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The Surgical Anatomy of the Long Head of the Biceps Brachii Relative to the Pectoralis Major Tendon

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Faculty Disclosure Information

My disclosure(s) is/are

1. Consultant for Arthrex Inc.
2. Advisory Board for Smith and Nephew

One Sentence Review

The proximal insertions of the biceps brachii fuse together well below the pectoralis major tendon, which is an important consideration when completing ***all-arthroscopic subpectoral*** biceps tenodesis

Introduction

The biceps brachii is the most variable muscle in the upper arm

The long head of the biceps is a common shoulder pain generator, managed with tenotomy or tenodesis

The pectoralis major tendon (PMT) is an important surgical landmark during biceps tenodesis

The biceps anatomy at the PMT superior and inferior borders varies and is important when completing tenodesis

Purpose

Cadaveric anatomic study

Primary objective: To identify whether the short and long heads of the biceps were separate or fused at the PMT insertion

Secondary objective: Identify whether the long head structure (tendon, musculotendinous, muscle) was different at the upper and lower PMT borders

Methods

21 cadaveric upper arm dissections

Deltopectoral approach

Short and long heads of biceps identified

PMT elevated from humerus

Assessment of proximal biceps at level of PMT: separate or fused at upper and lower PMT borders

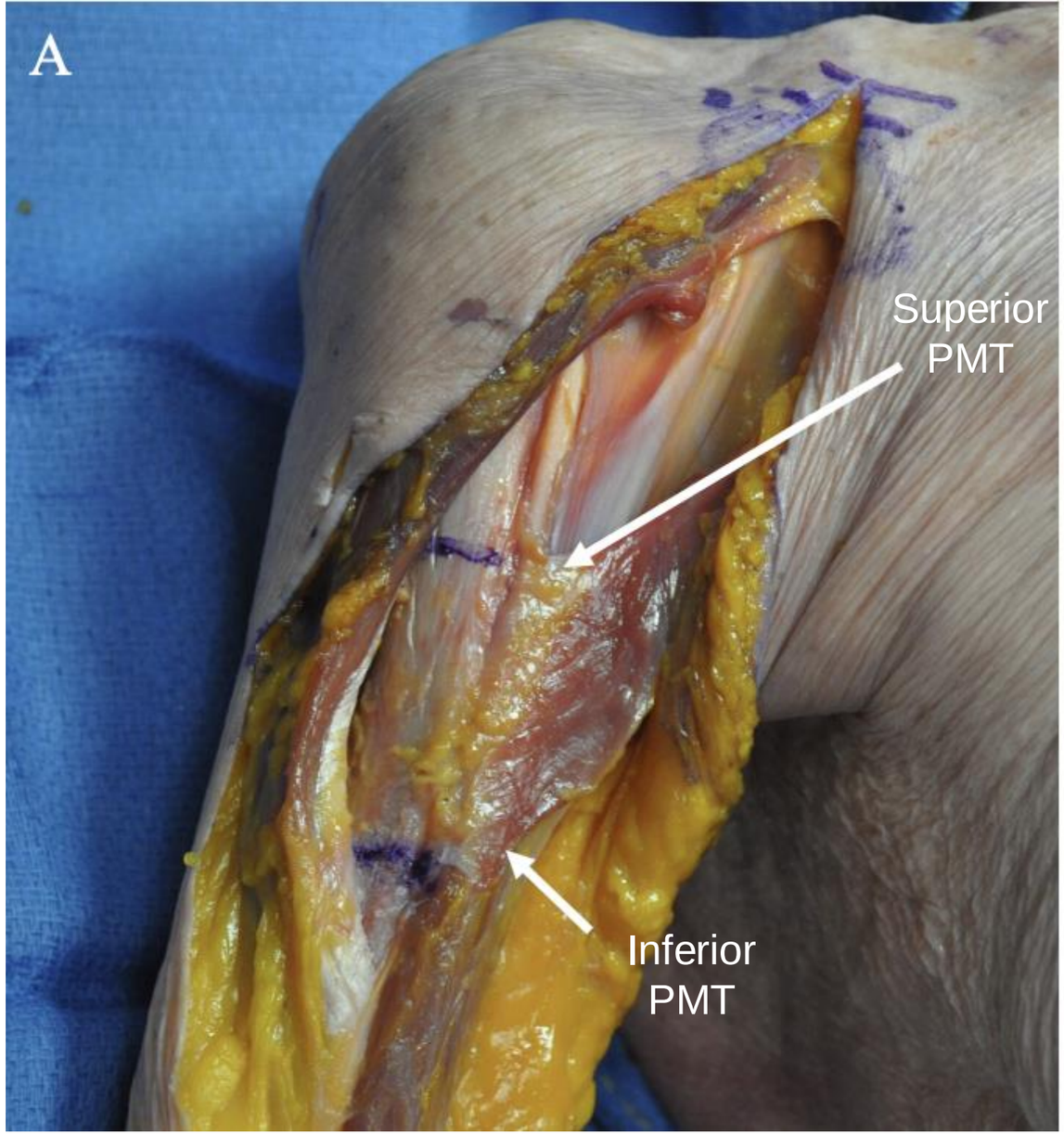
Results

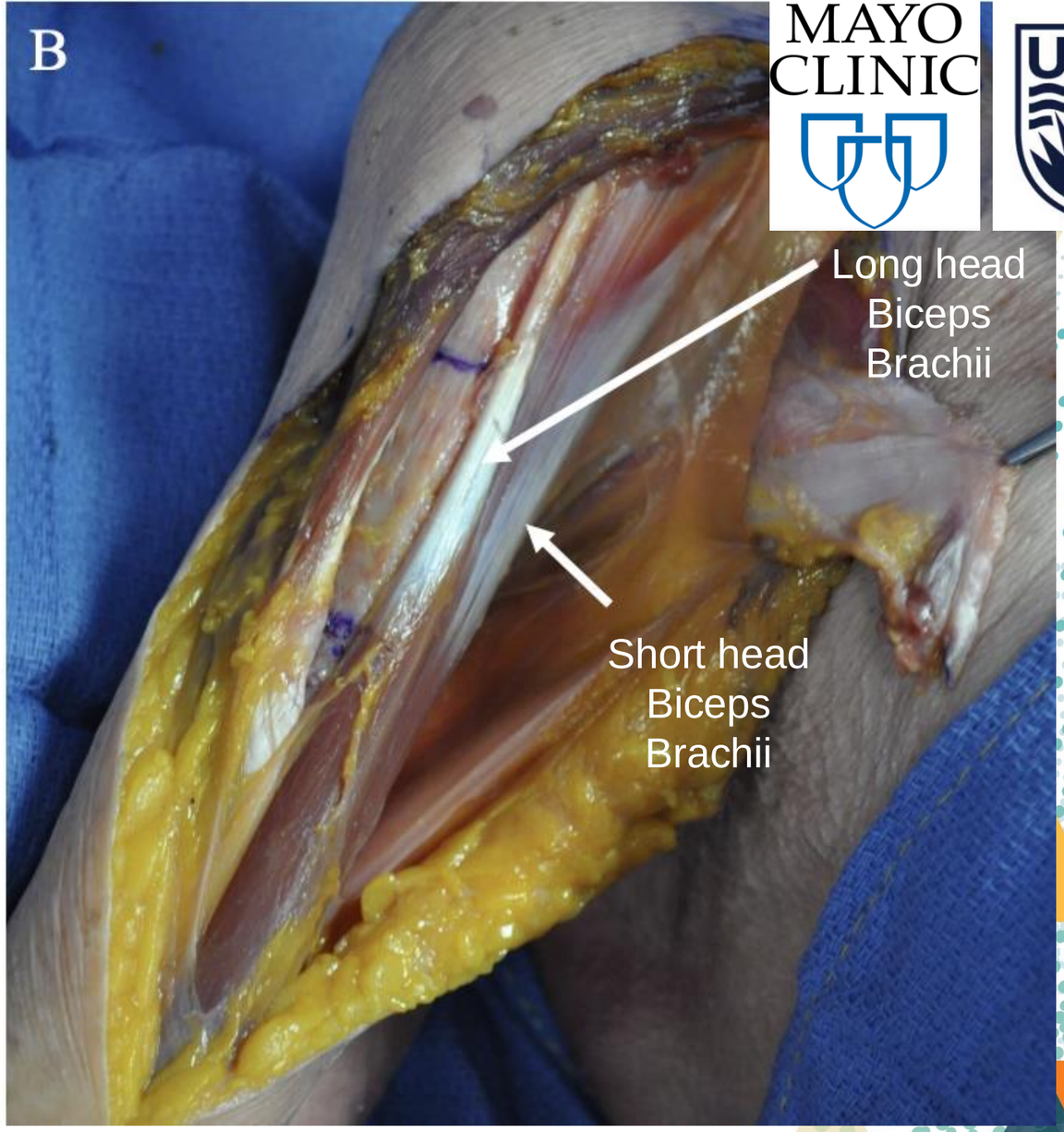
Mean fusion distance from proximal biceps insertions: ***95.5*** ± 38.4mm ***distal*** to the ***inferior*** PMT

