2017 MID-ATLANTIC CONFERENCE

7th ANNUAL CURRENT CONCEPTS IN VASCULAR THERAPIES

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Management of Diabetic Foot Ulcer
Case Presentation

Initial Presentation of JD

- 56 yo M, no medical care x17 years
- Recent diagnosis of HTN and DM (insulin)
- Traumatic injury to L foot
- OSH with black L 4th toe, edema, erythema
  - vancomycin/zosyn
  - ABI 0.55/0.47
  - bone scan: no osteo

History & Physical on Presentation

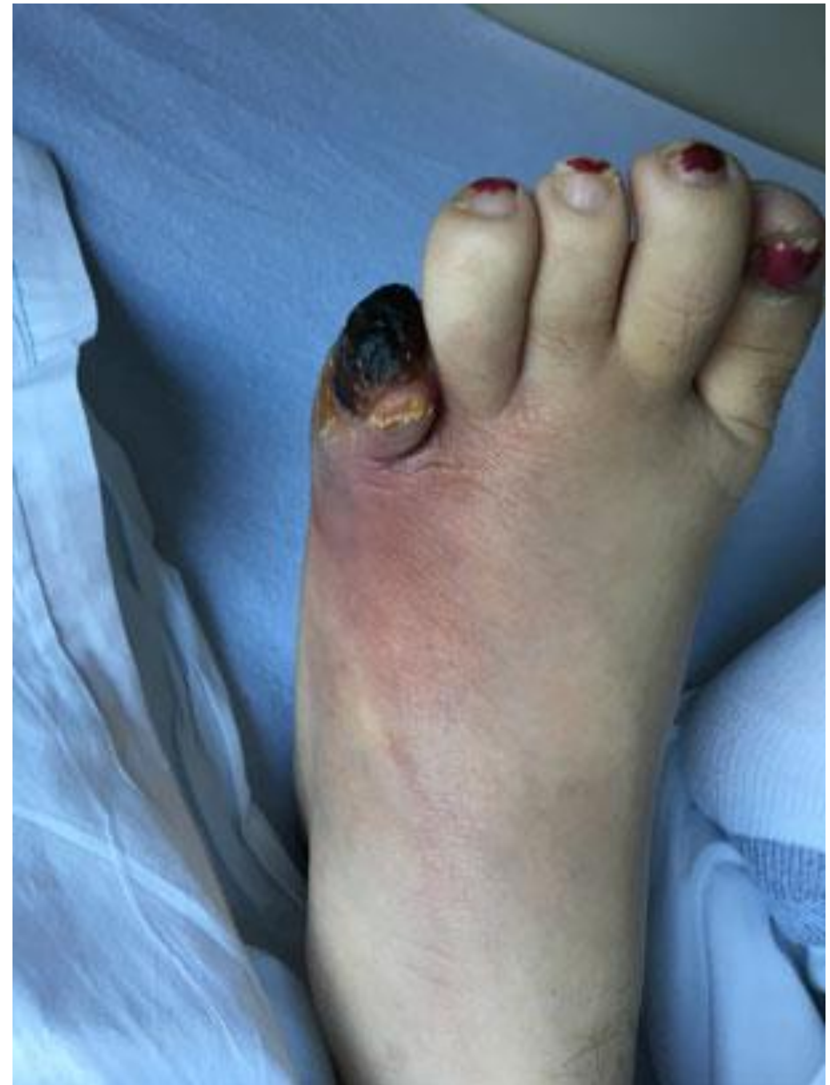
- **Past Medical History**
  - DM
  - HTN (untreated)
  - HLD
- **Past Surgical History**
  - none
- **Medications**
  - insulin
  - vancomycin/zosyn
- **Social History**
  - tob: quit 20 years ago

