

Proximal Tibial Fractures with Special Importance to Neurovascular Injuries and Acute Compartment Syndrome

1. A 30-year-old man sustains a valgus injury to the knee in a road traffic accident. X-ray reveals a lateral tibial plateau fracture.

Questions:

- a) What is the likely diagnosis?
 - b) Describe the mechanism of injury.
 - c) Mention the principles of management.
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2. A patient presents with gross swelling and deformity around the knee following a high-velocity injury.

Questions:

- a) Classify proximal tibial fractures.
 - b) Mention radiological investigations.
 - c) Outline treatment.
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3. A motorcyclist presents with an open fracture around the knee joint.

Questions:

- a) Classify the open fracture.
 - b) Outline emergency management.
 - c) Mention definitive treatment.
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4. A 72-year-old woman falls in the bathroom and sustains a proximal tibial fracture.

Questions:

- a) Mention risk factors.
 - b) Outline management.
 - c) Explain rehabilitation.
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5. A patient with a proximal tibial fracture has absent dorsalis pedis and posterior tibial pulses.

Questions:

- a) Which vessel is likely injured?
 - b) How will you assess vascularity?
 - c) Outline emergency management.
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6. After reduction of a proximal tibial fracture, the patient develops increasing pain and absent distal pulses.

Questions:

- a) Mention causes of vascular compromise.
 - b) How will you investigate the patient?
 - c) Outline treatment.
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7. A patient with a proximal tibial fracture is unable to dorsiflex the ankle.

Questions:

- a) Which nerve is injured?
 - b) How will you examine the nerve?
 - c) Outline management.
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8. A patient complains of numbness over the dorsum of the foot and inability to dorsiflex the ankle.

Questions:

- a) What is the diagnosis?
 - b) Mention the muscles involved.
 - c) Outline treatment.
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9. A patient presents with a fracture around the knee following a road traffic accident.

Questions:

- a) Describe vascular examination of the limb.
 - b) Mention signs of nerve injury.
 - c) Explain the importance of serial examinations.
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10. The affected limb is pale, cold and pulseless.

Questions:

- a) Mention the six signs of acute limb ischemia.
 - b) Outline emergency management.
 - c) Mention complications.
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11. A patient with a proximal tibial fracture develops severe pain that increases on passive extension of the toes.

Questions:

- a) What is the diagnosis?
 - b) Mention the six clinical signs (6 Ps).
 - c) Outline emergency treatment.
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12. Scenario: Six hours after surgery for proximal tibial fracture, the patient complains of severe pain and paresthesia.

Questions:

- a) Mention causes of compartment syndrome.
 - b) How will you confirm the diagnosis?
 - c) Outline management.
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13. A patient complains of unbearable pain despite adequate analgesia.

Questions:

- a) What complication do you suspect?
 - b) Mention early signs.
 - c) Explain emergency treatment.
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14. Compartment syndrome is suspected in a patient with a proximal tibial fracture.

Questions:

- a) Mention the indications for pressure measurement.
 - b) What is the critical pressure value?
 - c) Outline management.
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15. A patient presents 24 hours after injury with paralysis and sensory loss of the foot.

Questions:

- a) Mention complications of delayed diagnosis.
 - b) Explain Volkmann ischemic contracture.
 - c) Outline management.
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16. An emergency fasciotomy is planned in a patient with compartment syndrome.

Questions:

- a) Mention indications for fasciotomy.
 - b) Describe compartments of the leg.
 - c) Mention complications of fasciotomy.
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17. A patient presents with severe pain, absent pulses and tense swelling after a proximal tibial fracture.

Questions:

- a) Enumerate the limb-threatening complications.
 - b) Mention the order of management.
 - c) Outline definitive treatment.
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18. A patient with head injury and proximal tibial fracture is brought to the emergency department.

Questions:

- a) Explain the primary survey (ABCDE).
 - b) Describe neurovascular assessment.
 - c) Outline orthopedic management.
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19. A child presents with swelling around the knee and severe pain after a fall.

Questions:

- a) How will you assess distal circulation?
 - b) Mention signs of compartment syndrome.
 - c) Outline management.
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20. X-ray shows a medial tibial plateau fracture with absent distal pulses.

Questions:

- a) Classify the fracture.
- b) Mention associated neurovascular injuries.
- c) Outline emergency management.
