

Patellar Tendonopathy in Collegiate Volleyball Athletes

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Background

Patellar tendinopathy is an overuse injury affecting athletic individuals (age range 24–30s) and is most frequently reported in volleyball and basketball injuries (5).

Diagnostic ultrasound is the gold standard for confirming the diagnosis of patellar tendinopathy (5).



36% elite junior VB players (mean age 20) present with patellar tendon abnormality (3).

Patellar tendinopathy results in time loss ranging from weeks to months due to pain.

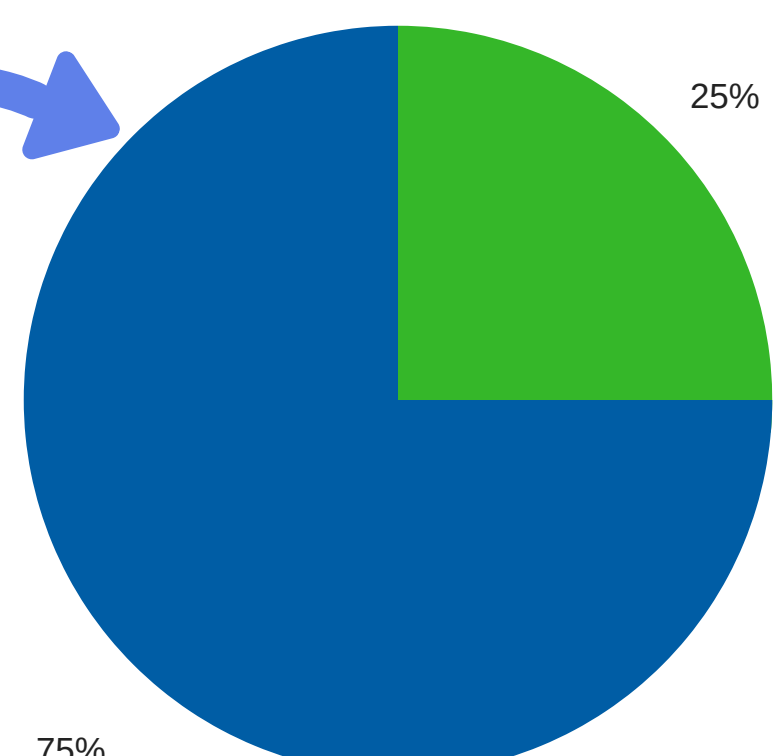
Purpose

The first purpose was to identify the prevalence of patellar tendon abnormality in female collegiate volleyball players. The second purpose was to identify a potential association between kinetic measures during the drop vertical jump between those with tendon abnormality and those without in female collegiate volleyball athletes.

Hypothesis

It was hypothesized that over 25% of the athletes would present with PTA at the start of the preseason. It was hypothesized that there would be a different landing strategy during the DVJ between those with and without PTA.

