Endoscopic removal of a broken self-expandable metal stent using the stent-in-stent technique

A 55-year-old man with dysphagia due to an unresectable distal esophageal adenocarcinoma underwent placement of a 15-cm partially covered self-expandable metal stent (SEMS), diameter 18 mm (Ultraflex; Boston Scientific, Natick, Massachusetts, USA). After 3 months, he presented with recurrent dysphagia. At endoscopy, the meshes of the SEMS had broken, leading to collapse of the SEMS and obstruction of the lumen (Fig. 1). Because the patient’s clinical condition had improved and further treatment with chemotherapy or radiotherapy was considered, we decided to remove the SEMS using the stent-in-stent technique. A second SEMS, 17-cm long, fully covered, diameter 20 mm (Hanaro, M.I.Tech, Korea) was inserted, overlapping the full length of the first SEMS. After 2 weeks, on endoscopic examination, the loose struts of the disrupted SEMS had perforated the covering of the second SEMS (Fig. 2). By pulling the proximal retrieval lasso of the fully covered SEMS, both SEMSs were extracted simultaneously without the need to exert much force. Examination of the retrieved stents showed they were strongly attached to each other, indeed with loose struts of the first stent perforating the covering of the fully covered SEMS (Fig. 3). Immediately after removal of both stents, no esophageal stenosis was observed. The post-procedural course was uneventful, and the patient is currently without dysphagia.

Endoscopic removal of a broken SEMS using the stent-in-stent technique is a simple and safe method to facilitate removal of embedded stents in benign disease [3]. This is the first report of removal of a broken SEMS using the stent-in-stent technique. It appears to be simple, safe and effective, also in malignant disease.

References

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