- **Physical Exam**

  VS: AF, HR 70, BP 149/75

  Vascular:
  - RLE: 1+ fem, no pop, 2+ DP/PT
  - LLE: 1+ fem, no pop, DS DP/PT

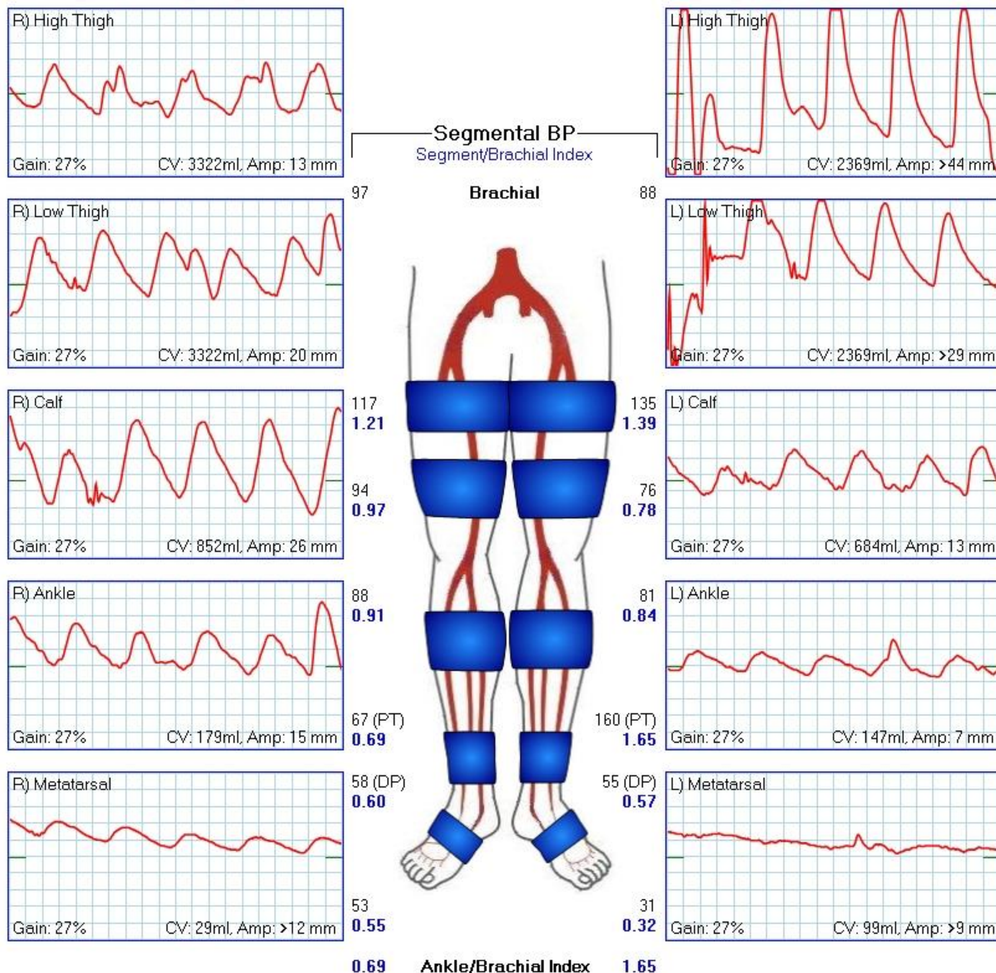
  Extremity: dry gangrene L̄ 4th toe, edema and erythema extending over dorsum of foot. No purulent discharge.



- **Pertinent Labs**

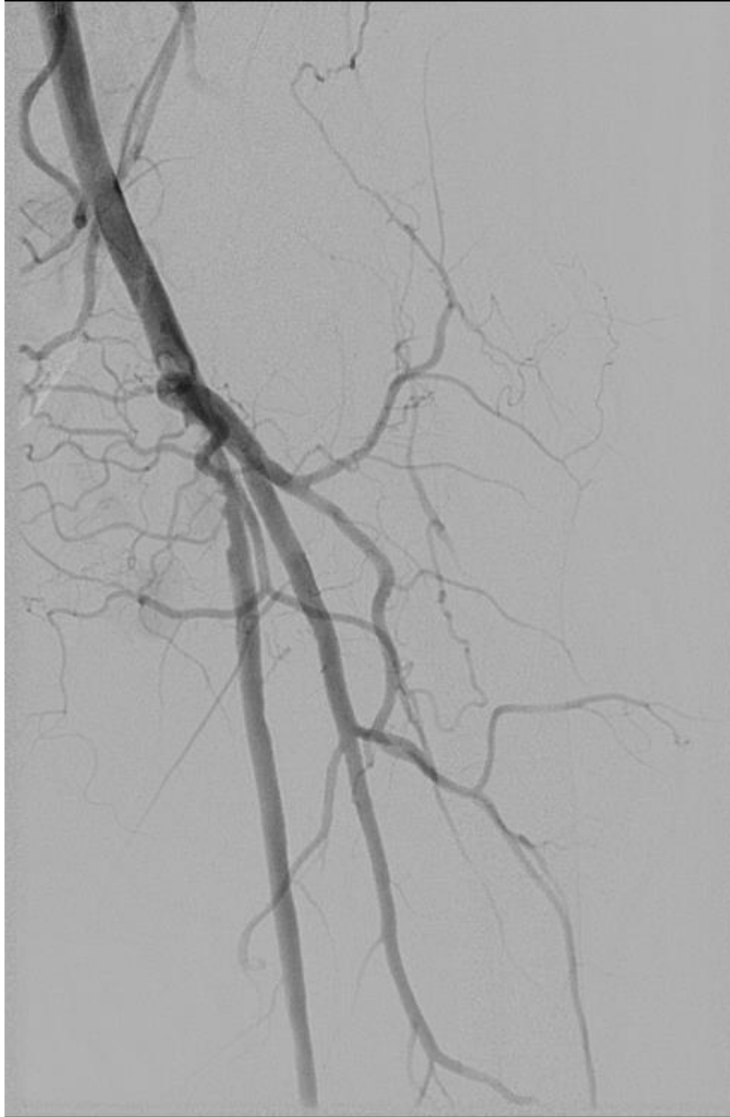
  - CBC: WBC 12.5
  - Coag: INR 1
  - BMP: Cr 0.7
  - A1c: 10.4

