

Case Report on Novel Variants of Attachments along a Broad Aponeurosis

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ABSTRACT

Objective: Bilateral donations and variants of the short head of the biceps brachii tendon are both uncommon, and reports of supererogatory heads of the biceps brachii muscle are common. New types of attachments along a broad aponeurosis present bilaterally and linked during routine pupil cadaveric analysis is shown in this case. The aponeurosis extended from

the coracoid process, where it joined the coracobrachialis, to the lower excrescence of the humerus, where it joined the pectoralis major muscle tendon. This was on the right shoulder. An arterial branch ran through the tendon of the aponeurosis on the left shoulder, which extended from the coracoid process to the lesser excrescence of the humerus. Counterexamples for shoulder mobility and surgical approach include the broad aponeurosis of the biceps brachii short head across the shoulder capsule.

Key Words: Brachial plexus muscle; Variations in anatomy; Shoulder; Brachin, biceps; Short head

INTRODUCTION

The biceps brachii muscle is an arm flexor with a short head that attaches to the coracoid process of the scapula and a long head that attaches to the supraglenoid excrescence. The musculocutaneous whim-whams supply both heads, and the long head tendon runs inside the humerus's bicipital (or intertubercular) groove. Initially, supererogatory heads of the biceps brachii muscle have been reported in approximately 10 to 15 of the examined cases. The innervation of these biceps brachii variants always comes from musculocutaneous whim-whams, whereas the arterial blood force is more variable. There are a few recent reports of variant origins for the long head and the short head in addition to supererogatory heads. The variation passed unilaterally in each of these reports. Scar towel was also present in the case of the variant long head biceps brachii muscle, whereas the patient with the variant short head had shoulder pain characteristics. Then, an explanation for decreased shoulder mobility and a bilateral variation in the origin of the short head of the biceps brachii are presented [1].

CASE REPORT

During routine cadaveric analysis in a medical gross deconstruction process, variants of the Short Head of the Biceps Brachii (SHBB) muscle were linked bilaterally in this case, which involved a 92-time joker who had died of renal cell melanoma. On the right shoulder, the aponeurotic tendon of the SHBB merged with the coracobrachialis tendon on one side and the pectoralis major muscle tendon on the opposite side, close to where it inserted on the humerus. Additionally, the SHBB tendon measured 3.0 centimeters from the coracoid process to the shoulder capsule. From the shoulder capsule to the lower excrescence of the humerus, it measured 35.3 centimeters from the coracoid process to insertion and 8.1 centimeters at its widest point. Figure 1 shows that the SHBB tendon joined the long head tendon to form an aponeurosis on the left shoulder [2-4].

DISCUSSION

The finding of a bilateral SHBB variant with emulsion of tendons in the shoulder region in this case report is novel. The literature contains numerous reports of appurtenant heads, but only a few reports of fused heads or variations specifically of the SHBB, none of which were bilateral. In the event of a shoulder injury, where tearing of the fused tendons may result in a more severe injury, this variation has clinical counteraccusations. Similarly, the SHBB's aponeurotic tendon on the right shoulder may be more susceptible to injury from gashes in the shoulder capsule due to its emulsion with the capsule. In a similar vein, in the event of a humeral or clavicular fracture, the direction of force would be altered as a result of the distribution of force across a wide aponeurosis and in conjunction with other conterminous muscles. Altering the surgical approach to the anterior shoulder would also be necessary due to

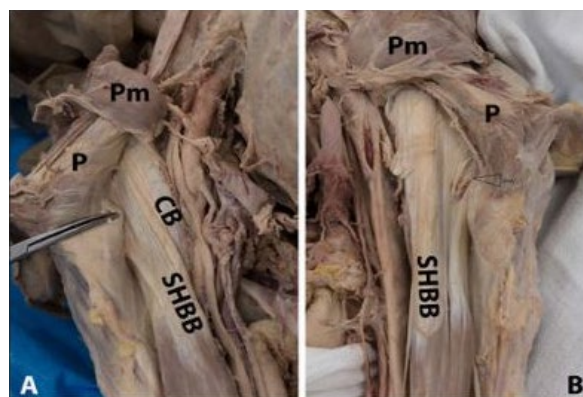


Figure 1) A) right and B) left shoulders illustrate the short head of the biceps brachii attachments. An artery pierces through the aponeurosis on the left shoulder (open arrow in panel B).

the broad aponeurosis. In point of fact, during a deltopectoral approach to the shoulder for hemiarthroplasty, the one previous report of an aponeurotic tendon of the SHBB that was comparable to that on the left shoulder of this corpse was linked. The previous case's aponeurotic attachment was smaller and did not involve as many different muscle groups as the current cases on the right shoulder. The clinical significance of this finding is supported by the identification of this alternate case of an analogous aponeurotic attachment. This is a variation that is rare but not singularly unique; consequently, it is one that may be encountered in new cases when the deltopectoral approach is used [5].

CONCLUSION

It might appear that the shoulder would have a lower range of motion based on the emulsion of tendons. Still, evolutionary insight into the significance of this variation is provided by comparisons with the deconstruction of the biceps brachii in brachiating hams of the Hylobatidae family. Rather than having two distinct heads, these hams, like gibbons, are said to have fused biceps brachii muscles. In addition, as shown in this case report, they have chains of fused muscles in the upper branch, including attachments between the biceps brachii, coracobrachialis, and pectoralis major muscles. It has been hypothesized that these acclimations of the forelimbs aid in the transmission of arboreal locomotional forces.

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