Is midazolam safe for sedation in cirrhotic patients?

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Dear Editor,

We read the article entitled "Safety and effectiveness of midazolam for cirrhotic patients undergoing endoscopic variceal ligation" written by Jo et al. (1) and published in Turkish Journal of Gastroenterology in July 2018. It is an interesting study and a well-written paper, which attracted our attention. Upon reading the title, we considered how midazolam could be safe in cirrhotic patients. However, when we read the entire manuscript, we understood that midazolam use for sedation in upper gastrointestinal endoscopy, in fact, increases the number of adverse effects in cirrhotic patients. For this reason, we are of the opinion that there is a discrepancy between the title and the information provided in its results and conclusion sections.

This article emphasizes that in cirrhotic patients, endoscopic variceal band ligation without sedation is safer than that with sedation. Nevertheless, we do not agree with this inference.

In our opinion, although in cirrhotic patients, the post-sedation recovery time is extended due to delayed drug metabolism and decreased transport protein levels, variceal band ligation with sedation is safer than that without sedation. This is also supported by the literature and established in many guidelines.

In cirrhotic patients, upper gastrointestinal endoscopy needs high patient compliance. In particular, in patients with active variceal bleeding, procedural success and patient safety are vital. Retching during the procedure can cause rebleeding owing to variceal rupture. Further, endoscopy and ligation may be technically more difficult if a patient does not lie still. Therefore, for patient safety, we suggest that cirrhotic patients should be sedated preferably with safer methods and medicines during upper gastrointestinal endoscopy. In addition, if a patient has active variceal bleeding, he/she should be intubated to avoid aspiration.

The half-life of midozolam is prolonged in cirrhotic patients because of its effect on GABA receptors, its main disadvantage for sedation. In a meta-analysis by Tsai et al. (2), it was concluded that midazolam and propofol have similar sedative effects, but propofol has fewer adverse effects than midozolam. According to this meta-analysis, propofol does not have a deteriorating effect on hepatic encephalopathy but has shorter post-procedure recovery time.

Although sedation with propofol provides a longer recovery time and higher volume of distribution in cirrhotic patients than in non-cirrhotic patients, total body clearance and terminal elimination half-life are similar in both. Moreover, compared with midozolam, propofol does not increase the risk of bradycardia, hypotension, and hypoxemia in upper gastrointestinal endoscopy.

In conclusion, esophageal variceal bleeding is one of the most important causes of mortality in cirrhotic patients. Therefore, successful therapeutic endoscopy is vital. Using propofol instead of midazolam for endoscopic sedation can decrease the risk of encephalopathy, which is one of the most concerned complications in cirrhotic patients. We conclude and recommend that emergency or prophylactic endoscopic band ligation should always be performed under safe sedation in well-prepared patients.

REFERENCES

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Author's Reply

Editorial Office Staff reached out to the authors of the addressed article but they decided not to respond to the letter.

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