KEY PROCEDURES

LATERAL CLAVICLE FRACTURE FIXATION USING
A SUPERIORLY PLACED LOCKING PLATE

Edmund Ieong, MBBS, BSc, MRCS, Nicholas Antonio Ferran, MBBS, MSc(Orth Eng), FRCS(Tr&Orth)

Published outcomes of this procedure can be found at: *Clin Orthop Relat Res.* 2011 Dec;469(12):3344-50, *J Shoulder Elbow Surg.* 2010 Oct;19(7):1049-55, and *J Shoulder Elbow Surg.* 2012 Mar;21(3):423-9

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Abstract

Clavicle fractures are common injuries that account for 4% of all fractures, and approximately 21% of clavicle fractures are lateral. Studies have demonstrated that displaced lateral clavicle fractures with disruption of the coracoclavicular ligaments have nonunion rates as high as 28%. Many surgical techniques for fixation of lateral-end clavicle fractures have been proposed. More recently, locking plate technology has led to the development of superiorly placed locking plates, which are used when the distal fragment is large enough and which offer greater biomechanical stability in osteoporotic or metaphyseal bone. Our surgical technique for use of a compression plate for an unstable and displaced lateral clavicle fracture consists of the following steps. Step 1: identification of the fracture pattern and surgical planning. Step 2: setup of the operating room with the image intensifier in an optimum position for satisfactory intraoperative images. Step 3: approach, through a bra-strap incision centered over the fracture. Step 4: reduction of the fracture and temporary stabilization. Step 5: implant selection based on sizing and patient anatomy. Step 6: application of the plate of choice and fixation with a combination of proximal bicortical screws and distal locking screws. Step 7: closure in layers and application of postoperative slings and dressings. Patients follow a graduated physiotherapy regimen postoperatively. Studies have demonstrated high union rates following lateral clavicle fracture fixation with good-to-excellent functional outcomes and a combined complication rate of approximately 6%.

Edmund Ieong, MBBS, BSc, MRCS¹

Nicholas Antonio Ferran, MBBS, MSc(Orth Eng), FRCS(Tr&Orth)¹

¹Department of Trauma and Orthopaedics, London North West Healthcare NHS Trust, Northwick Park Hospital, Harrow, United Kingdom

E-mail address for N.A. Ferran: nferran@uku.co.uk

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