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Arm Weakness and Deformity

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A healthy 58-year-old man presented to the emergency department with right arm weakness first noticed while playing hockey that day. He could not recall the onset of injury, but endorsed several weeks of antecedent intermittent right shoulder discomfort. Examination revealed a deformity of the right biceps brachii with distal bunching of the muscle (Figure). Tenderness existed along the proximal humerus near the long head of the biceps. The patient had full range of motion with decreased elbow flexion strength on the right. He was diagnosed clinically with an acute biceps brachii tendon rupture.

Acute biceps tendon rupture most commonly occurs at the proximal end of the long head of the biceps brachii and is usually associated with trauma. Acute biceps tendon rupture frequently occurs in patients with underlying overuse injuries and tendinopathies—thus the actual moment of rupture may go unnoticed.¹⁻⁴ While the diagnosis can generally be made by history and physical examination, ultrasound and magnetic resonance imaging can aid in diagnosis.¹⁻⁴ Most injuries are

managed conservatively and the typical post-injury reductions in strength are mild to moderate and well tolerated.²⁻⁵ Surgical management may lessen loss of elbow flexion and supination strength and may be considered in the management of highly active patients.^{3,5}

This patient underwent surgical open subpectoral biceps tenodesis with successful resolution of his biceps contour and restoration of full strength and mobility.

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Figure. Appearance of the patient's affected right arm and normal left arm.