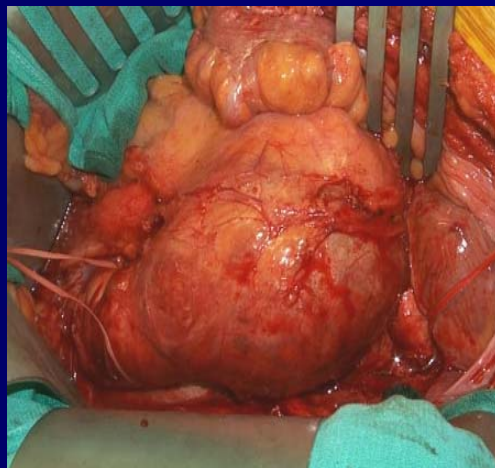


AORTIC GRAFT INFECTION

NURSING CARE



Theresa O'Keefe
NUM
Vascular Unit PAH

AORTIC GRAFT INFECTION

- Vascular infections are serious
- They are associated with high morbidity and mortality
- The primary cause of surgical wound infections is contamination by skin organisms during surgery

AORTIC GRAFT INFECTION

- Prosthetic graft infections typically result from a progressive wound infection
- Comorbid conditions are also related to increase risk of vascular infections
- We should identify vascular patients at increased risk for infection, monitor them closely, and intervene to optimize the healing environment

AORTIC GRAFT INFECTION

- Prosthetic graft infections are an uncommon complication of aortic bypass (1.3%–6% of cases)
- However they can have serious consequences such as limb loss and death (mortality rates of 25%–75%)

AORTIC GRAFT INFECTION

Diagnosis

- (CT) is the most efficacious imaging method for diagnosis of graft infections due to its quick availability

AORTIC GRAFT INFECTION

- The clinical presentation may be straightforward if there is a femoral component
- There will be: swelling, heat, tenderness, a pulsatile mass, or possibly a draining sinus tract

AORTIC GRAFT INFECTION

- Nonspecific presentations as:
malaise, back pain, fever
gastrointestinal bleeding
hydronephrosis or
ischaemic limb
should also be considered potential
manifestations of a graft infection

AORTIC GRAFT INFECTION

- In the early postoperative period, signs of graft infection can be difficult to differentiate from normal postoperative changes
- Aorto enteric fistula should be considered a subset of aortic graft infection

AORTIC GRAFT INFECTION

- Because of the high rates of early and late mortality and limb loss, aortic prosthetic graft infections require emergent aggressive intervention and limb salvage procedures
- Goal of treatment is to save the patient's life

AORTIC GRAFT INFECTION

Treatment Options

Treatment options include

- Total graft excision
- Extra-anatomic bypass grafting
- In situ replacement of the graft

AORTIC GRAFT INFECTION

- A recent study found that percutaneous drainage of perigraft infected fluid can be used as an initial form of treatment
- Surgery after percutaneous drainage appears to be safer than surgery alone

