Use of a detachable snare with polyglycolic acid sheets in a simple and novel shielding method for post-endoscopic submucosal dissection ulcers

Many reports have described a shielding method involving the use of polyglycolic acid (PGA) sheets and fibrin glue as a means to prevent post-endoscopic submucosal dissection (ESD) complications [1–5]. During this procedure, however, a PGA sheet under little tension easily shrinks when exposed to mucus. Therefore, appropriate PGA sheet delivery is required to keep the sheet dry and maintain its shape.

We demonstrate a simple and novel shielding method with autologous fibrin glue and a PGA sheet (Video 1). We performed gastric ESD for a 20-mm lesion at the lesser curvature of the body. The size of post-ESD ulcer was 40 × 30 mm (Fig. 1). The equipment used consisted of a PGA sheet (NV-M-015G; Gunze, Kyoto, Japan) and a detachable snare (HX-400U-30; Olympus, Tokyo, Japan) (Fig. 2a). First, a PGA sheet was cut to the size of the endoscopic detachable snare (65 × 40 mm) and four points on the PGA sheet were connected to the snare using silk thread (Fig. 2b). The sheet was captured by an endoscopic clip (ROCC-D-26-235-C; Micro-Tech, Nanjing, China) and anchored using clips around the sides of the gastric floor. This method resulted in the ulcer being fully covered by a single PGA sheet (Fig. 3a). The fixed PGA sheet then had autologous fibrinogen and thrombin sprayed onto it simultaneously to bond it. The procedure time was 5 minutes. Follow-up endoscopy the day after the ESD showed full coverage of the ulcer by the PGA sheet (Fig. 3b).

In this method, the detachable snare prevents the sheet from shrinking, even when it comes into contact with mucus. Moreover, this novel shielding method is a more rapid procedure because it allows a large size sheet (65 mm) to be applied in one go. In our study, we found that, using this method, a large PGA sheet can be easily applied to a post-ESD ulcer in a short time.

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Competing interests

The authors declare that they have no conflict of interest.

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References


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