

Stent : 1 Nitinol

가
 ingrowth) (stent migration) , (tumor
 Nitinol
 Nitinol 가
 1 (erosion)
 가 (Fig. 1A).
 4 cm , 0.035 inch
 (1 - 3). (Radiofocus, Terumo, Tokyo, Japan)
 가 (Self - expanding metallic stent) 5Fr Davis
 8 cm nitinol (Choo
 (1 - 4). stent, M.I.Tech., Pyungtaek, Korea)
 (stent fracture) Gianturco (Fig. 1B). 2
 1 Nitinol 가 grade I . 4
 가 III . 11 grade
 (5, 6). Nitinol 4
 1
 60 4 (Fig. 1C).
 가 10 cm nitinol 가 가
 Grade II(modified Takita ' (Fig. 1D). 2
 s dysphagia grading) 가 (Fig. 1E), grade I . 4
 (stable disease) 9
 grade IV 가

1
 2008 7 22 2008 9 11

가 (1, 7).

가 (1, 7-9).

가

Gianturco Z

(5-8).

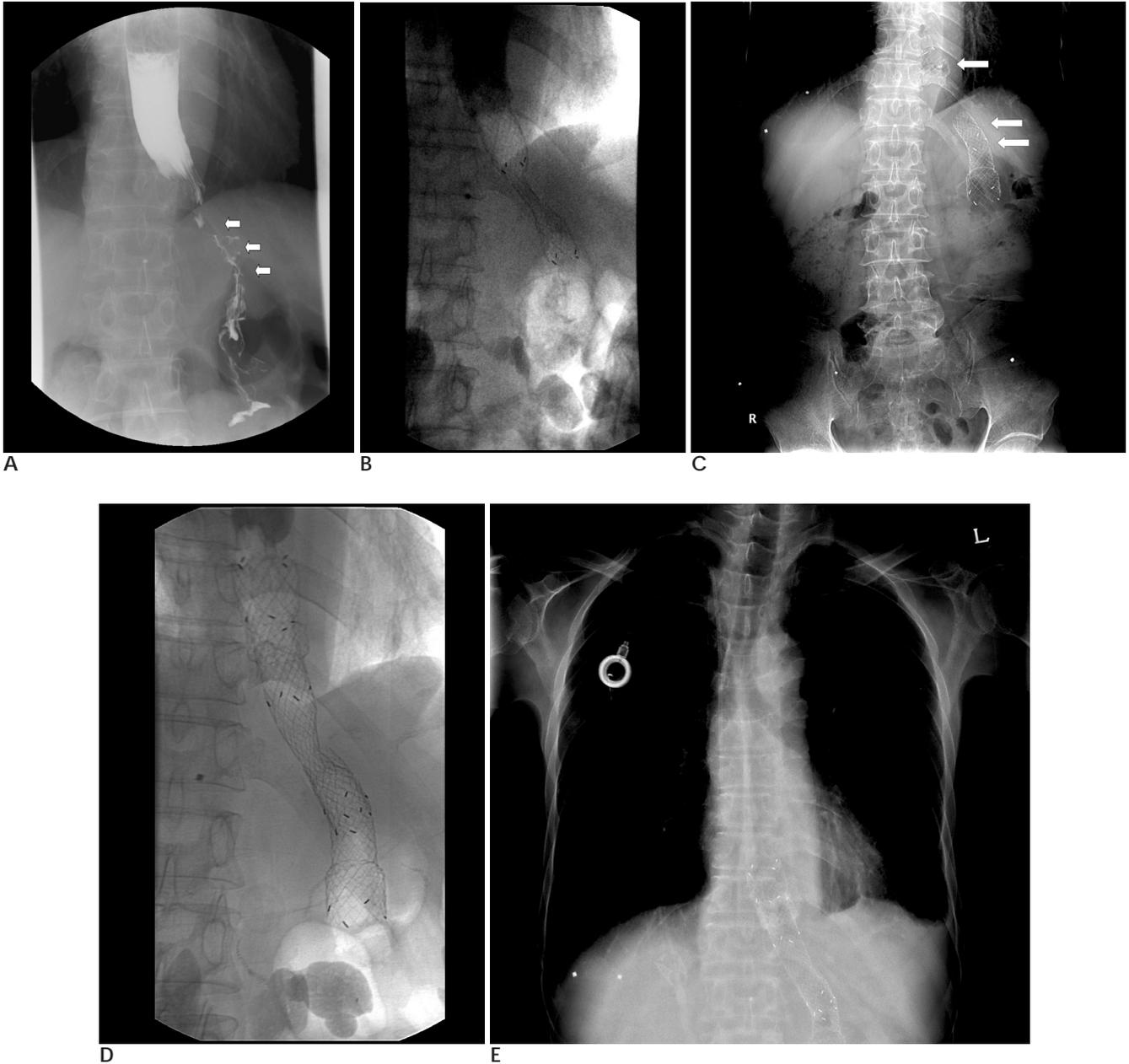


Fig. 1. A 60-year-old man with malignant esophageal stricture.
A. Upper gastrointestinal series shows abrupt luminal narrowing (arrow) in gastroesophageal junction with passage disturbance of contrast media.
B. A 8 cm length covered nitinol esophageal stent (Choo stent) is deployed in gastroesophageal junction for malignant stricture measured 4 cm in length.
C. Eleven weeks after the initial stent insertion, stent fracture (arrow) is seen associated with upward migration of proximal portion and downward migration of distal portion of the stent.
D. A 10 cm length covered nitinol esophageal stent is deployed covering migrated proximal and distal portion of broken stent.
E. Chest radiograph obtained 2 days after reinsertion of the stent shows near complete stent expansion.

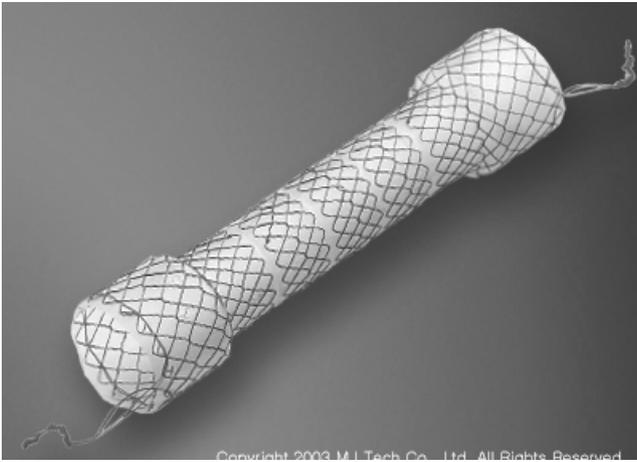


Fig. 2. Structure of Choo stent.

Choo stent which is a silicon covered nitinol stent has larger bands on both ends preventing migration. Its unique segmented structure minimizes the effect of outside pressure on overall stent body.

(1, 2, 7, 8).

nitinol

(<http://www.mitech.co.kr>)(Fig. 2).

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(3, 8).

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(erosion)
(6).

nitinol

가

(anti-reflux valve)

1. . UGI Stents: Covered or non-covered. 2005;30 (Suppl 1):230-235
2. Cwikiel W, Stridbeck H, Tranberg KG, von Holstein CS, Hamsbraeus G, Lillo-Gil R, et al. Malignant esophageal strictures: treatment with a self-expanding nitinol stent. *Radiology* 1993;187: 661-665
