

Antidepressant Use Increases Fall Risk; Exercise May Be An Alternative Intervention In At-risk Adults

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Approximately 19% of American adults age ≥ 65 years are taking an antidepressant medication. Prescriptions are more common among adults who do not engage in regular exercise and those who have experienced a fall. A sedentary lifestyle and antidepressant use may compound the risk of falling, but data are limited.

PURPOSE: To examine the effect of antidepressant use on fall risk in older adults.

METHODS: We analyzed patients from a Level 1 trauma center in an urban-suburban setting. Patients age ≥ 65 years who experienced a fall-related injury constituted the study sample (N=615). We collected their demographic information, conducted a medical history, documented poor balance, lightheadedness, and cognitive struggles, recorded the use of antidepressants, and tabulated previous fall-related admissions. Holding all demographic and diagnostic variables constant, a logistic regression tested the effect of antidepressant use on the odds that patients had been admitted multiple times in the past for falls. We then tracked patients forward for 8 months, tabulated future falls, and repeated the logistic regression prospectively, holding the same predictors constant. Lastly, we conducted a Poisson regression to measure the effect of antidepressant use on the total number of falls (retrospective and prospective), using the same set of predictors.

RESULTS: Subjects were 80.0 ± 9.1 years old; 31.1% were taking an antidepressant medication; the most common class was SSRIs (22.4%). In the retrospective logistic regression (pseudo $R^2 = 0.170$; $p < 0.001$), the use of antidepressants associated with a 59% increase in the odds of sustaining multiple previous falls ($p < 0.001$; 95% CI of OR: 1.10 - 2.29). The prospective logistic regression (pseudo $R^2 = 0.111$; $p < 0.001$) showed antidepressant use to predict a 104% increase in the odds of a future fall ($p < 0.001$; 95% CI of OR: 1.42 - 2.95). The Poisson regression ($p < 0.001$) predicted an 18% increase in the total number of falls when taking an antidepressant ($p = 0.002$; 95% CI of IRR: 1.06 - 1.31).

CONCLUSION: The use of antidepressants appears to increase fall risk in this population. Physicians may consider advising at-risk patients to participate in controlled exercise to decrease the need for prescriptions while simultaneously lowering the likelihood of falls.

Pediatric Achilles Tendon Rupture: A 10 Year Retrospective Case Series

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Achilles tendon rupture is an injury associated with significant morbidity. It is a common injury in adults and has been well studied in this age group. However, pediatric Achilles tendon ruptures are considered rare and have not been well described.

PURPOSE: To describe cases of pediatric Achilles tendon rupture seen at a large pediatric center over a 10 year period.

METHODS: A retrospective chart review was conducted over a 10 year period (2010-20) at a single, large pediatric center. Potential cases of Achilles tendon rupture were identified through database searches of EPIC and Orthopedic Surgery schedules, using relevant ICD9/10 and CPT codes. Additional cases were identified by correspondence from treating physicians. Cases were included if an acute injury to the Achilles tendon was identified in an individual 19 years or younger. Qualitative data including medical history, mechanism of injury, physical exam, and treatment were identified from the medical record.

RESULTS: A total of 25 acute Achilles tendon ruptures were identified that met inclusion criteria. 10 of these were spontaneous ruptures, while 15 were laceration injuries. Of the 10 spontaneous ruptures, 9 were complete ruptures (Table 1). 5 injuries occurred during basketball, with football and volleyball being next most common. An abnormal Thompson's test was documented in 8/10 spontaneous cases. Of note, one subject was on minocycline at the time of injury. Another had a history of clubfoot surgery on the injured side. All 15 laceration injuries were treated surgically. 6 injuries were partial lacerations. Patients were younger than those with spontaneous ruptures (mean: 10 vs 16 years). No advanced imaging was done in most cases of laceration.

CONCLUSION: Achilles tendon ruptures are uncommon, but do occur in the pediatric population. Accidental laceration of the tendon is more common than spontaneous injury during sports. A positive Thompson test is suggestive of an Achilles tendon rupture.

Table 1: Spontaneous Achilles Injuries

<u>Injury Type</u>	<u>Age</u>	<u>Sex</u>	<u>Sport</u>	<u>BMI</u>	<u>PMH</u>	<u>Recent Medications</u>	<u>Mechanism</u>	<u>Physical Exam</u>	<u>Surgery?</u>
Complete	13	F	Soccer		Clubfoot Surgery (Ipsilateral)		Cleated in heel, then twisted	Thompson "sluggish", limited plantar flexion	Y
Complete	16	F	Volleyball	22.1			Planting	Thompson +, Gap in Achilles	Y
Complete	16	F	Basketball	22.3	Acne	Minocycline	Planting	Thompson +, Gap in Achilles	Y
Complete	16	M	Basketball	41			Twisted	Thompson +, Gap in Achilles	Y
Complete	16	F	Volleyball		Ehlers-Danlos (Hypermobility)		Sprinting (start)	Unable to plantar flex	Y
Complete	17	M	Football	38.7			Planting (backpedal to forward sprint)	Thompson +, Gap in Achilles	Y
Complete	17	M	Basketball	40.9			Sprinting (start)	Thompson +	N
Complete	18	M	Football	25.2			Landing	Thompson +, Gap in Achilles	Y
Complete	18	M	Basketball	18.8			Heel stepped on while starting to sprint	Thomson +	Y
Partial	15	F	Basketball	20.7	Achilles tendonitis (Ipsilateral, 2 years prior)		Landing	Thompson -, No defect in Achilles	N