Pre- and Post-COVID-19 Trends in Adolescent Lower Extremity Tendinitis

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BACKGROUND

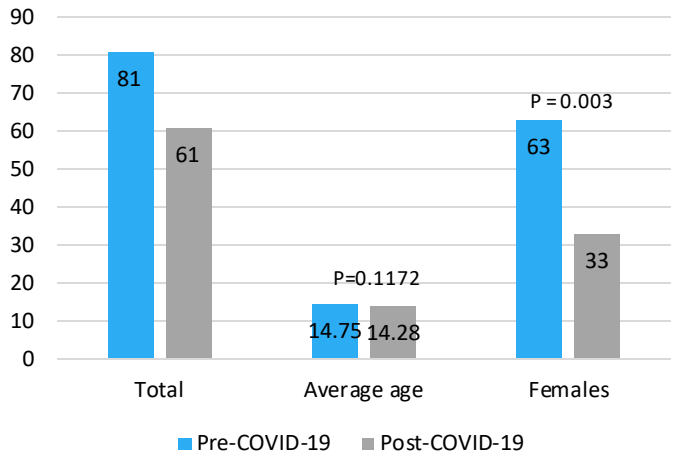
- Tendinitis a common injury seen amongst adolescent athletes due to repetitive loading of the tendon, often due to chronic overuse.
- The COVID-19 pandemic began in early 2020 and significantly impacted young athletes' opportunities to participate in sport due to cancellations.

- Type of study: retrospective cohort
- Purpose of this study is to determine differences in lower extremity tendinitis prior to the COVID-19 pandemic versus after this initial lockdown in 2020 in regard to:
  - Incidence
  - Age & Sex
  - Sport
  - Location of injury

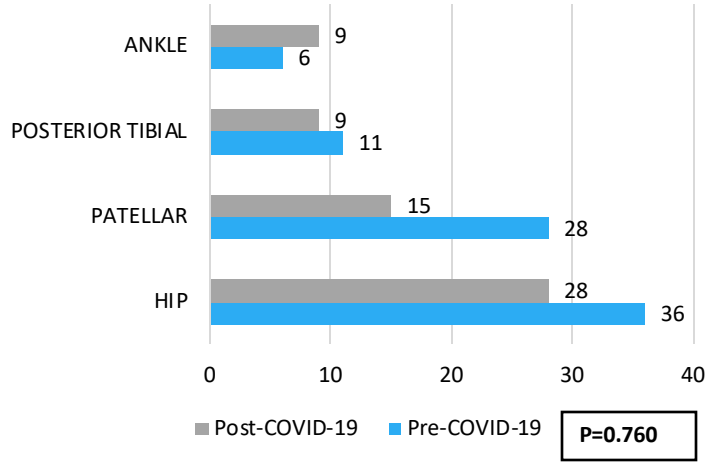
METHODS

- Data was collected using the Children's Hospital of Philadelphia's electronic medical records.
- Lower extremity tendonitis for this manuscript includes diagnoses of:
  - Knee/patellar, ankle, peroneal, posterior tibial, anterior tibial, hip flexor, or hip abductor tendonitis
- Patients in the pre-COVID group were evaluated for lower extremity tendonitis in 2019, while patients in the post-COVID group were evaluated for lower extremity tendonitis in 2021.
- Data was statistically analyzed using Pearson Chi-square tests to determine significance between age, sex, and type of injury.

Demographics



Location of Tendinitis Injury



RESULTS

- A total of 142 patients (81 in 2019 vs. 61 in 2021) were found to have been diagnosed with lower extremity tendonitis.

- The average age in the pre-COVID cohort was 14.75 versus 14.275 in the post-COVID cohort (p-value = 0.1172)
  - Females made up 62/81 (77.78%) in 2019 and 33/61 (54%) in 2021.

- Hip tendinitis specifically made up 36/81 (44.4%) in 2019 and 28/61 (25.9%) in 2021, while patellar was 28/81 (34.6%) in 2019 and 15/61 (24.6%) in 2021.

DISCUSSION

- The main finding of this study is that *no significant difference in incidence of tendinitis was found* in adolescents in the year prior to COVID-19 versus the year following the initial COVID-19 wave.
- No difference was found between location of injury between the groups (p=0.760)
- Females, however, were more likely to have a tendinitis injury compared to males in both cohorts (p=0.003).
  - This supports previous studies regarding incidence of tendinitis in ballet dancers.
- The pre-COVID-19 cohort was found to have a higher incidence of an additional lower extremity injury after their tendonitis diagnosis.

CONCLUSION

- This study found no difference in the incidence of tendinitis prior to COVID-19 compared to in 2021, when sports had resumed after the start of the pandemic, with no significant change in location of injury.

- As tendinitis is often due to overuse, the results that these injuries were still just as likely to occur after a forced cessation of many sports.

- This conclusion highlights the multifactorial etiology of tendinitis and provides further insight to better treat adolescents with this injury.