3. Laasch HU, Marriott A, Wilbraham L, Tunnah S, England RE, Martin DF. Effectiveness of open versus antireflux stents for palliation of distal esophageal carcinoma and prevention of symptomatic gastroesophageal reflux. *Radiology* 2002;225:359-365
4. Cwikiel W, Tranberg KG, Cwikiel M, Lillo-Gil R. Malignant dysphagia: palliation with esophageal stents: long term results in 100 patients. *Radiology* 1998;207:513-518
5. Schoefl R, Winkelbauer F, Haefner M, Poetzi R, Gangl A, Lammer J. Two cases of fractured esophageal nitinol stents. *Endoscopy* 1996;28:518-520
6. Modified Gianturco Stent : 1 1997;37:79-81
7. Wang MQ, Sze DY, Wang ZP, Wang ZQ, Gao YA, Dake MD. Delayed complications after esophageal stent placement for treatment of malignant esophageal obstructions and esophagorespiratory fistula. *J Vasc Interv Radiol* 2001;12:465-474
8. Acunas B, Rozanes I, Akpinar S, Tunaci A, Tunaci M, Acunas G. Palliation of malignant esophageal strictures with self-expanding nitinol stents: drawbacks and complications. *Radiology* 1996;199: 648-652
9. Binmoeller KF, Maeda M, Lieberman D, Katon RM, Ivancev K, Rosch J. Silicon covered esophageal metallic stents in the esophagus: an experimental study. *Endoscopy* 1992;24:416-420

A Covered Nitinol Stent Fracture in a Patient with a Malignant Esophageal Stricture: A Case Report¹

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Self-expanding metallic stent insertion has been widely applied for the palliative treatment of malignant esophageal strictures. Although it is known as an easy, safe, and effective procedure, complications are well known and include things such as stent migration and esophageal stent occlusion caused by tumor ingrowth. However, metallic stent fractures have been rarely reported in the esophagus, especially for nitinol stents. We report a case of a stent fracture associated with migration in a patient with a malignant esophageal stricture near the gastroesophageal junction. It is highly probable that the stent fracture was due to chemical erosion of the stent caused by gastric juice.

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