Management of Periarticular Knee Injuries in Traumatic Brain and Spinal Cord Injury Patients

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There are over 12,400 traumatic spinal cord injuries (SCI) in the United States per year. The most common causes of SCI are motor vehicle accidents, falls, violent acts, and sports injuries, with peak incidence occurring in the late teenage years. The mortality rate in individuals with SCI has improved over the past few decades with younger patients generally having improved survival rates. With improved outcomes in spinal cord injury patients, it has become more common to involve orthopedists in the multidisciplinary care of these complex patients. We look at the management of periarticular traumatic knee injuries in this population.

We review our over 20 year history of experience in the management of periarticular knee injuries at the Shepherd Center for Spinal Cord Injury and Rehabilitation, including the management of unique complications in these patients. Traumatic periarticular knee injuries include tibial plateau and distal femur fractures, ligamentous injuries, and tendinous injuries. Identification of these injuries and timely treatment of these conditions are crucial for rehabilitation and functional outcomes. We have identified the complications in dealing with these injuries, including heterotopic ossification, spasticity, autonomic dysreflexia, unique complications within the peri-operative setting, and management of functional deficits as they relate to rehabilitation protocols.