Infectious Pseudoaneurysm Following Carotid Endarterectomy with Bovine Patch Angioplasty – a Case Report

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Disclosures

• None
Introduction

• Pseudoaneurysm (PSA) formation following carotid endarterectomy (CEA)
  Rare complication (< 1%)

• Diagnosis and management
  Under-reported true incidence
  Undefined natural history
  No current consensus on treatment algorithm
History of Present Illness (HPI)

• 75-year-old male s/p left CEA with bovine patch angioplasty
• Post operative course
  POD 1 – discharge
  POD 2 – return for hematoma evacuation, patch revision
• 6 weeks later
  Purulent incisional drainage with in-office incision and drainage
  ER with progressively worsening left-sided neck pain
  and swelling x 2 days
HPI on transfer to TGH

• Medical history: HTN, HLD, PAD
• Surgical history: femoral-femoral artery bypass, left CEA
• Vital signs:
  Afebrile, all within normal limits
• Physical Exam
  Left neck swelling and tenderness
  Left-sided tongue deviation (hypoglossal injury?)
Hospital Course

• Preoperative
  Blood cultures
  Empiric vancomycin and piperacillin-tazobactam

• Operative exploration
  Carotid PSA resection, saphenous vein angioplasty, wound cultures
  Intraoperative findings: hematoma, complete dehiscence of patch, devitalized tissue

• Postoperative
  Wound/blood cultures positive for *Streptococcus intermedius*
  Discharged POD 6 with PICC for 6 additional weeks of ceftriaxone
Follow up

• 2-week wound check
• 3-month visit with surveillance duplex
• 6-month visit with surveillance duplex pending
Discussion

• Background

Rare

Mortality and permanent stroke morbidity rates up to 29%
Can lead to embolization, thrombosis, mass effect on airway and cranial nerves. Rupture in approximately 10%
40-60% due to infection
Early infection – *Streptococcus* and *Staphylococcus*
Late infection – skin commensals (*Staphylococcus epidermidis*)
Discussion

• Diagnosis

Average: 6 to 15 months from index operation
Symptoms: neck swelling, PSA, sinus tract. Systemic symptoms rare
Linked with hematoma, wound complications, cervical drains, poor dental hygiene, chronic immunosuppressants, smoking, diabetes
Discussion

• Treatment

ICU, antibiotics, emergent repair
Difficult due to re-operative field and inflammatory process
Gold standard: open repair with patch/interposition
  - Conduit = saphenous vein, femoral vein, SFA, prosthetic
Carotid-carotid bypass
Carotid ligation
Endovascular
Antibiotics for 2-6 weeks after repair
Conclusion

• PSA due to infected carotid endarterectomy patch is a well-known though rare and under-reported complication of CEA

• Due to paucity of literature it is important that institutions publish their experiences with this rare complication
References


