

Through-the-scope self-expanding metal stent placement using newly developed short double-balloon endoscope for the effective management of malignant afferent-loop obstruction



Fig. 1 Computed tomography scan revealed a dilated afferent loop.



Fig. 2 Malignancy of the afferent-loop obstruction was confirmed by endoscopy.



Fig. 3 Jejunography showed the stenotic lesion.



Fig. 4 Improvement of afferent-loop obstruction was confirmed by abdominal radiography 2 days after the procedure.

Video 1



Afferent-loop obstruction was confirmed by endoscopic view. An endoscopic retrograde cholangiopancreatography catheter was used to pass the guidewire through the stenotic region. Through-the-scope self-expanding metal stent placement was performed along the guidewire. Endoscopic view confirmed good drainage function and the fluoroscopic image confirmed stent deployment.

This is the first report of through-the-scope (TTS) self-expanding metal stent (SEMS) placement, using a newly developed, short-type, double-balloon endoscope (S-DBE), for the palliation of malignant afferent-loop obstruction (ALO). The endoscope has a 3.2mm working channel and 152cm working length (EI-580BT; Fujifilm, Tokyo, Japan). The SEMS is a new Niti-S D pyloric/duodenal uncovered stent, with a diameter of 18mm and lengths of 6cm, 8cm, 10cm, or 12cm, which is deployed using a 9Fr×220cm

delivery system (TaeWoong Medical Co., Ltd., Gimpo, South Korea). In the case presented here, the 6cm SEMS was used. A 71-year-old woman, who had undergone pancreaticoduodenectomy for pancreatic cancer 5 years previously, was admitted for fever and acute abdominal pain. Computed tomography revealed dilation of the afferent loop, which was caused by bowel obstruction due to cancer recurrence (Fig. 1). SEMS placement using the S-DBE was planned for palliation. S-DBE smoothly accessed the ALO

lesion. Malignancy was confirmed from the endoscopic view (Fig. 2), and the stenosis was recognized on the jejunograph (Fig. 3).

The SEMS was advanced through the S-DBE and deployed accurately at the target area under direct endoscopic view. TTS SEMS placement was successful, and immediate intestinal flow was confirmed visually (Video 1). Abdominal radiography 2 days after the procedure showed a palliated ALO (Fig. 4). The patient started dietary intake 3 days after the pro-

cedure and was discharged without any complication.

The combined use of the new S-DBE with 3.2 mm working channel and SEMS with the 9 Fr delivery system enabled TTS SEMS placement, which had previously been difficult because the large diameter of the SEMS delivery system did not allow stent deployment through the 2.8 mm working channel of conventional short DBE.

Malignant ALO caused by pancreatic cancer recurrence after pancreaticoduodenectomy is usually managed by percutaneous transhepatic drainage [1] or palliative surgical bypass [2,3]; however, these are invasive procedures and can only be performed in a limited selection of patients.

Recent reports have described SEMS placement for ALO via a DBE overtube [4, 5]; however, stent deployment was attempted only under fluoroscopic view. Therefore, TTS SEMS placement is an important innovation for the management of malignant ALO because it allows safe and accurate SEMS placement.

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Competing interests: None

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