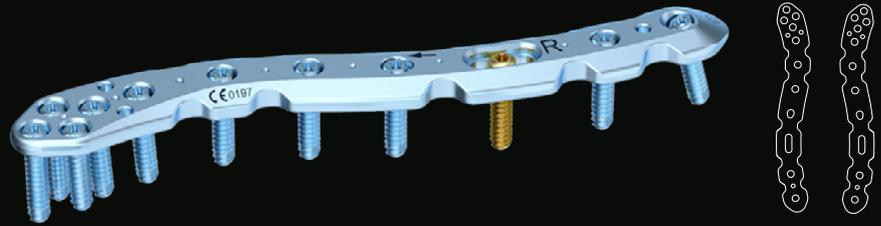


CASE STUDY



Fixation of a Displaced Neer Type IIA Fracture with the APTUS 2.8 Superior Lateral Shaft Plate

The Surgeon

Mr Andrew C. Wright

Mr Wright is a Fellowship trained Specialist Elbow and Shoulder surgeon who was appointed to Wrightington hospital in the UK in January 2020. His practice specialises in surgery for all aspects of Elbow and Shoulder sports injuries, pain and instability, as well as being experienced in trauma to the whole upper limb. Mr Wright is a regular faculty member on Elbow and Shoulder courses, as well as Course Director for the Shoulder and Elbow section of the Fellowship examination course held at Wrightington triannually.

The Case



Patient Profile

A 51-year-old male patient attended the Emergency Care Centre following a fall from an electric motorbike onto his right side. He was right hand dominant, in employment as an accountant and a keen social tennis player. His past medical history was of mitral incompetence for which he did not require medication.



Figure 1



Figure 2



Clinical Findings/Preoperative Analysis

Radiographs of the clavicle showed a displaced Neer type IIA fracture (Figures 1 & 2). The risk of non-union in this fracture pattern^{1,2} and the time frame to recovery alongside risks of surgery were discussed with the patient. After deliberating this for one week he elected to proceed with operative intervention.



Surgical Treatment

Surgery was performed on the next available specialist trauma list.

The patient was placed in a beach chair position and 20 ml of 0.5% local anaesthetic with adrenaline were instilled to the soft tissues overlying the fracture. A direct anterior approach to the clavicle was made with care taken to preserve cutaneous nerves. On visual inspection of the injury, further fracture lines were seen that had not been visible on the presenting radiographs. An undisplaced butterfly fragment was found still attached to the proximal fragment.

This was fixed with using a lag screw technique and a 2.8 mm cortical screw. Once secure, this left two remaining fragments, these were reduced with pointed reduction forceps and a further 2.8 mm lag screw.

A superior lateral third plate was applied which provided optimal length and contour to span the fracture. The plate enabled a stable fixation laterally without lateral plate prominence. Three proximal and five lateral screws were placed in a mixture of cortical and locking forms.



Figure 3



Figure 4



Postoperative Treatment

Following surgery, the patient was given a sling for comfort. No restrictions on range of movement were placed and he was encouraged to move the shoulder as comfort allowed. At final review, two months post operatively, the patient had fully recovered. The wound had healed without issue, range of movement of the shoulders were equal bilaterally and radiographs indicated bony union (Figures 3 & 4).



Conclusion

Neer type IIA clavicle fractures can be adequately treated with open reduction and internal fixation with the APTUS 2.8 superior lateral shaft clavicle plate.



References

1. Robinson CM, Court-Brown CM, McQueen MM, Wakefield AE. Estimating the risk of nonunion following nonoperative treatment of a clavicular fracture. *J Bone Joint Surg Am.* 2004;86(7):1359–1365
2. Robinson CM, Cairns DA. Primary nonoperative treatment of displaced lateral fractures of the clavicle. *J Bone Joint Surg Am.* 2004;86(4):778–782