Treatment of Tibial Shaft Fractures Associated with Acute Spinal Cord Injuries
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Abstract

Of 34 tibia fractures in 28 acute spinal cord injuries, 13 patients had complete and 15 had incomplete neurologic lesions. Tibia fractures were divided into three groups: Group I, nonoperative treatment; Group II, early open reduction and internal fixation; and Group HI, Type HI open injuries. Group I included 17 fractures, of which nine (53%) had delayed union, malunion, or nonunion. The average time to union was 6.5 months. Seven patients had pressure sores and pulmonary emboli. Eleven fractures were noted in Group II. One delayed union (9%), one superficial wound infection that healed uneventfully, and one deep vein thrombosis were noted. The average time to union was 12 weeks. All six Group HI tibias had delayed and nonunions, regardless of treatment. Nonoperative fractures healed at a prolonged rate, while open reduction and internal fixation enhanced the rate and time to union. Fractures treated with early open reduction and internal fixation, excluding Group HI patients, had the least orthopedic and medical complications. Open reduction and internal fixation is a justifiable alternative to nonoperative treatment in the uncomplicated tibia fracture regardless of neurologic lesion for improved medical and fracture care.