Female Collegiate Volleyball Players without Patellar Tendinopathy



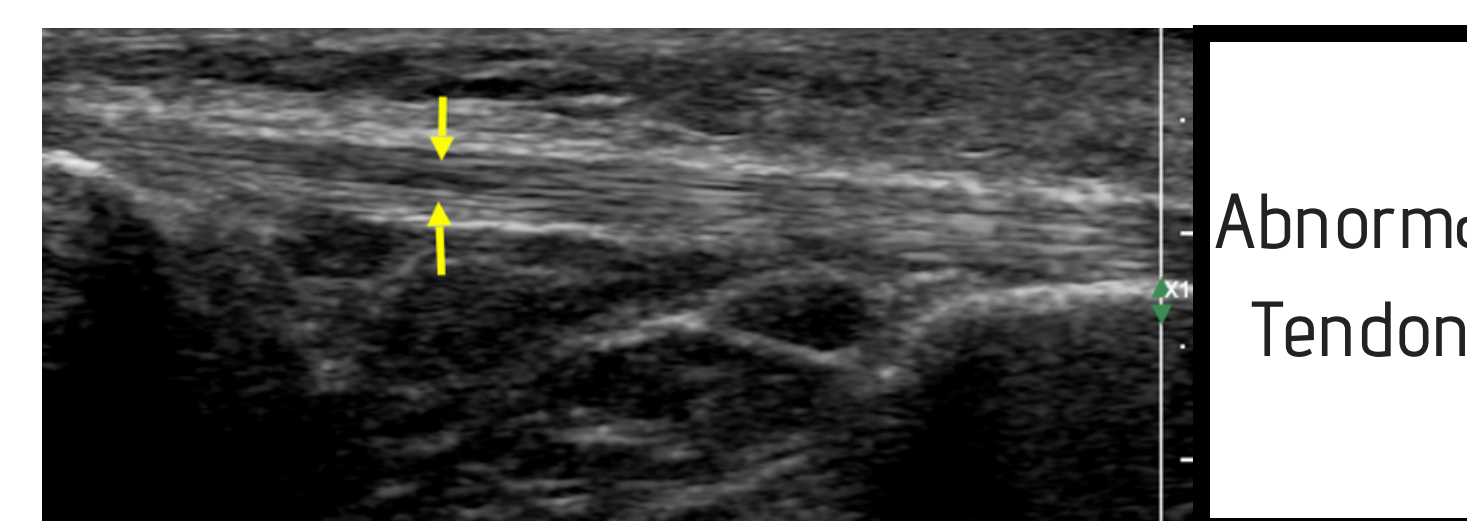
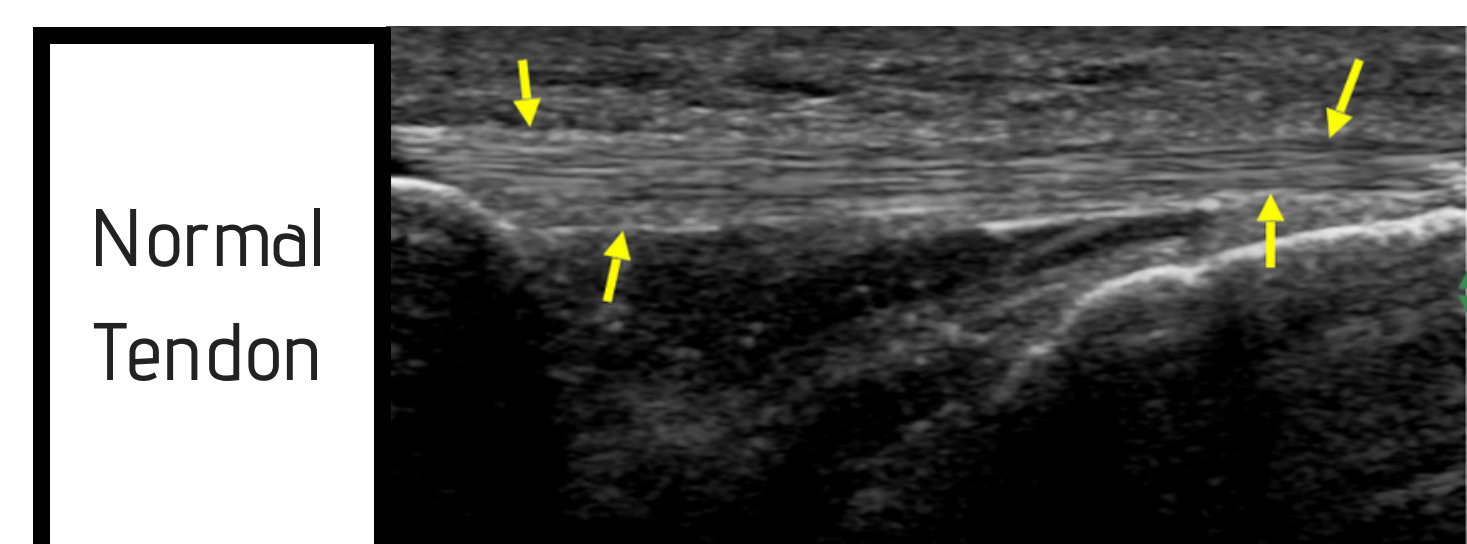
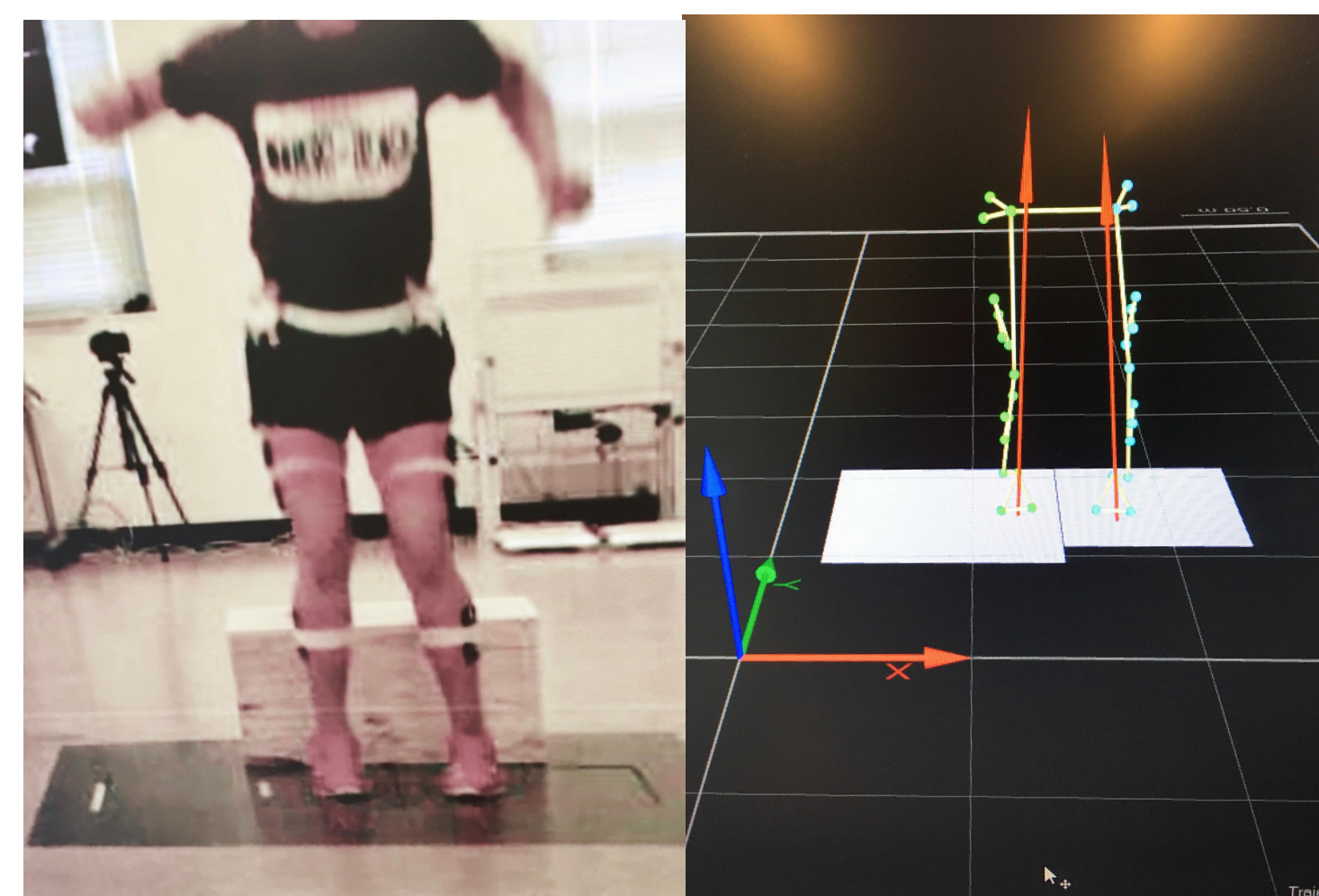
Female Collegiate Volleyball Players with Patellar Tendinopathy

