

Injuries of the Medial Clavicle: A Cohort Analysis in a Level-I-Trauma-Center. Concomitant Injuries. Management. Classification

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Abstract

Introduction: Although shoulder girdle injuries are frequent, those of the medial clavicle are widely unexplored. An applied classification is less used just as a standard management.

Methods: A retrospective analysis of medial clavicle injuries (MCI) during a 5-year-term in a Level-1-Trauma-Center. We analyzed amongst others concomitant injuries, therapy strategies and the classification following the AO standards.

Results: 19 (2.5%) out of 759 clavicle injuries were medial ones (11 A, 6 B and 2 C-Type fractures) thereunder 27,8% were displaced and thus operatively treated. Locked plate osteosynthesis was employed in unstable fractures and a reconstruction of the ligaments at the sternoclavicular joint (SCJ) in case of their disruption. 84,2% of the patients sustained relevant concomitant injuries. Numerous midshaft fractures were miscoded as medial fracture, which limited the study population.

Conclusions: MCI resulted from high impact mechanisms of injury, often with relevant dislocation and concomitant injuries. Concerning medial injury's complexity, treatment should occur in specialized hospitals. Unstable fractures and injuries of the SCJ ligaments should be considered for operative treatment. Midshaft fractures should be clearly distinguished from the medial ones in ICD-10-coding. Further studies are required also regarding a subtyping of the AO classification for medial clavicle fractures including ligamentous injuries.

Key words: shoulder girdle, medial clavicle, sternoclavicular joint, sternoclavicular ligament, costoclavicular ligament, ICD-10