Orthopaedic Injuries Associated With Cellphone Use: A 20-Year Analysis

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Purpose: Cellphones enable constant connectedness and communication while also serving as significant distractors that can lead to injury. To date, no research has focused on the profile and severity of orthopaedic injuries associated with cellphone use. The present study uses a large national emergency department database to evaluate the frequency, anatomic location, and type of injury associated with cellphone use.

Methods: The National Electronic Injury Surveillance System (NEISS) was queried from 1999 to 2018 for all injuries associated with a telephone. Only orthopaedic-related diagnoses (fracture, dislocation, sprain/strain, amputation, crush, and nerve injury) were included. Injuries to the head, face, or involving a landline telephone were excluded. Injuries were then classified as direct mechanical or cellphone use-associated. Injuries were further classified to differentiate the activity at the time of injury (walking, cycling, or driving).

Results: A weighted national total of 44,599 injures met inclusion criteria. Incidence of cellphone-use-associated musculoskeletal injuries increased from 0.4 injuries per million person-years in 1999 to 12.6 injures per million person-years in 2018 (Fig. 1). The most common types of injuries were sprain/strain (56.8%) and fracture (32.6%), with fractures significantly more common in patients >65 years ($P < 0.001$). The most commonly injured body parts were the pelvis, hip, and lumbar spine (14.1%), ankle (12.8%), cervical spine (12.7%), finger (9.3%), and ribs and thoracic spine (8.9%). The most common activities resulting in injury were walking (31.6%) and driving (18.2%). The proportion of injuries resulting in fractures was not significantly different across activities ($P = 0.09$).

Conclusion: Orthopaedic injures resulting in emergency department visits due to cellphone use have increased rapidly in the last decade, demonstrating a need for increased education and awareness regarding the distracting effect and potential for musculoskeletal injury while using a cellphone.