Editorial Commentary: Can It Really Be That Simple? Predicting Risk Factors for Failed Arthroscopic Rotator Cuff Repair

Abstract: Failure after arthroscopic rotator cuff repair is multifactorial. Tear size and chronicity do matter but, until a case series with a large enough sample size can be performed, we must still continue to counsel patients that a wide variety of risk factors and comorbidities may affect healing.

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Gasbarro et al.,1 in their article “Morphologic Risk Factors in Predicting Symptomatic Structural Failure of Arthroscopic Rotator Cuff Repairs: Tear Size, Location, and Atrophy Matter,” attempted to isolate those factors most important in predicting failure. Relying on the results of 5 fellowship-trained surgeons over a 7-year period, analysis revealed that supraspinatus tear size, infraspinatus tear size, and supraspinatus atrophy were the only statistically significant factors identified as predictors for failure (as defined by pseudoparalysis or structural defect on postoperative magnetic resonance imaging). Although both supraspinatus and infraspinatus tear size were associated with increased risk of failure, surprisingly massive tears (>5 cm) were not!

Conventional wisdom suggests that failure after arthroscopic rotator cuff repair is multifactorial. But is it reasonable to think that no other morphologic factors have an impact on healing? As the authors have determined, chronologic age does not predict failure; but what about physiologic age? Additionally, comorbidities such as diabetes, coronary artery disease, and tobacco use, as well as massive tear size, were found to have no significant impact on failure. However, because the sample sizes for these subsets of patients were extremely small (18, 10, 22, and 13 patients, respectively) and no post hoc power analysis was performed, these conclusions should be taken with a grain of salt. Finally, the authors concluded that repair technique (single-row vs double-row, simple vs mattress sutures) also had no impact on failure risk. But again, with multiple surgeons, many repair techniques, and small numbers, one must view these results with a wary eye.

Many others have also previously tried to identify risk factors to predict which patients may progress to a failed arthroscopic rotator cuff repair.2-6 But until a case series with a large enough sample size can be performed, we must still continue to counsel patients that a wide variety of risk factors and comorbidities may affect healing and recommend all sensible options to minimize failure. Tear size and chronicity do matter but, we suspect, so does everything else.

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References


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0749-8063/16 $36.00
http://dx.doi.org/10.1016/j.arthro.2016.06.025