

PERSISTENT SHOULDER PAIN IN A RECREATIONAL CLIMBER: A SYMPTOMATIC BUFORD COMPLEX

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Background

The Buford Complex is a rare congenital anatomical variant of the shoulder, characterized by the absence of the anterosuperior glenoid labrum and a thickened, cord-like middle glenohumeral ligament. Although typically asymptomatic and regarded as a benign normal variant, it may become clinically relevant in individuals exposed to repetitive overhead activities or increased joint loading—particularly athletes and recreational sports practitioners. Failure to correctly identify this variant can result in misdiagnosis, inappropriate surgical intervention, and suboptimal clinical outcomes. Its recognition relies heavily on high-resolution imaging, especially MR arthrography, and careful correlation with clinical findings.

Case report

A 27-year-old right-handed female and recreational indoor climber, presented with a 10-month history of progressive left shoulder pain, exacerbated by overhead movements and traction positions, impairing daily functional activities and climbing performance. Physical examination revealed tenderness over the anterior joint line, a positive O'Brien test, and pain with resisted external rotation in abduction. Initial shoulder ultrasound raised suspicion of a paralabral cyst, but due to persistent symptoms and incongruent findings, a MR arthrography was performed. Imaging demonstrated complete absence of the anterosuperior labrum and a thick, cord-like middle glenohumeral ligament—findings consistent with the Buford Complex—without associated labral tear or rotator cuff pathology. A subacromial corticosteroid injection was ineffective for pain relief. The patient underwent a targeted rehabilitation program emphasizing dynamic scapulohumeral stabilization, rotator cuff strengthening, proprioception, and neuromuscular retraining. Marked symptomatic improvement was observed within six weeks, with full pain-free return to climbing at three months.

Conclusion

Although often underrecognized, the Buford Complex can become symptomatic in active individuals. This case highlights the importance of recognizing this rare variant, and shows that accurate diagnosis through detailed imaging and clinical correlation is essential to prevent overtreatment. In the absence of concomitant structural lesions, conservative rehabilitation programs can yield excellent functional outcomes.

Keywords: Buford, Shoulder, Variant, Pain, Rehabilitation