previously reported on a larger cohort that included patients with liver disease, chronic kidney disease, and neoplasia. In that study, hypoalbuminemia was also an independent predictor of hospital mortality in NVUGIB.[4]

In conclusion, serum albumin is an accessible tool that enables risk stratification in patients with NVUGIB. The association of low serum albumin levels and greater mortality in NVUGIB could be due to the greater frequency of hypoalbuminemia in patients with malnutrition, chronic subclinical liver diseases (e.g. fatty liver disease), or chronic diseases associated with increased catabolism (e.g. kidney diseases, diabetes, cardiovascular diseases). Nevertheless, this association will have to be clarified in future studies.

Previous studies have shown how medical strategies that are easy to adopt, such as restricting blood transfusion in patients with upper gastrointestinal bleeding and hemoglobin levels < 70 mg/dl, are associated with better outcome, compared with those patients that receive transfusions under a less confining criterion (< 90 mg/dl).[5] Therefore, the results of the present study should stimulate the performance of controlled clinical trials on albumin infusions in NVUGIB patients, mainly in those with hypoalbuminemia, for the purpose of improving outcome in these patients.

Conflict of interest

The authors declare that there is no conflict of interest.

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☆☆ See related content at DOI: http://dx.doi.org/10.1016/j.rgmx.2016.03.005, González-González JA, et al. Hipoalbuminemia en el desenlace clínico de pacientes con sangrado de tubo digestivo alto no variceal. Revista de Gastroenterología de México. 2016;81:183–189.

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