Methods

Population: 90 Female collegiate volleyball players from NCAA DII, DIII, and NAIA teams.



Palpation of the inferior pole of the patella



Results

Table. Relationships between age and sport-related demographic with the presence of patellar tendinopathy and patellar tendon abnormality

Characteristic	PTA Yes	PTA No	p-value
Age (years)			
19 or younger	11	39	0.817
20 or older	8	32	
Age Starting Sport (years)			
11.79 or younger	8	26	0.661
11.80 or older	11	45	
Level of Competition			
NCAA D2	2	14	0.376
NCAA D3	13	36	
NAIA	4	21	
Position			
L/DS/S	7	26	0.986
OPP/OH/MB	12	45	
Player Groupings			
L/DS	4	13	0.562
S	3	15	
OH	5	27	
MB/OPP	7	16	
Starter Status			
Starter	7	27	0.925
Non-Starter	12	44	

Current analysis did not reveal a difference in landing kinetics in this population.

Discussion

The presence of patellar tendon abnormality was much lower in female collegiate volleyball athletes than hypothesized. It is speculated that it is lower in this population because they are not jumping with as much frequency as elite players. Based on each player's various demographic factors there was no greater prevalence of PTA. Continued research is needed to further examine if frequency plays a contributing factor in the prevalence of PTA in collegiate volleyball athletes.

Conclusion

The prevalence of patellar tendon abnormality was much lower than hypothesized. There was no difference in landing mechanics between those with and without PTA.

References

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