- Admitted for IV abx
- PVL Studies

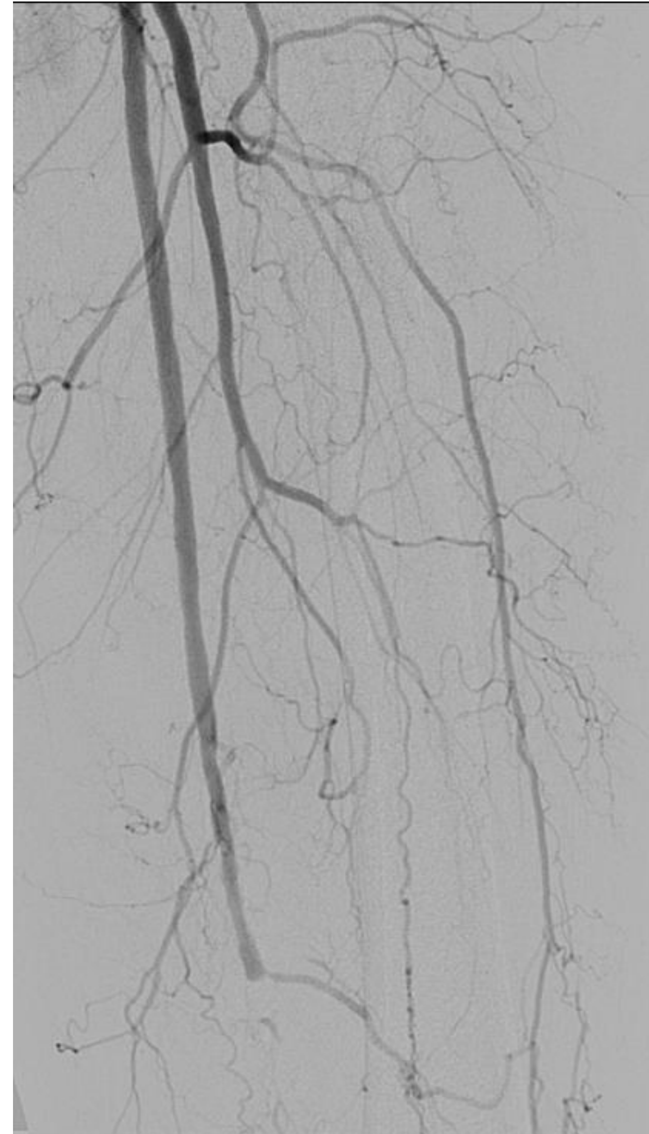


- ABI 0.69/NC (0.57 in DP)
- TBI 0.55 (53)/0.32 (31)
- PVRs suggest SFA/popliteal disease