Proximal muscle bellies ***fused proximal to inferior PMT 1/21*** times

Long head ***myotendinous*** structure was ***18.7*** ± 33.7mm ***distal*** to PMT ***superior*** border, but ***32.8*** ± 38.4mm ***proximal*** to PMT ***inferior*** border

Long head ***muscle*** belly was ***76.9*** ± 26.9mm distal to ***superior*** border, ***30.7*** ± 23.4mm ***distal*** to ***inferior*** PMT border





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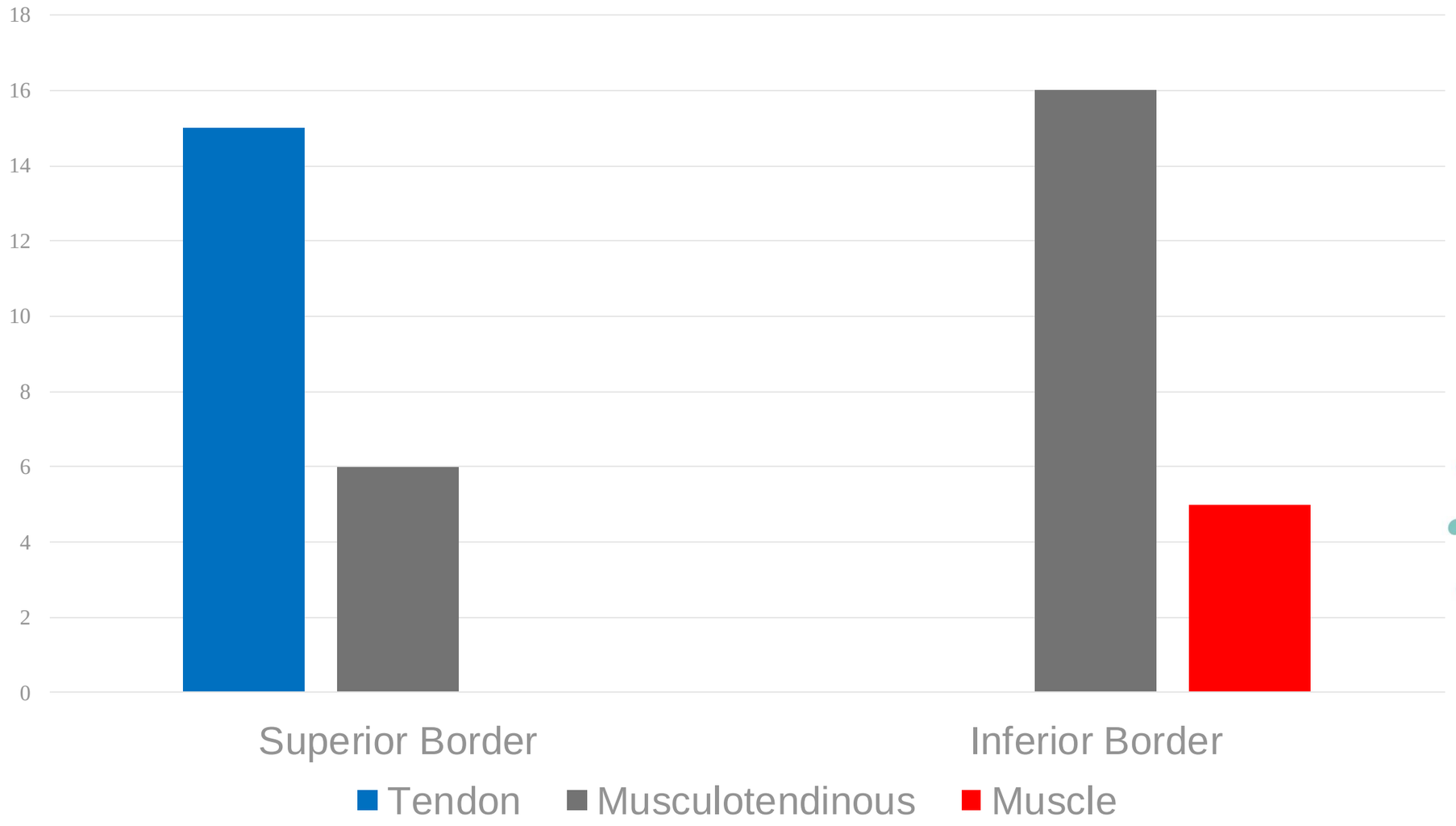
Long Head Structure Relative to the Pectoralis Major Tendon



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Discussion and Conclusion

The biceps brachii proximal insertions fuse well below the PMT inferior border

Recently, an ***all-arthroscopic subpectoral biceps tenodesis*** at the PMT inferior border has been described

The long head is either tendinous or myotendinous at the inferior PMT border