J Gastric Cancer. 2022 Mar;22(1):1-2
https://doi.org/10.5230/jgc.2022.22.e7
pISSN 2093-582X·eISSN 2093-5641

Journal of Gastric Cancer

Editorial

Predicting the Bleeding Risk for Patients on Anticoagulant Therapy Prior to Gastric Endoscopic Submucosal Dissection

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▸ See the article "Bleeding After Gastric Endoscopic Submucosal Dissection Focused on Management of Xa Inhibitors" in volume 22 on page 47.

Received: Mar 15, 2022
Accepted: Mar 15, 2022
Published online: Mar 22, 2022

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Conflict of Interest
No potential conflict of interest relevant to this article was reported.

Endoscopic submucosal dissection (ESD) is a standard treatment for gastric epithelial neoplasm, including dysplasia and early gastric cancer. Therapeutic endoscopic procedures carry increased risks of complications such as bleeding and perforation compared with diagnostic endoscopy. The joint Asian Pacific Association of Gastroenterology and Asian Pacific Society for Digestive Endoscopy practice guidelines state that, among therapeutic endoscopic procedures, ESD has a particularly high risk of bleeding [1]. The number of patients on antithrombotic therapy, including antiplatelet or anticoagulant agents, has been reported to have increased [2,3], with antithrombotic agents further increasing the risk of bleeding during ESD. Thus, the timing of antithrombotic therapy discontinuation prior to ESD is important for patients after having considered the risks of bleeding and thromboembolic events. Several clinical practice guidelines have considered the use of antithrombotic agents pre- and post-ESD [1-6]. However, the risk of bleeding and thromboembolic events can depend on individual situations. Thus, consultation with a cardiologist or neurologist in terms of the duration of discontinuation and when to resume antithrombotic therapy may be helpful [2]. Furthermore, having a marker that could predict the bleeding risk could facilitate an individualized approach.

In this issue of the *Journal of Gastric Cancer*, Ono et al. [7] analyzed the association between the risk of bleeding post-gastric ESD and antithrombotic therapy. They evaluated the bleeding risk and the coagulation time, focusing on direct oral Xa inhibitors (DXaIs) among direct oral anticoagulants (DOACs), and investigated a molecular marker to predict the risk of bleeding. They found that the bleeding risk in a DXaIs group was higher than that in both control and antiplatelet agent groups, which was not a novel finding. The risk of bleeding in the DOACs group was reported to differ according to the DOACs withdrawal time. Moreover, the withdrawal time was less than the 48 h recommended in several guidelines [1,2,6,8]. Ono et al. [7] aimed to measure molecular markers predicting bleeding in patients on DXaIs. They analyzed the ratio of inhibited thrombin generation (RITG) based on dilute prothrombin time to determine a residual coagulation activity. They reported that the RITG was significantly higher in patients using DXaIs who hemorrhaged than in those who did not hemorrhage. Therefore, the RITG could be a marker for monitoring coagulation capacity and predicting the bleeding risk post-gastric ESD.

jgc Journal of Gastric Cancer

The RITG has not yet been commercialized; however, Ono et al.'s study [6] showed the possibility of the RITG measurement being a good predictor of the risk of bleeding post-gastric ESD. This type of molecular predictor is likely to enable a more tailored approach to be adopted in relation to the use of DOACs pre- and post-gastric ESD.

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