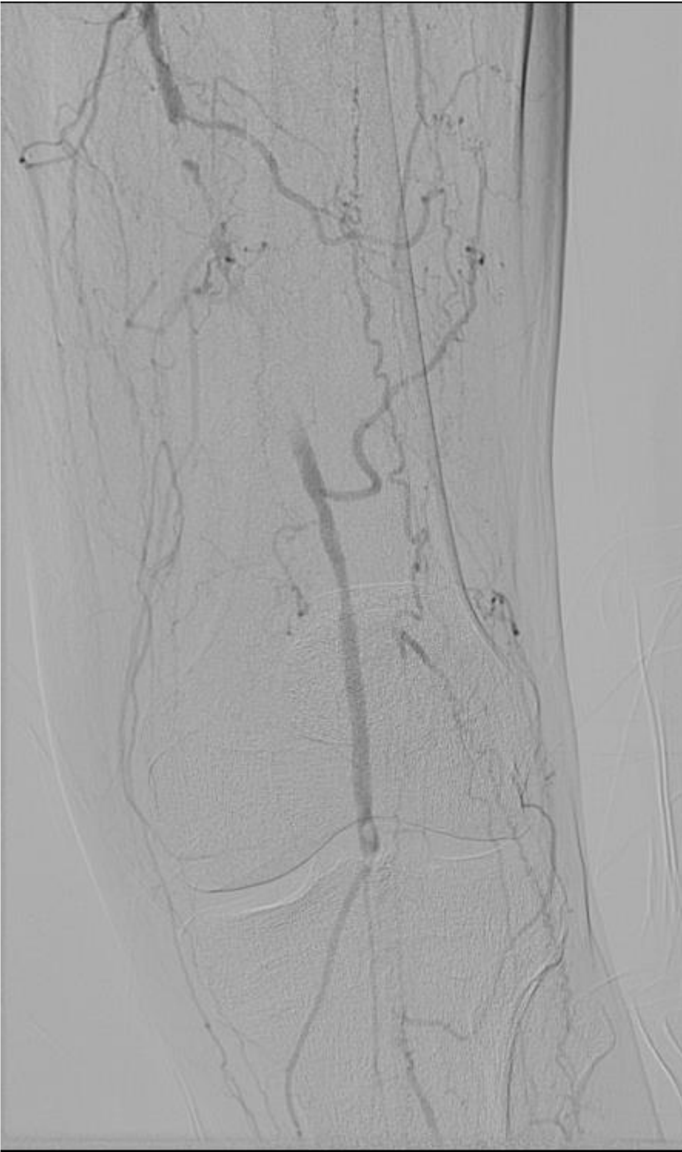
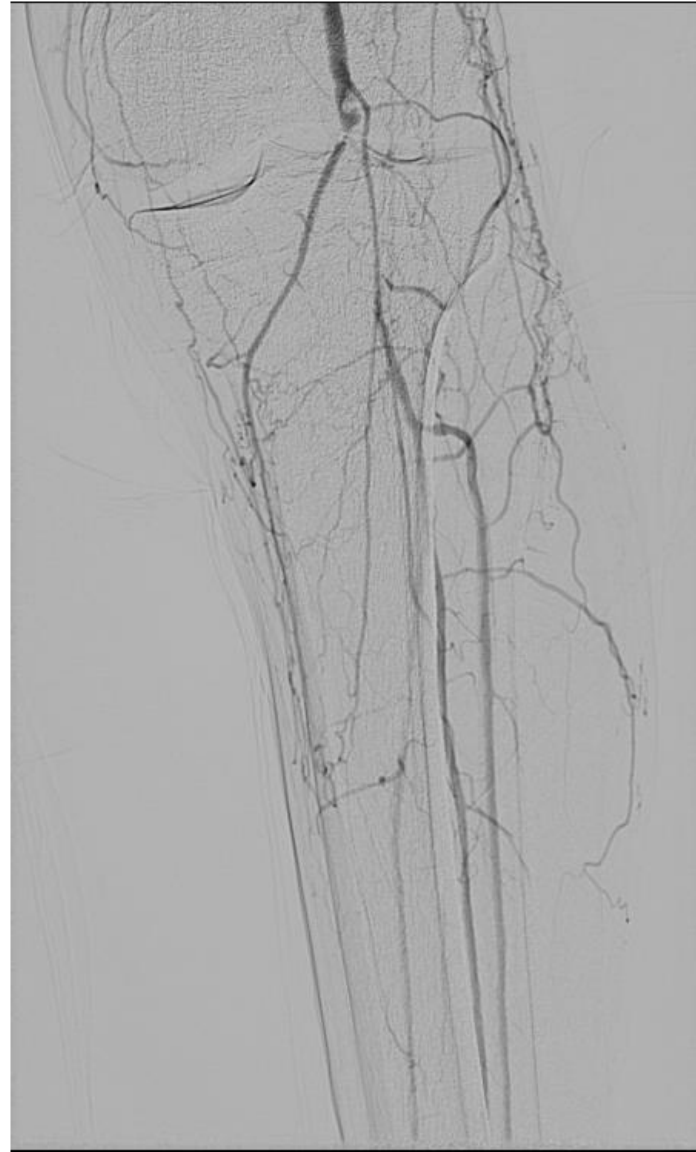
- Angiogram



