

A fractured duodenal self-expanding metal stent in a patient with pancreatic cancer



Fig. 1 Computed tomography (CT) scan showing the fractured duodenal self-expanding metal stent (SEMS), which had partially migrated into the distended stomach.

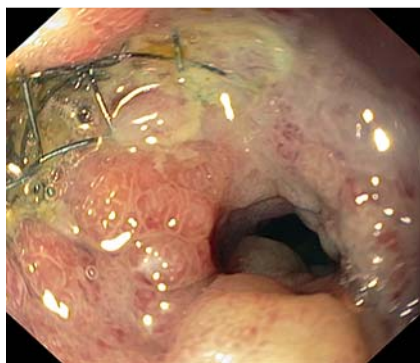


Fig. 2 Endoscopic view of the remnant part of the duodenal self-expanding metal stent (SEMS), which was no longer patent.

A 65-year-old man with biliary and duodenal obstruction due to metastatic adenocarcinoma of the pancreas underwent placement of an uncovered biliary self-expanding metal stent (SEMS). Subsequently, palliative chemotherapy with gemcitabine and nab-paclitaxel was initiated. Because the patient developed worsening symptoms of gastric outlet obstruction, an uncovered, 12-cm duodenal SEMS (Niti S-enteral D type, diameter 20 mm; TaeWoong Medical, Seoul, South Korea) was placed 4 weeks later.

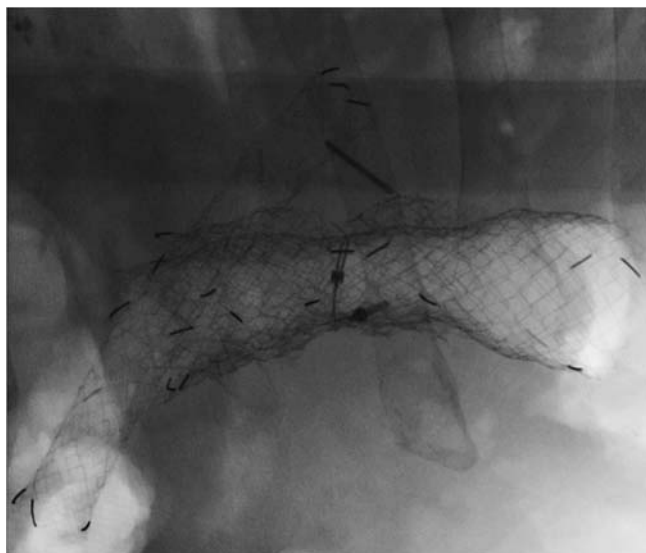


Fig. 3 Radiographic images following the extraction of the migrated part of the self-expanding metal stent (SEMS) showing a second duodenal SEMS positioned in the remnant of the original SEMS. The patent biliary SEMS, which remains in place, is also shown.

After 2 months a partial tumor response was documented; however, 6 weeks later he presented again with recurrent symptoms of gastric outlet obstruction. Computed tomography (CT) demonstrated fracture of the duodenal SEMS, which had partially migrated into the distended stomach (● Fig. 1). A remnant of the SEMS was still in place but was not patent (● Fig. 2). After the migrated piece of the SEMS had been removed with a snare, an additional uncovered 8-cm SEMS (same type, diameter 22 mm) was placed in the remnant duodenal SEMS (● Fig. 3). Examination of the removed piece of SEMS showed that the wire mesh was broken (● Fig. 4). The biliary stent remained patent. After this procedure, the patient was able to eat soft food again.

Placement of a duodenal SEMS is the standard palliative treatment for malignant gastric outlet obstruction and results in prompt relief of symptoms. Distal stent migration can occur in up to 56% of patients who have covered SEMSs placed [1,2]. In contrast, stent migration is rare in patients who have had uncovered duodenal SEMSs placed, being reported in less than 2% of patients in a recently published prospective multicenter study [3]. An extremely rare adverse event of such SEMSs is complete stent fracture and subsequent migration of the broken part. To date, 12 cases of complete fracture of a SEMS, mostly esophageal SEMSs, have been reported [4].

In cases where symptoms of gastric outlet obstruction recur after initially successful placement of a duodenal SEMS, tumor ingrowth, stent migration, and stent fracture, as reported in the present case, should all be considered.

Endoscopy_UCTN_Code_CPL_1AH_2AD

Competing interests: None

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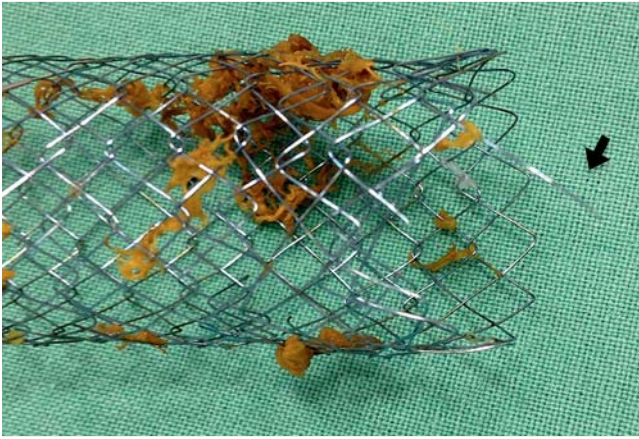


Fig. 4 The removed piece of self-expanding metal stent (SEMS) showing a broken wire mesh (arrow).

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DOI <http://dx.doi.org/10.1055/s-0034-1377364>
Endoscopy 2014; 46: E386–E387
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

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