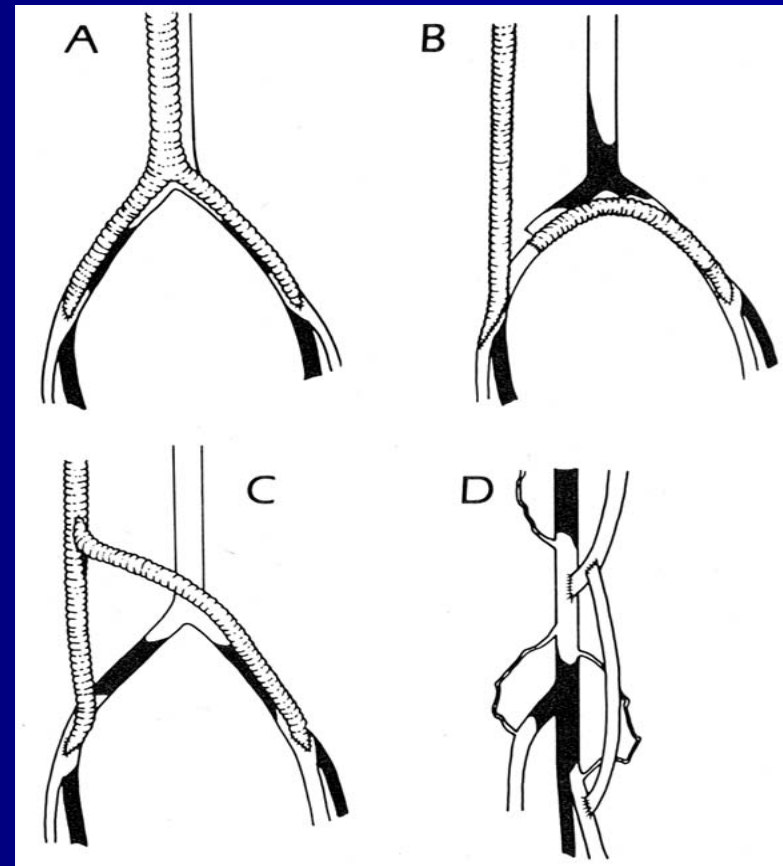
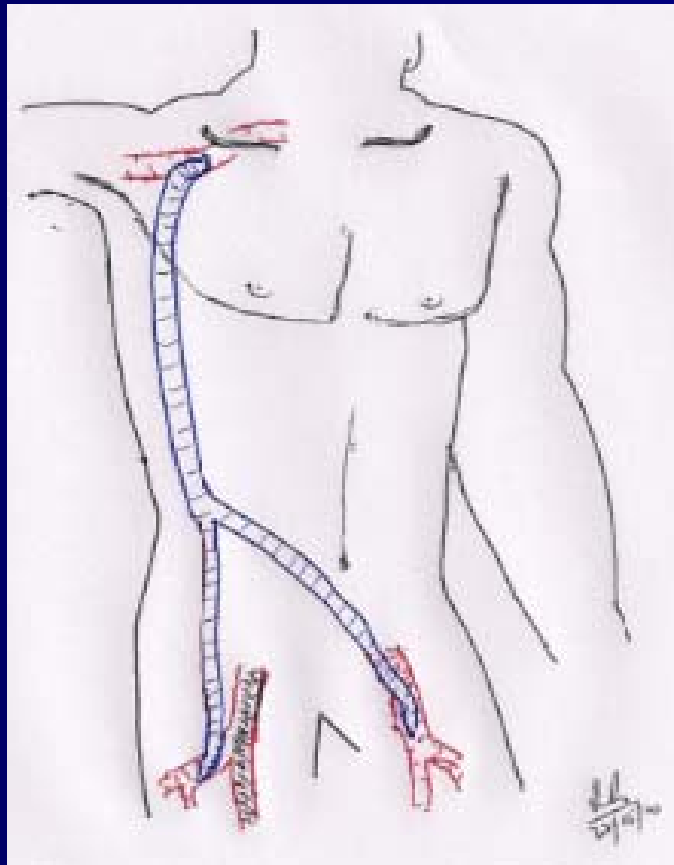
AORTIC GRAFT INFECTION

Treatment Options

- The standard treatment is to remove the infected graft and perform an extra anatomic bypass
- Risky and has a high rate of death, amputation, and disruption of aortic closure

