



A Novel Method to Prevent Migration of Gastric Stent

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Abstract

Keywords

- ▶ gastric outlet obstruction
- ▶ migration
- ▶ self-expandable metal stent

Self expandable metal stent (SEMS) are widely used in patients with gastric outlet obstruction. Stent migration can occur in these patients, and is an important issue, which needs to be addressed. We used a novel technique for prevention of migration of gastric stent in an 80 year old female. Patient presented with recurrent vomiting due to gastric outlet obstruction by a growth in the antrum. SEMS was placed for palliation of symptoms. A nylon thread multiloop and through the scope clips were used to fix the SEMS with the gastric wall. The technique was used successfully to prevent the migration of SEMS.

Self-expandable metal stents (SEMS) has been widely used for palliation of symptoms in patients with malignant gastric outlet obstruction. Stent migration has been reported in 19% and 6% of patients with covered and uncovered stent respectively¹ and can lead to serious complications. We have used a novel method for the prevention of migration of pyloric stent. An 80-year-old female presented with a history of vomiting for the last 3 months. Upper gastrointestinal endoscopy revealed growth with partial narrowing in antrum, narrowed segment measured 2 cm in length, and 9.2 mm scope was passable with maneuvering. Histopathology revealed poorly differentiated adenocarcinoma. A 22 mm, 9 cm uncovered SEMS with proximal flange of 27 mm (Wallflex, Boston Scientific Corp, Massachusetts, United States) was placed (▶ **Fig. 1A**) for palliation of symptoms. As the narrowing was partial, endoscopic fixation of stent was planned to prevent migration. We used multiloop and clips to fix the stent to the gastric wall. Multiloop technique has been used previously for assistance in endoscopic submucosal dissection.² Loops of nylon thread were prepared over 2 mL syringe, and multiple knots were applied at each of the three loops. (▶ **Fig. 1B**). Hemoclip (EZ clip, Olympus Medical System,

Gurugram, India) was passed through the accessory channel of endoscope, and the loop was grasped (▶ **Fig. 2A**) and partially withdrawn inside the channel. Gastroscope was passed till the proximal flange of the stent, 1 clip was used on stent and 3 on the loops. (▶ **Fig. 2B**). Stent and clips are still in the same position at 4 weeks of follow-up, and patient is able to take semisolid diet.

Various techniques such as double layered stents,³ big funnel stents with large flare,⁴ and fixation with clips⁵ have been used previously for the prevention of migration of the stent. In the present case, we have tried to fix the pyloric stent with the easily available accessories without significant addition of the cost to the procedure. The technique may be particularly useful in conditions where risk of migration is predicted to be high, such as placement of covered stent for benign indication, in patients with partial narrowing of lumen, or previous history of stent migration.

Authors Contribution

Vikas Singla wrote the manuscript. Shivam Khare collected all the images and wrote the manuscript. Anil Arora designed the work and wrote the manuscript. Shrihari Anil Anikhindi wrote the manuscript.

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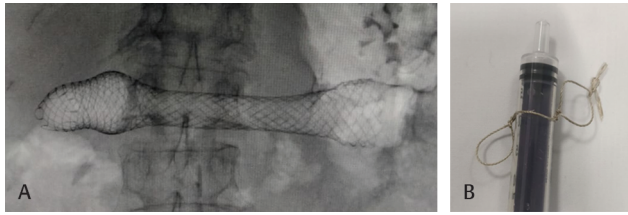


Fig. 1 (A) Self-expandable metal stent placed across the pylorus. (B) Preparation of multiloop over the 2 mL syringe.

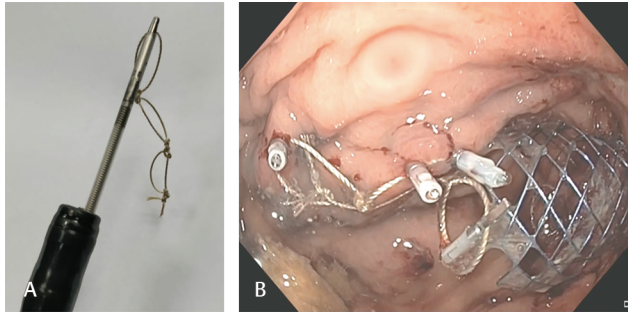


Fig. 2 (A) Passage of Hemoclip through the accessory channel of the scope, and grasping of multiloop. (B) Fixation of self-expandable metal stent to the gastric wall.

Conflict of Interest

All the authors declared no conflict of interest.

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