Management of Aorto-enteric fistula using Nellix Graft (EVAS).

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Disclosure

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I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☐ I do not have any potential conflict of interest
Introduction

• Aorto-enteric fistula (AEF) is an uncommon but devastating complication of open aortic surgery.

• We report a novel technique for managing AEF using the Nellix® endovascular aneurysm sealing (EVAS) system.
A 79-year-old gentleman presented massive gastrointestinal bleeding from his colostomy.
PMHx

- Open repair for ruptured abdominal aortic aneurysm complicated by sigmoid colectomy and Left AKA in 2013.

- Chronic obstructive pulmonary disease COPD.

- Myocardial infarction.

- Hypertension.

- CKD stage 3 with nephrostomy tube.
Physical Examination

• BP 100/50, Pulse 120

• Left sided abdominal tenderness

• Stoma examination: healthy stoma with fresh blood.
Investigation

Fig 1 CTA showed suspicious aorto-enteric fistula, neck diameter of 36mm.
Management

• Due to multiple cardiovascular, renal and respiratory comorbidities combined with a hostile abdomen the patient was deemed unfit for open surgery.

• Due to unfavorable anatomy, He underwent EVAS procedure under local anaesthesia through a bilateral percutaneous approach.
Procedure

**Fig 2:** Two 10x150mm Nellix grafts positioned to cover potential site of AEF.

**Fig 3:** Nellix Balloon inflated to open the stent, 20ml of polymer injected in each limb carefully.
Day 1 Post-operative

- Patient had anaphylactic shock secondary to antibiotics and was treated with adrenaline and steroids.

- Acute left lower limb ischemia secondary to Embolisation and underwent left femoral artery Embolectomy.
Outcome

GIT bleeding stopped and patient was discharged 5 days postoperatively on long term oral antibiotics after colonoscopy which showed no obvious GIT cause of bleeding.
Follow up

Fig 4: 6-month follow up CTA showed patent stent with reduced gas locule size. Technical success was accompanied by clinical resolution of symptoms
Discussion

**Advantage**

- Avoid multiple stents Reduced operation time.
- Fewer technical difficulties.
- Easy to explant, so can be used as a bridge for a future open intervention (no fixation bars).
- Polymer might act as a barrier between the fabrics and the fistula. (double layer protection).
- Future application of using biological or bacterial resistance material instead of the current endobags might help to reduce the rate of re-infection.

**Disadvantage**

- Expensive
- Migration
- Polymer volume
Conclusion

Although further research is necessary, this case suggests that Nellix graft is a feasible alternative technique for Management of aorto-enteric fistula. Future application, like integrated biological material or bacterial resistance endobags might help to reduce the incidence of re-infection.