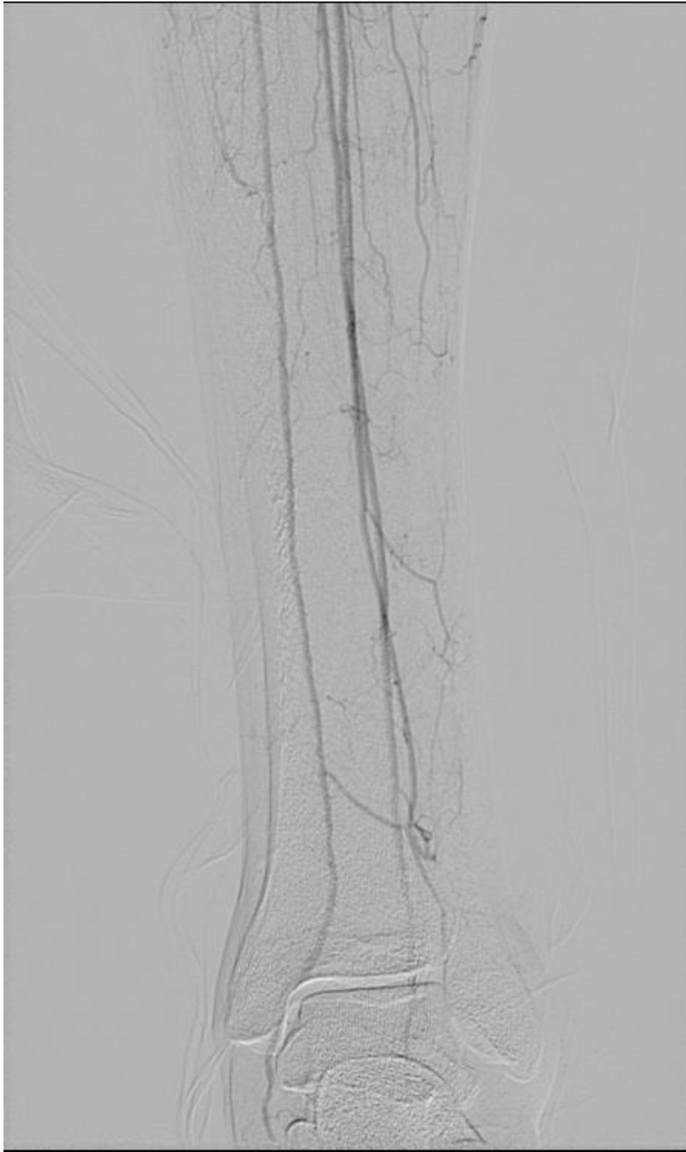
Common femoral disease

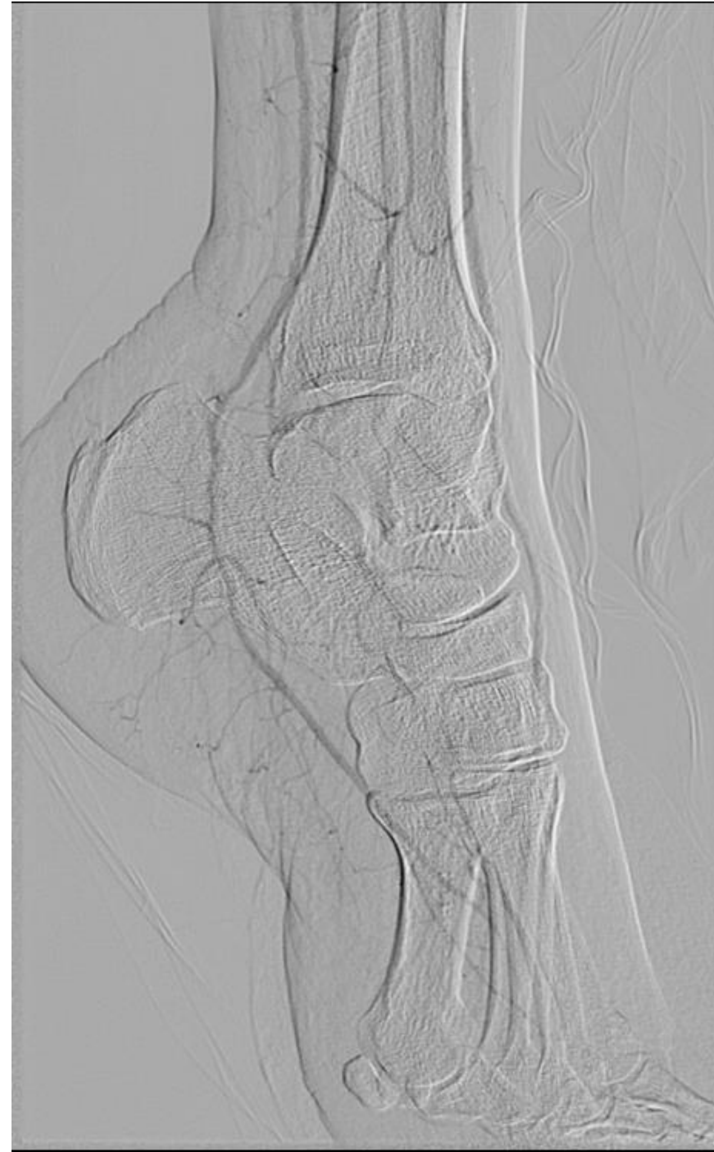


SFA occlusion at adductor canal

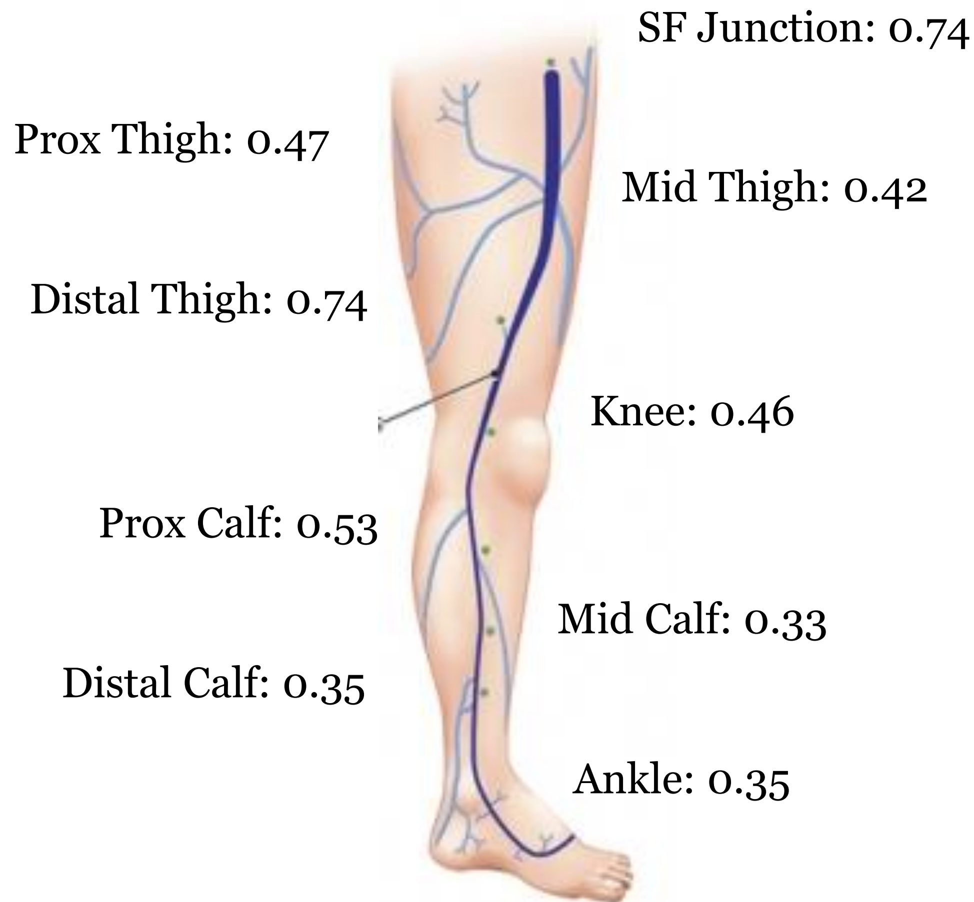
Reconstitution of popliteal artery, occlusion of TP trunk. Reconstitution of PT in mid-calf





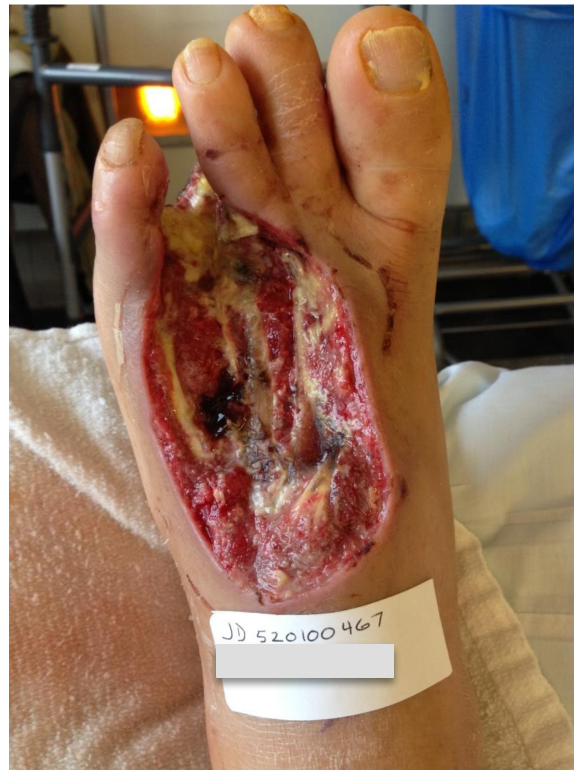
DP/PT filling on delayed imaging

- Vein Mapping



- OR for
  - L femoral endarterectomy
  - L femoral to AT BPG with ipsi NR GSV
  - open L 4th toe ray amputation and debridement
    - significant amount of purulence tracking along 4th tendon sheath and extending to 3rd and 5th tendon sheaths

- Continued on IV antibiotics during hospital stay
- Multiple repeat debridements necessary but wound finally looked clean enough for discharge 14 days later



