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Peripheral Vascular Trauma

Purpose: To provide guidelines for treatment of peripheral vascular injuries

Guidelines:

- A. Extremity arteriogram or extremity CT angiogram should be obtained in the following situation
 - a. Any fracture with evidence of poor arterial perfusion
 - i. Hard signs of poor arterial perfusion
 - 1. Absent pulses
 - 2. Bruit or thrill
 - 3. Active or pulsatile hemorrhage
 - 4. Signs of limb ischemia
 - b. Consider if soft signs of poor arterial perfusion due to injury are present
 - i. Soft signs of poor arterial perfusion
 - 1. Proximity of injury to vascular structures
 - 2. Major single nerve deficit
 - a. Sciatic, femoral, median, ulna, or radial
 - 3. Non-expanding hematoma
 - 4. Reduced pulses
 - 5. Hypotension or moderate blood loss at the scene
 - c. Posterior knee or anterior elbow dislocation
 - i. Even if spontaneously relocated
 - d. Penetrating wounds where course of injury is near an artery with hard or soft signs
 - e. The presence of distal pulses does not necessarily mean that an arterial injury has not occurred
 - f. Doppler ankle brachial index (ABI) may be helpful
 - g. Wound proximity to major vessel is not be itself an indication for angiogram
- B. Consider Vascular Surgery consultation if signs of poor arterial perfusion are present
- C. Refer to Management of Musculoskeletal Injuries guideline if a fracture is present with poor perfusion for emergency orthopedic consultation

References:

- American College of Surgeons (ACS). (2014). Resources for Optimal Care of the Injured Patient.
- ACS TQIP and OTA. (2014). Best Practices in the Management of Orthopaedic Trauma