

CRITICAL DIFFERENTIAL DIAGNOSIS FOR COMPLEX POST-OP KNEES

Nerve injury

- Sensory-motor deficits expected for the first 1-2 days post-op if patient received a nerve block during surgery
- Progressive deterioration (rather than gradual recovery) of:
 - Specifically pathway of superficial and deep peroneal nerves
 - Superficial peroneal nerve
 - Motor (myotomes)
 - lateral compartment of leg
 - peroneus longus
 - peroneus brevis
 - Sensory (dermatomes)
 - majority of skin on the dorsum of foot, excluding webspace between hallux and second digit
 - anterolateral distal 1/3 of leg
 - No associated reflex
 - Deep peroneal nerve
 - Motor (myotomes)
 - tibialis anterior
 - extensor digitorum longus/brevis
 - peroneus tertius
 - extensor hallucis longus/brevis
 - Sensory (dermatomes)
 - articular branch to the ankle joint
 - 1st dorsal webspace
 - No associated reflex

Vascular injury → Compartment syndrome

- Disproportionately high pain that does not respond to analgesics
- Severe pain with stretch of the involved compartment
- Parasthesia or numbness
- Loss/reduction of lower extremity pulse (dorsalis pedis/posterior tibial pulses)
 - Reduced capillary refill at toes/foot
 - Dusky appearance of toes/foot
 - Foot is cold
- Progressive lower leg swelling (into foot, toes as well)
- Firmness/tightness at lower leg compartments
- Compartment syndrome risk factors include: lower leg trauma, vascular compromise, excessively tight/compressive dressing
- 5 Ps (pain, palor, pulselessness, paresthesia, paralysis)

DVT

- Painful, progressive lower leg swelling (ankle, foot, toes swollen)
- Painful to palpation of the calf
 - Can be general tenderness or tenderness to the deep veins
 - Usually along saphenous vein (central calf)
- Pain with passive ankle DF
- DVT risk factors best defined using Wells' Criteria for DVT

Well's Criteria

Active cancer Treatment or palliation within 6 months	No 0	Yes +1
Bedridden recently >3 days or major surgery within 12 weeks	No 0	Yes +1
Calf swelling >3 cm compared to the other leg Measured 10 cm below tibial tuberosity	No 0	Yes +1
Collateral (nonvaricose) superficial veins present	No 0	Yes +1
Entire leg swollen	No 0	Yes +1
Localized tenderness along the deep venous system	No 0	Yes +1
Pitting edema, confined to symptomatic leg	No 0	Yes +1
Paralysis, paresis, or recent plaster immobilization of the lower extremity	No 0	Yes +1
Previously documented DVT	No 0	Yes +1
Alternative diagnosis to DVT as likely or more likely	No 0	Yes -2

- A score of 1-2 is considered moderate risk with a pretest probability of 17%.
 - A score of 3 or higher suggests DVT is likely. Pretest probability 17-53%.
- **Have a low threshold for requesting an US if there is any concern.**

Infection

- Foul smelling, purulent/pus-like discharge
 - Blood and serosanguinous fluid are normal for the first few days after surgery.
- Progressive redness, warmth (expanding/intensifying rather than retracting/diminishing)
- Tenderness around affected area
- Fever >101.5 degrees

Fracture

- Pain increased from baseline with weight bearing or muscle activation
- Focal pain and swelling over the involved region of bone
- Associated trauma/MOI after surgery

STEPS TO TAKE WHEN RED FLAGS OBSERVED

1. Contact the medical team for consult:

- a. PT team member to contact MD team:
 - i. teamlaprade@tcomn.com attention Chris Armstrong, PA
- b. Patients may call 952-456-7412 if needed

2. Pursue urgent medical visit referral and/or imaging consult as recommended

- a. TCO urgent care
 - i. Locations: https://tcomn.com/ortho-urgent-care/?gclid=EAlaIQobChMlo--Wsti78QIVUGpvBB0i2qdHEAAYASAAEgLDLfd_BwE
- b. Duplex ultrasound for DVT screening
 - i. CDI (US available in Eagan on select days)
 1. Eagan office should be able to coordinate a visit at another location if US not available on-site
 - ii. Vascular & Interventional Experts (VIE)
 1. Located on-site at TCO locations
 - a. Minnesota Drive, Edina (available Mon-Fri)
 - b. Plymouth (available Fri)
 - c. Woodbury (available Tues)

3. Send to ED

- a. Edina: Fairview/M Health Southdale
- b. Eagan: Fairview/M Health Ridges (Burnsville)
- c. Link to all Fairview/M Health ED Locations:
<https://www.fairview.org/specialties/emergency-services-and-critical-care#locations1>