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The dual subscapularis procedure: a modifed Hawkins' technique for neglected posterior fracture/dislocation of the shoulder

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Abstract

Background Posterior fracture/dislocation of the shoulder is a rare injury that is frequently missed on initial assessment. It is frequently associated with reverse Hill–Sachs impression fracture. Several orthopaedics procedures have been described on the literature for reconstructable reverse Hill–Sachs lesion. The McLaughlin's procedure and its modifcations, anatomic bone grafting procedures, rotational osteotomies, and the remplissage technique were reported by many authors. We advocated a new "dual subscapularis procedure" that consists of the Hawkins lesser tuberosity transfer with addition of flling the remainder of the defect with a part of subscapularis tendon.

Materials and methods In the period between January 2013 to December 2017, 12 patients (13 shoulders) sufering from a delayed managed posterior fracture dislocation were managed. Our inclusion criteria were adult patients less than 60 years presented with reverse Hill–Sachs impression defects from 20 to 50% with or without fractures. For all patients, the dual subscapularis procedure was done. UCLA score was used for postoperative functional assessment.

Results After a minimum follow-up of 6 months, the results of UCLA score were excellent/good in eight patients and fair/ poor in fve patients. All patients were found stable after open reduction ± internal fxation with no reported complications. There was a signifcant correlation of the UCLA score and non-abuse or lower doses of tramadol and the shorter interval between trauma and procedure. Twelve patients were satisfed after the operation.

Conclusion Reconstructing the reverse Hill–Sachs defect with the dual subscapularis technique provides adequate stability, pain relief, and function in patients with locked chronic posterior shoulder fracture/dislocation. The used technique has the merit of versatility with diferent fracture patterns, improved fxation of the tendon and increasing the tendon's footprint that ensures extra-articular location of the defect.

Keywords Reverse Hill–Sachs · Posterior shoulder dislocation · Dual subscapularis procedure · McLaughlin's technique ·Hawkins' technique · Tramadol

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