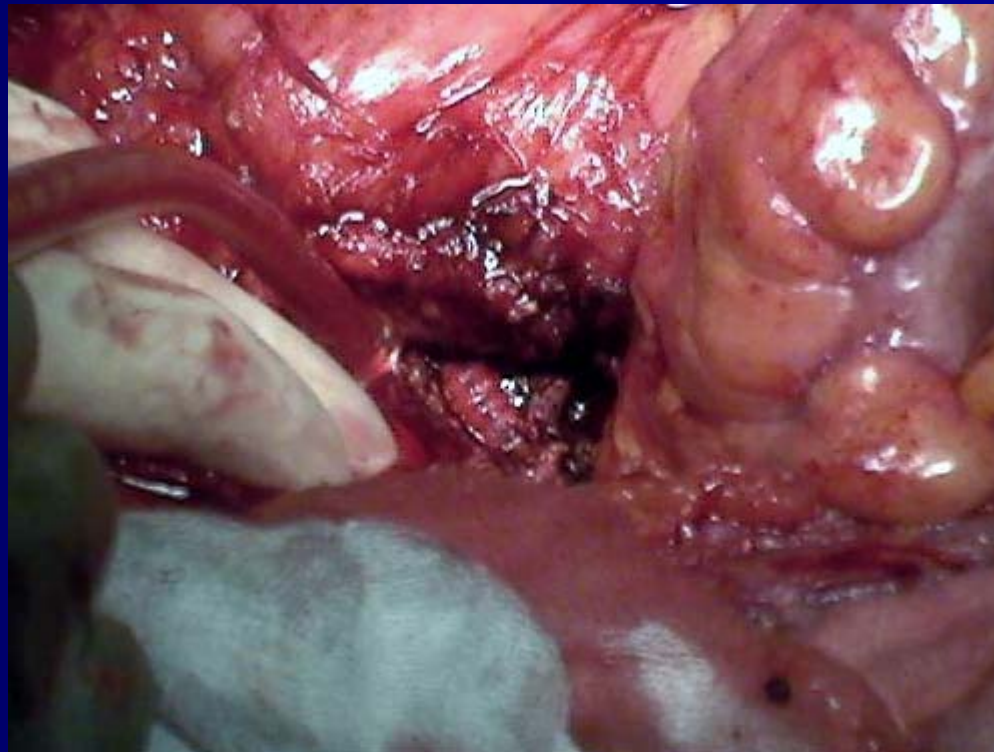
AORTIC GRAFT INFECTION

Treatment Options



AORTIC GRAFT INFECTION

Enteric fistula adhered to the right common iliac anastomosis



AORTIC GRAFT INFECTION



AORTIC GRAFT INFECTION

Complications/Nursing care

- Many patients have underlying coronary artery disease and chronic obstructive pulmonary disease
- Increase the risk of postoperative atelectasis and decrease the tolerance of hemodynamic changes from blood loss and fluid shifts

AORTIC GRAFT INFECTION

Complications/Nursing care

- Prerenal failure can develop for several reasons
- The kidney can sustain ischaemia from decreased aortic blood flow, decreased cardiac output, emboli, inadequate hydration or the need for clamps on the aorta above the renal arteries during surgery

AORTIC GRAFT INFECTION

Complications/Nursing care

- Emboli can also develop and lodge in the arteries of the lower extremities or mesenteric arteries
- Clinical manifestations include those of acute occlusion in the leg
- Bowel necrosis is exhibited as fever, leukocytosis, ileus, diarrhoea and abdominal pain

AORTIC GRAFT INFECTION

Complications/Nursing care

- Paralytic ileus may develop as a result of anaesthesia and the manual manipulation and displacement of the bowel for long periods during surgery
- The intestine may become swollen and bruised and peristalsis ceases for variable intervals

AORTIC GRAFT INFECTION

Complications/Nursing care

- A nasogastric tube is inserted during surgery this decompresses the stomach and duodenum, prevent aspiration of stomach contents, and decrease pressure on suture lines

AORTIC GRAFT INFECTION

Nursing Care post op

- ICU post op
- Return to ward anywhere from day 1 to 30
- Varying degrees of 'wellness'

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- Strict FBC
- Monitor IV fluids, TPN
- Monitor NGT drainage
- May require dialysis
- Daily weight

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- Minimum Q4H vascular observations
- Q2H –Q4H Vitals - Prolonged hypotention may result in graft thrombosis due to decreased blood flow
- Severe hypertention may cause undue stress on the arterial anastomosis

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- Myocardial ischaemia or infarction may occur in the perioperative period due to decreased oxygen supply
- Cardiac arrhythmias also may occur due to electrolyte imbalances, hypoxaemia, hypothermia or myocardial ischaemia

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- ECG monitoring, frequent electrolyte and blood gas (ABG) O₂ and antiarrhythmic medications as needed
- Replacement of electrolytes as indicated, adequate pain control and resumption of preoperative cardiac medications

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- Cause of decreased renal perfusion can be embolization of a fragment of thrombus or plaque from the aorta that subsequently lodges in one or both of the renal arteries

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- This can cause ischaemia of one or both kidneys
- Hypotension, dehydration, prolonged aortic clamping, can also lead to decreased renal perfusion

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- Ensure adequate nutrition and observe the surgical incision for any evidence of delaying healing, signs of infection or prolonged drainage

AORTIC GRAFT INFECTION

Complications/Nursing care

Nursing care

- While NBM mouth care should be regularly given
- Ice chips may be given to the patient
- If the blood supply to the bowel is disrupted during surgery there will be no bowel sounds, fever, abdominal distention, diarrhoea, and bloody stools



BODY PROTECTED
ELECTRICAL AREA

29.2

VTE

Ian JENNINGS
-NBM-
Dr Quinn



AORTIC GRAFT INFECTION

Long term care

Rehabilitation

Long term antibiotics up to 6 months

AORTIC GRAFT INFECTION

Thankyou

Questions

