Long-term outcome after structural failure of rotator cuff repairs

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BACKGROUND
In a previous study, twenty consecutive patients with a rerupture of the rotator cuff, as documented with magnetic resonance imaging, were found to have significantly less pain and better function and strength, compared with the preoperative state, at 3.2 years postoperatively. It was the purpose of this study to determine the clinical and structural outcomes of these reruptures in the same twenty patients after a longer period of follow-up.

METHODS
At a mean of 7.6 years postoperatively, the twenty patients were reexamined clinically and with standard radiographs and magnetic resonance imaging with use of the same clinical, radiographic, and magnetic resonance imaging criteria as were utilized in the review at 3.2 years. The mean age at the time of final follow-up was sixty-six years.

RESULTS
Nineteen of the twenty patients continued to be either very satisfied or satisfied with the outcome. The relative Constant score averaged 88% and was not significantly different from the score at 3.2 years, which averaged 83%. The mean scores for pain, function, and strength also had not changed significantly. Overall, the twenty reruptures had not increased in size, and eight of them had healed structurally at the time of the 7.6-year follow-up. Seven of these eight reruptures had been of the supraspinatus tendon only, and seven had been smaller than 400 mm(2) at 3.2 years. Twelve reruptures persisted, and five were larger than the preoperative tear. Fatty infiltration of the infraspinatus muscle progressed significantly (p = 0.015) and the acromiohumeral distance decreased significantly (p = 0.006) between the two follow-up periods. Neither fatty infiltration of the supraspinatus and subscapularis muscles nor glenohumeral osteoarthritis progressed significantly.

CONCLUSIONS
At an average of 7.6 years, the clinical outcomes after structural failure of rotator cuff repairs remained significantly improved over the preoperative state in terms of pain, function, strength, and patient satisfaction. Overall, the reruptures that had been present at 3.2 years did not increase in size. We also
found that reruptures of the supraspinatus that had been smaller than 400 mm (2) had the potential to heal.

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