Prophylactic short-term stenting of high-risk Esophageal anastomoses at the time of Esophagectomy

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Introduction

Esophagectomy anastomotic leaks are associated with major morbidity and decreased long term survival.

Preventing leaks is therefore the holy grail for surgeons.

Prophylactic Esophageal stenting after Endoscopic Submucosal dissection (ESD) is increasingly used to prevent stricture formation. These could also be used to prevent leaks. However, reported catastrophic complications of erosion into the Aorta or bronchial tree has subdued progress in this field.

Procedures

We present three patients over a sixteen-month period who had insertion of prophylactic esophageal stents (**fully covered self-expanding removable metal stents**) to protect high risk esophageal anastomoses at the time of esophagectomy following neoadjuvant chemotherapy.

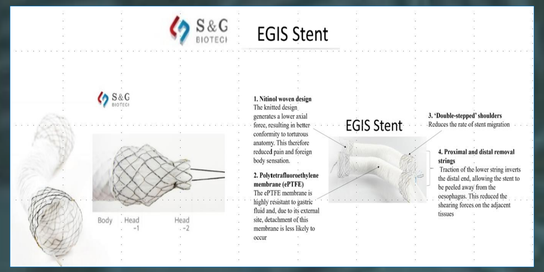
The modified Orringer technique of linear stapled esophago- gastric anastomoses was employed. All three patients underwent insertion of the EGIS (S & G Biotech, Korea) 18mm diameter fully covered esophageal stent with antireflux valve.

The stent was fixed to the esophageal wall with two 2-0 Vicryl Rapide sutures (polyglactin 910) to minimise migration. The anastomoses were completely covered with omentum.

Daily Chest X-rays confirmed stent position. All patients were allowed water to drink as soon as they were extubated.

The Three patients:

- JG, a 62-year-old lady who had presented with complete dysphagia due a locally advanced gastro esophageal junctional cancer underwent a two stage Ivor Lewis esophagectomy in July 2018. Her stent was removed on day 12 and she was discharged home on day 13. She developed brain metastases 4months post-surgery and died 6 months later.
- DW, a 42-year-old man underwent a two stage Ivor Lewis esophagectomy with extended superior mediastinal lymphadenectomy in February 2019. His stent was removed on day 20 and he was discharged on day 21. Remains well.
- The third patient is SM, a 65-year-old lady with mid esophageal adenocarcinoma underwent a thoracoscopic assisted three stage esophagectomy in November 2019. Her stent was removed on day 14 and she was discharged on day 15. Remains well.



The stents were removed endoscopically between day 12 and 20 and the patients were discharged the next day.



Discussion:

Anastomotic leaks after esophagectomy are associated with prolonged hospital stay and decreased disease-free survival, not to mention the poor quality of life for patient and surgeon.

Protecting the esophageal anastomosis during the first few weeks allows the patients to recover from surgery and potentially close all the surgical spaces enabling recovery even if a leak persists after stent removal.

These benefits should be carefully balanced against the dangers of erosion into neighbouring vital structures which can be minimised or eliminated by early planned stent removal.

Improvements in stent materials and design technology might make this safer in the near future.