The contemporary management of infected aortic grafts: Endovascular stenting saves lives but definitive surgery is necessary

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I have the following potential conflicts of interest to report:

☒ Consulting – Medtronic, Bolton Medical, Orzone
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☒ Other(s) – Speaker, travel and conference fees from Medtronic and Bolton and Gore;
Imperial College London:
☒ Institutional level funding from Orzone
INFECTED AORTIC STENT GRAFTS

A significant clinical issue
Incidence increasing
Difficult management

Present (or are diagnosed) late, often significant co-morbidity and malnourished
OPTIONS FOR TREATING GRAFT INFECTION

Options:

– **EMERGENCY**
  • Endovascular salvage
– **Graft excision**
  • In situ bypass
    – Vein
    – Dacron
    – Bovine or similar
    – Human aorta
  • Extra-anatomical
– **Conservative measures**
  • Antibiotics
  • Drainage of sac

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THERE IS AN EARLY MORTALITY RATE

10-30%

DEPENDENT ON SELECTION, PRESENTATION, TYPE OF SURGERY AND EXPERTISE
The pooled overall follow-up mortality was 45.7% (95% CI 36.4% to 55.4%) vs 58.6% (95% CI 28.8% to 83.3%) for the patients receiving conservative treatment.

CONSERVATIVE THERAPY - RECURRENT SEPSIS
Treatment and outcomes of aortic endograft infection

Matthew R. Smeds, MD, Andra A. Duncan, MD, Michael P. Harlander-Locke, MPH,
Peter F. Lawrence, MD, and Mark K. Eskandari, MD, on behalf of the Vascular Low-Frequency Disease Consortium, Little Rock, Ark; Rochester, Minn; Brandeis and
Gainesville, Fla; Los Angeles, Calif; Cleveland, Ohio; and Chicago, Ill

P < .001

Autogenous

Prosthetic

soaked in Abx

Prosthetic

Months
INFORMED BY THE EVIDENCE

SECONDARY AORTO-ENTERIC FISTULA - RECURRENT SEPSIS
Why deep vein? - Imperial Experience
WHY NOT CONSERVATIVE?
AORTO-OESOPHAGEAL FISTULA

STENTING FOR EMERGENCY TREATMENT

Recovery and TPN and respiratory wean
RUPTURE AFTER EMERGENCY STENTING
EXCISION OF THORACIC GRAFT AND BYPASS
An interesting finding in a study by Chaufour et al was that AEF was present in a third of patients with infected endografts.

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AEF is a more common finding than initially thought.
Graft in infection is commonly associated with multiple interventions, providing a further nidus for infection.
• In 2013, CDC published a report outlining the top 18 drug-resistant threats to the United States.

• Threats are categorized based on level of concern: urgent, serious, and concerning.
KEY MESSAGES

• Stenting of infected aorta and graft infection in emergency is life saving

• It has been proposed you can treat infection in vascular grafts conservatively, with endo salvage

• But the traditional teaching is removal...for a reason

• IF it is safe to leave the grafts in then we must provide robust evidence that leaving the stent/graft in is safe...this evidence does not exist

• Anything but graft removal is palliation.

• Graft excision, with extra-anatomical bypass or deep vein reconstruction should be the aim of surgery