



Surgical Treatment of Hypertrophic Cervical Spondylotic Radiculopathy in Elite Rugby Union Players

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Introduction

This series represents the largest cohort of professional athletes undergoing cervical spine surgery and documents their subsequent return to play. Furthermore, we describe the unique pathophysiological changes seen in the cervical spine of rugby players and the role of posterior decompressive surgery is highlighted.

Methods

Single surgeon, prospective consecutive case series of 33 international and premiership rugby players. Case notes and radiological imaging were reviewed.

Results

41 procedures were performed on 33 elite rugby players over a 9 year period. Only patients with more than a year's follow up were included in this series. 64% were front row forwards, 21% other forwards and 15% backs. The mean duration of symptoms was 22 months (median 14, range 3-88 months). 15 of the players experienced symptoms for a year or longer prior to surgery. Pain and significant weakness were major presenting features with 31 of the 33 athletes reporting both. The involved levels were 10% at C4/5, 34% C5/6, 46% C6/7 and 10% C7/T1.

None of the players required same-site revision surgery. Improvement in pain symptoms and motor recovery was seen in all patients, but in one player the level of recovery of power was insufficient to continue playing. There were no peri-operative complications in our series. None of the players developed kyphosis within the follow-up period.

3 players elected pre-operatively to retire from play and in the remaining cohort, 90% returned to play within 12 weeks of surgery.

Conclusions

Elite rugby players, particularly forwards are subject to extreme axial loading forces which result in a characteristic hypertrophic cervical spondylosis. The resultant radiculopathies may be managed by posterior cervical microsurgery.

The literature thus far has favoured an anterior approach with cervical discectomy and fusion. Our series is the first to describe return to full contact participation at an elite level following a posterior microforaminotomy.

Learning Objectives

Highlight the role of posterior microsurgery in maintaining sporting performance following cervical spondylotic radiculopathy.

References