Clinical outcomes and return to sports after open reduction and hamstring tendon autograft reconstruction in patients with an acute, traumatic, first-time, posteriorly dislocated sternoclavicular joint

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INTRODUCTION:
Traumatic posterior dislocations of the sternoclavicular joint (SCJ) are rare. Multiple case reports, case series and systematic reviews have previously been published on the treatment of posterior SCJ dislocations. However, they have usually been of small numbers, described a variety of differing surgical techniques on a mixture of acute and chronic dislocations and have not specifically focused on functional recovery or return to sport.
The purpose of this study was to assess the clinical outcomes and return to sport after SCJ open reduction and reconstruction using a hamstring tendon autograft in patients with an acute, first-time, traumatic posteriorly dislocated SCJ. We hypothesised that SCJ open reduction and reconstruction would result in high survivorship, good clinical outcomes and a high rate of return to sport.
METHODS: All patients who underwent SCJ open reduction and reconstruction within 14 days of sustaining a first time, traumatic posteriorly dislocated SCJ, with a minimum 3-year follow-up, were included. Patient reported outcomes were assessed by the short version Disabilities of the Arm, Shoulder and Hand (Quick-DASH), the Rockwood SCJ, the Modified Constant and the Single Assessment Numerical Evaluation (SANE) scores. Survivorship was defined as no clinical failure such as instability or recurrent dislocation or no further revision surgery. Return to sports was assessed using a customised questionnaire.
RESULTS: A total of 19 patients that underwent surgery with a mean age of 30.8 years (18–52) were included. Seventeen patients were available at final follow-up with a mean follow-up of 94.5 months (37–178). At final follow-up the mean QUICK-Dash score was 4.3 (0-20.4), the mean Rockwood score 13.9 (12-15), the mean Modified Constant score 94.4 (71–100) and the mean SANE score 92.1 (70–100). The construct survivorship was 94%. One patient developed symptomatic SCJ osteoarthritis which failed non-operative treatment and underwent an arthroscopic excision arthroplasty. Twelve of the 14 patients (86%) who participated in sport returned to their pre-injury level.
DISCUSSION AND CONCLUSION: Following an acute, first-time, traumatic posterior SCJ dislocation an open reduction and stabilisation with a hamstring tendon autograft, undertaken within 14 days of injury, provides a good clinical outcome, high survivorship and a high rate of return to sport.