

Clinical Considerations: Orthopaedic options following the failure of nonoperative treatment of a lower extremity long-bone fracture depend on the clinical situation and may include excision or resection of bone or soft tissue, malunion or nonunion correction, fracture fixation, wound debridement and closure, soft-tissue release, or amputation.

3.2 Recommendation

We suggest that individuals with an SCI and an acute lower extremity fracture should be monitored for the development of acute compartment syndrome.

Grade: 2D

Clinical Considerations: Monitoring of creatine phosphokinase (CPK) levels and renal function may be necessary to assist in determining the rare need for fasciotomy or debridement.

3.3 Recommendation

We suggest that nonsteroidal anti-inflammatory drugs (NSAIDs) may be considered to prevent progression of heterotopic ossification (HO) post-fracture.

Grade: 2D

Clinical Considerations: We suggest that excision of HO should only be considered in persons in whom the HO location and configuration place the patient at risk for NPUAP Stage-3 or 4 pressure injury or interfere with necessary range of motion for function, after confirmation that no vascular structures are encased within the HO. Second and third-generation bisphosphonates should not be used to treat HO.

3.4 Recommendation

We suggest that clinicians consider using parathyroid analogues such as teriparatide in addition to operative or nonoperative treatment for fractures that are at risk for nonunion (e.g., distal femoral fractures, unstable tibial fractures) during the acute fracture-healing period.

Grade: 2D

3.5 Recommendation

We suggest that if nonunion affects functional activity or creates pressure concerns, providers should consider referral to a metabolic bone specialist for use of teriparatide and/or surgical intervention to attain union. If a malunion affects functional activity or creates pressure concerns, providers should consider surgical interventions.

Grade: 2D

3.6a Recommendation

We recommend that clinicians routinely assess the risk of venous thromboembolism (VTE) following an acute lower extremity fracture.

Grade: 1C

3.6b Recommendation

We recommend that, following an acute lower extremity fracture, clinicians routinely provide anticoagulant thrombo-

prophylaxis with a low-molecular-weight heparin (LMWH) or a direct oral anticoagulant (DOAC) (if there are no contraindications) or obtain the advice of a health professional with expertise in the area of thromboprophylaxis, such as an SCI rehabilitation physician, hematologist, thrombosis specialist, or internist.

Grade: 1D

3.6c Recommendation

We recommend that thromboprophylaxis start as soon after the fracture as is feasible.

Grade: 1C

3.6d Recommendation

We suggest that, for persons who are admitted to the hospital, thromboprophylaxis should continue at least until discharge from acute care and rehabilitation, with consideration of a total duration of at least 2 to 4 weeks.

Grade: 2D

3.6e Recommendation

We suggest that, for persons with an SCI who are not admitted to the hospital, thromboprophylaxis should continue for a total duration of at least 2 to 4 weeks.

Grade: 2D

3.6f Recommendation

We recommend that clinicians proactively consider the risk of increased leg edema and skin injury and utilize multilayered compression wraps to help mitigate these adverse events in those who are at risk.

Grade: 1D

3.7a Recommendation

We recommend that clinicians use the Orthopaedic Trauma Association (OTA) post-fracture pain management guidelines and the CanPain SCI guidelines²⁹ to inform decision-making regarding therapy selection for post-fracture pain and neuropathic pain exacerbation, respectively.

Grade: 1A

3.7b Recommendation

We suggest that clinicians monitor persons who have an SCI and a recent lower extremity fracture for signs and symptoms of inadequate pain management triggering autonomic dysreflexia (AD) in the first 48 to 72 hours post-fracture²⁸.

Grade: 2D

3.7c Recommendation

We suggest that surgeons consult a pain specialist or the treating physiatrist if the individual with an SCI, prior to the fracture, was on >100 morphine milligram equivalents (MME)/day of extended-release opioids or >3 concurrent medications for the management of neuropathic pain.

Grade: 2D