Tulip-bundle technique as rescue hemostatic therapy in a deep Mallory–Weiss tear

An 80-year-old woman who was anticoagulated with rivaroxaban for a previous deep venous thrombosis of the left lower limb presented with a 12-hour history of hematemesis. Her physical examination was unremarkable, and she had a blood pressure of 153/78 mmHg and heart rate of 75 beats/minute. Laboratory test results showed a hemoglobin level of 13.1 g/dL. Upper gastrointestinal endoscopy revealed a deep Mallory–Weiss tear with a visible vessel and active pulsatile bleeding located in a hiatus hernia (Fig. 1a).

Because she was anticoagulated with rivaroxaban, mechanical hemostasis with clips (Resolution Clip; Boston Scientific) was selected as the treatment (Fig. 1b) but despite the application of six hemostatic clips, bleeding persisted (Fig. 1c). Subsequently, a tulip-bundle technique was planned (Video 1). A detachable snare (MAJ-254; Olympus, Tokyo, Japan) was placed over the clips (Fig. 1d), which resulted in immediate hemostasis (Fig. 1e). Adjunctive management with nil per os, a proton pump inhibitor as a continuous infusion, metoclopramide, and prophylactic enoxaparin instead of rivaroxaban was instituted. The patient remained asymptomatic and was discharged 3 days later.

Mallory–Weiss syndrome accounts for 6%–14% of all cases of upper gastrointestinal bleeding, mainly occurring at the gastroesophageal junction or gastric cardia [1]. The tulip-bundle technique consists of the placement and tightening of a detachable snare around clips [2]. This technique has a range of applications, including hemostasis and closure of perforations and fistulae [2,3]. Moreover, this technique may represent an effective rescue treatment in bleeding that is refractory to initial hemostasis in patients with comorbidities that limit hemostatic options, as highlighted in this report.

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Fig. 1 Endoscopic views showing: a a Mallory–Weiss tear with active bleeding located in a hiatus hernia; b placement of a hemostatic clip; c persistent bleeding after the placement of six hemostatic clips; d a detachable snare tightened around the hemostatic clips; e cessation of the bleeding after completion of the tulip-bundle technique.
References


Bibliography

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