Lesions of the biceps pulley and instability of the long head of the biceps tendon are common diagnoses in patients with anterior shoulder pain. To analyze the pathoanatomy of the biceps reflection pulley ("pulley") in consecutive patients undergoing shoulder arthroscopy. Cochrane study (prevalence); Level of evidence, 2.

Prospective data were collected on 229 shoulders in consecutive patients (155 male, 74 female) who underwent shoulder arthroscopy (121 rotator cuff pathology, 50 instability, 43 osteoarthritis, 15 miscellaneous). The average age was 48.5 years (range, 18-76 years). Sixty-eight shoulders had undergone a previous surgery. The long head of the biceps tendon was absent in 21 shoulders (9.2%); 1 was excluded for incomplete data. In 207 shoulders, the mean width of the long head of the biceps tendon was 6.0 mm (range, 3-10 mm), and the pulley complex, 7.2 mm (range, 4-15 mm). Sixty-seven patients (32.4%) had a pulley tear: 48 shoulders had anteromedial pulley tears, 32 posterolateral, with 13 combined anteromedial-posterolateral lesions. Patients with pulley tears were significantly older than those without (57 vs 44 years, P< .001). For anteromedial pulley tears, the mean width of the long head of the biceps tendon was significantly larger in the torn group (6.4 vs 5.8 mm, P = .012). The anteromedial or posterolateral pulley tears were significantly associated with subluxation or dislocation of the long head of the biceps tendon (P = .001), with a pulley torn in all 27 cases of biceps...
dislocation. In 173 shoulders with a centered long head of the biceps tendon, the pulley was torn in 36 (23 anteromedial, 18 posterolateral [with 5 being combined]). Pulley tears and rotator cuff injury showed a significant association (P< .001). Superior labral anterior posterior lesions were significantly associated with anteromedial (P< .008) and posterolateral pulley tears (P< .021). Pulley lesions are fairly common in patients undergoing arthroscopic surgery and were found in 32.4% of this prospective cohort (67 of 207). Current consensus indicates that pulley lesions are often associated with rotator cuff tears. This series also showed correlations with superior labral anterior posterior tears, biceps instability, and long head of the biceps tendon tears.