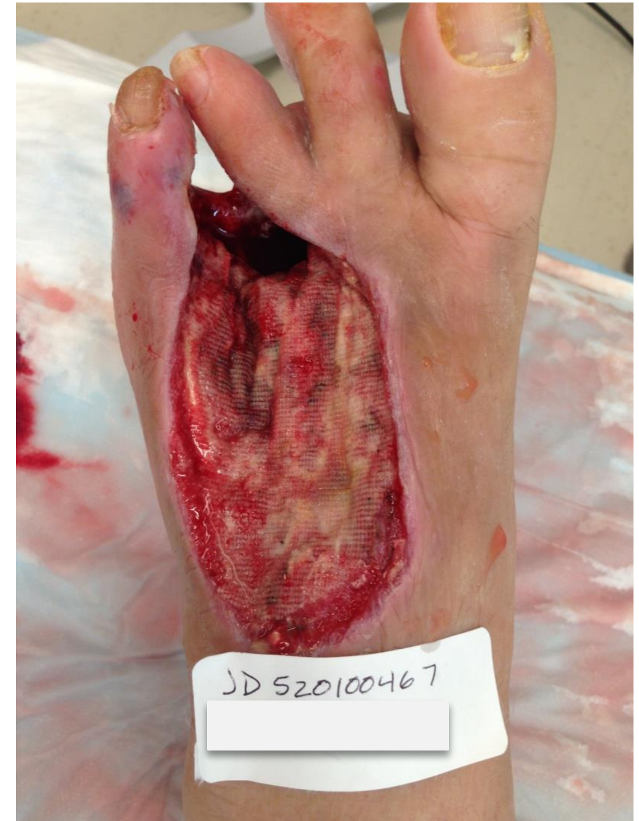
- Discharged on levaquin and augmentin

Follow-up

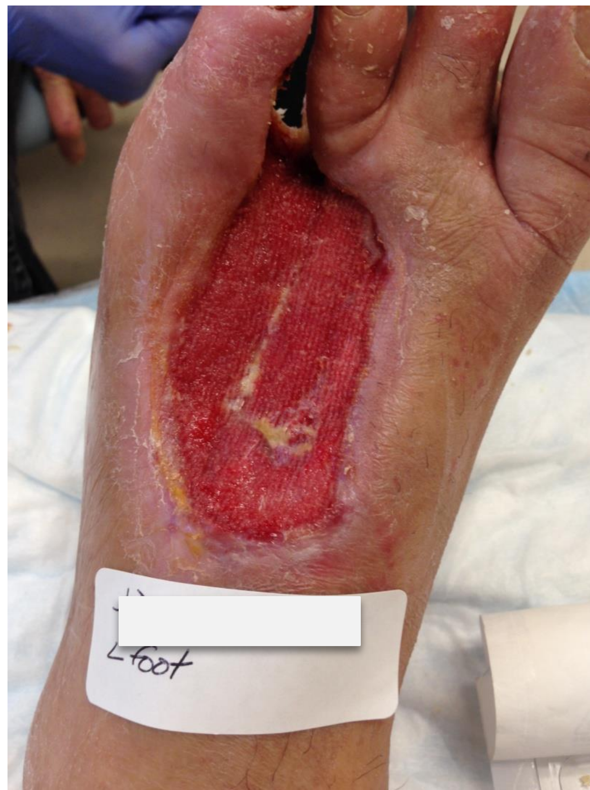
- **Wound**
  - wound care with silvadene
  - further debridement, L 4th metatarsal amp
  - application of wound VAC

- **Endocrinology**
  - diabetes management
  - A1c: 10.4 (Nov) -> 6.3 (Mar) -> 6.3 (Jun)

- Readmitted for IV abx 2 weeks later after presented in clinic with 5th toe erythema
- PICC line placed for long-term IV abx (IV daptomycin, PO Flagyl, PO cipro)
- Continued VAC therapy

