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**Predictors of Functional Outcomes following
Operative Treatment of Acute Achilles Tendon Ruptures**

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Introduction:

Previous studies involving operative management of Achilles tendon ruptures have attempted to determine if patient factors influence outcomes. No previous study has attempted to identify outcome predictors in patients exclusively undergoing surgical repair. The purpose of this study is to determine if any injury or patient variables were predictive of outcomes following operative management of Achilles ruptures.

Methods:

Patient demographics including age, sex, body mass index (BMI), comorbidities (diabetes mellitus, depression, anxiety), mechanism of injury (sports, non-sports), and date of injury were collected. Postoperative notes were reviewed to determine compliance. Patients completed the Foot & Ankle Ability Measure (FAAM)-Activities of Daily Living (ADL) and –Sports subscales, and visual analog scale (VAS) for pain. Multivariable regression analysis was performed, and regression coefficients with 95% confidence intervals and p-values were reported.

Results:

Female sex was associated with lower FAAM-Sports score (-10.11 [-19.73,-0.50]) and a lower Single Assessment Numeric Evaluation score from the FAAM-Sports subscale (-13.79 [-26.28,-1.30]; p=0.0325). History of anxiety was related to a lower FAAM-ADL score (-29.02 [-45.68, -12.36]; p=0.0009), FAAM-Sports score (-33.41 [-64.46, -2.37]; p=0.0368), and a higher VAS pain score (19.83 [4.43, 35.23]; p=0.0128). Age, BMI, a history of depression or diabetes mellitus, mechanism of injury, timing of repair, and patient compliance were not predictive.

Discussion:

Females and patients with anxiety have significantly poorer outcomes following Achilles tendon repair. Further study is indicated to determine whether these factors are also predictive of outcomes of Achilles ruptures treated non-surgically and how this may affect surgical indications in these patients.