

Segmental clavicle fracture on a floating shoulder: case report

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INTRODUCTION:

Floating shoulder is an unstable combination of fractures that involve the scapular neck and the ipsilateral clavicle. Segmental clavicle fractures are rare injuries where two or more portions of the clavicle are fractured simultaneously. We discuss the successful operative management of a segmental clavicle fracture on a floating shoulder.

REPORT:

Mr H is a 56-year-old man, previously healthy, sustained polytrauma following motor vehicle accident. He suffered intraabdominal injury and closed right elbow dislocation with coronoid process fracture. Ipsilaterally, he also had closed fracture neck of right scapula and closed segmental fracture of right clavicle (floating shoulder). He initially underwent exploratory laparotomy with ileostomy together with closed manual reduction and cross right elbow spanning external fixation. He was admitted to intensive care unit for close monitoring, and subsequently returned after he was stabilized. Computed tomography (CT) scan of right shoulder was obtained prior to the definitive surgery. He underwent open reduction and internal fixation of his right clavicle a month later. Dual anatomical plate was applied using lateral clavicle plate and anterior plate.

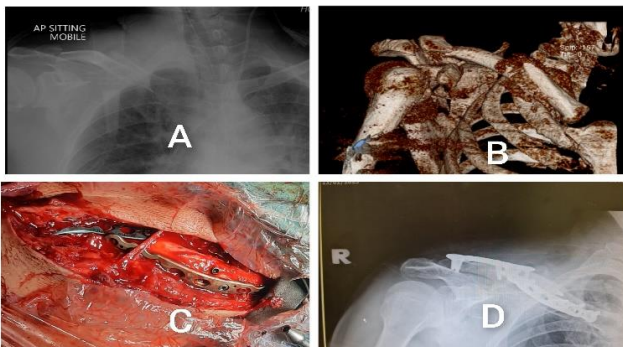
shoulder is unstable with a high risk of non-union or malunion. Given the unstable nature of this fracture with significant displacement, surgery is highly recommended due to risk for long-term functional deficits. According to Herscovici et al, if the clavicle is fixed by open reduction, an unstable fracture becomes stable, resulting in bony union for both fractures; therefore, plate fixation of only the clavicle is sufficient to correct a floating shoulder. Hashiguchi and Ito reported that, all 5 patients achieved bony union for fractures of both the clavicle and the scapula by internal fixation of the clavicle alone. In our case, open reduction and internal fixation was offered to this patient to prevent disuse muscular weakness. Two anatomical plates were applied to address the lateral third and midshaft clavicle fractures as the midshaft fracture was split in coronal plane. A long lateral clavicle plate was unable to span the segmental fracture given the long oblique fracture at the midshaft clavicle.

CONCLUSION:

Segmental clavicle fractures on a floating shoulder relatively unstable. Hence, internal fixation is appropriate treatment for both fractures that may lead to a satisfactory clinical outcome.

REFERENCE:

1. Herscovici D, Fiennes AGTW, Allgower M, Ruedi TP. The floating shoulder: ipsilateral clavicle and scapula neck fractures. *J Bone Joint Surg Br* 1992;74:362-4
2. Hashiguchi and Ito, Clinical outcome of the treatment of floating shoulder by osteosynthesis for clavicular fracture alone *J Shoulder Elbow Surg* November/December 2003



A: Plain radiograph B: CT image of segmental clavicle and scapula fracture preoperative. C: Intraoperative post dual plating clavicle with preserved supraclavicular nerve. D: Plain radiograph post dual plating right clavicle.

DISCUSSION:

Floating shoulder with segmental clavicle fractures are uncommon injury in which disruption of superior shoulder suspensory complex (SSSC) at 2 or more different points. In general, floating