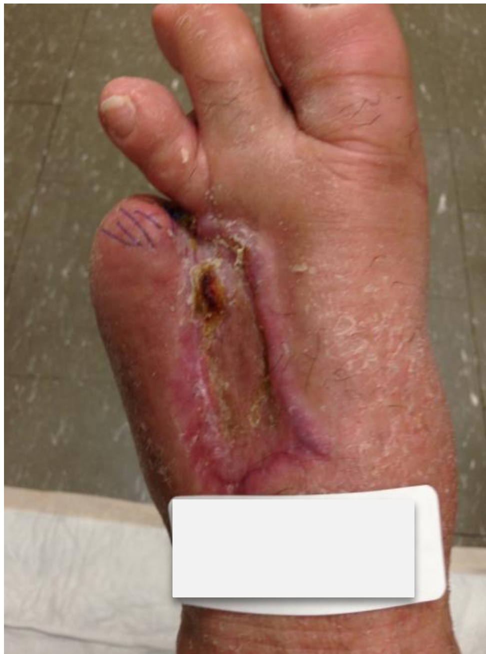


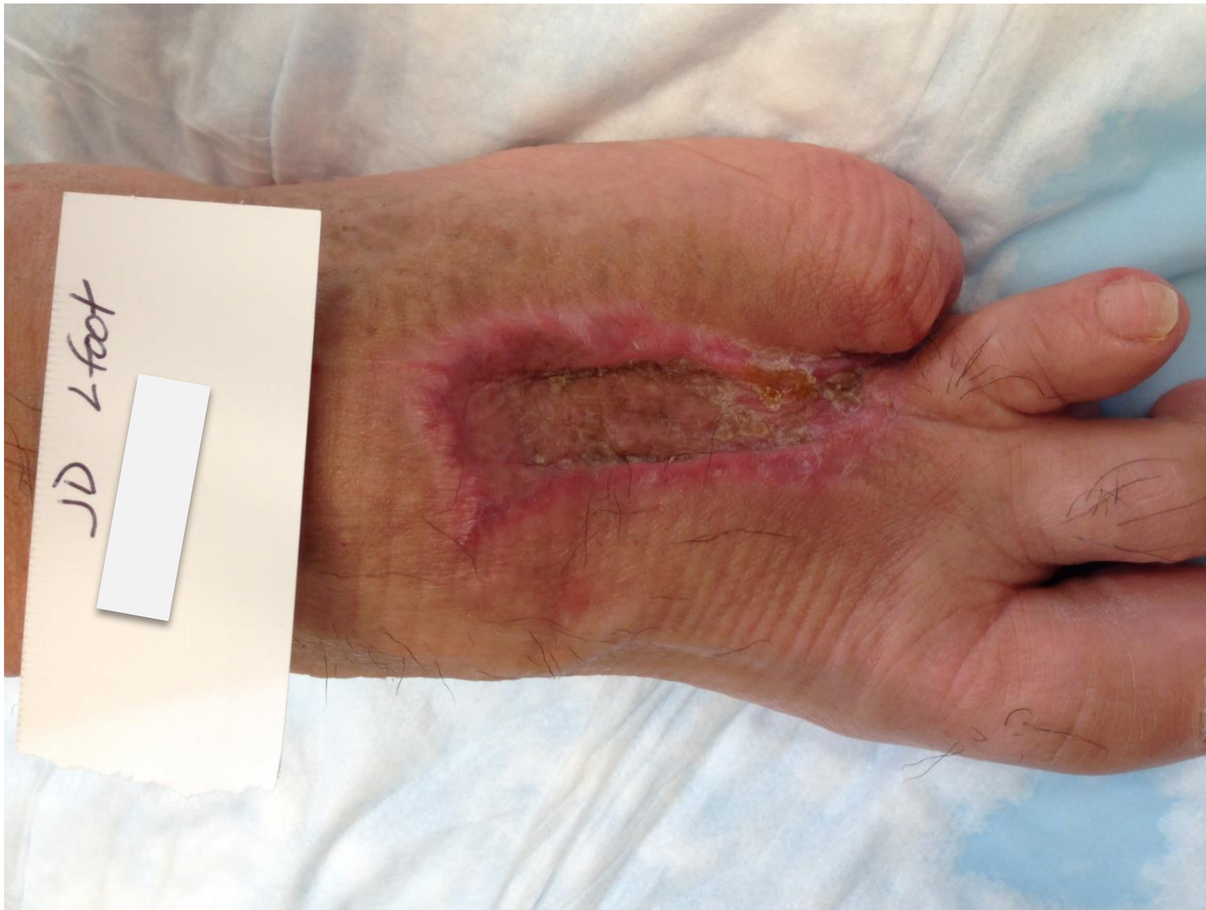
- Presented 1 month later with much improved appearance of wound, almost entirely covered bone
- abx discontinued at this time



- One month later underwent amputation of L 5th toe with local rearrangement flap closure and STSG with NPWT

- Tolerated procedure well and recovered uneventfully





fully healed wound

Management of DFI with PAD requires a multi-specialty Approach

- Presentation to ER, vascular surgery consultation
- Vascular surgery evaluation
  - Pulse exam
  - Non-invasive vascular studies
  - Imaging, usually angiography
- Surgical intervention- if indicated - with dual purpose:
  - Endovascular vs. open revascularization
  - Wound and infection management
    - Surgical or chemical debridement, I&D, amputation
- Treatment of acute infection and optimization of medical comorbidities
  - Usually IV abx
  - DM, HTN, tobacco use, CKD …
- Close f/u with aggressive re-intervention for wound care, perfusion and continued medical optimization
- Off-loading for healing
- Maintenance of medical optimization after acute episode

Key Steps to Avoid the "Diabetic Foot Disaster"

- Don't wait to refer a diabetic foot ulcer
  - Examine the feet without shoes or socks on
  - Perform a pulse exam
  - If no palpable pedal pulses -> refer to vascular surgeon
- Encourage meticulous home foot care and daily precautions in every diabetic patient
- Regular podiatric care is crucial (nail and callus care)
- Health maintenance
  - DM – A1c goal <6.5%
  - HTN
  - Smoking cessation
  - Weight management

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Thank you