Thursday: Achilles: 8:55 – 8:57 am

Insertional Achilles Tendinitis and Haglund's Deformity

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Summary:
We analyzed the characteristics of a Haglund’s deformity in patients with and without insertional Achilles tendinitis to determine if there was a correlation. A retrospective radiographic review of patients with and without Haglund's deformity, involving various measurements of the Haglund's deformity, showed no statistically significant difference in Haglund's deformity characteristics between study and control groups. Therefore, the Haglund's deformity is not indicative of, and has little predictive value for, insertional Achilles tendinitis.

Introduction:
A Haglund’s deformity is an enlargement of the posterosuperior prominence of the calcaneus, which is frequently associated with insertional Achilles tendinitis. To our knowledge, no study has been done successfully correlating the characteristics of a Haglund’s deformity with insertional Achilles tendinitis. The purpose of our study was to analyze the characteristics of a Haglund’s deformity in patients with and without insertional Achilles tendinitis to see if there was a correlation.

Methods:
The study design was a retrospective radiographic review of a single surgeon’s patients with insertional Achilles tendinitis from 2005 to 2008. Our study population consisted of 44 patients (22 male, 22 female) and 48 heels with insertional Achilles tendinitis – with a mean age of 52 (range 23 to 79 years old). Our control population consisted of 50 patients (25 males, 25 females) and 50 heels without insertional Achilles tendinitis and with a mean age of 55.6 (range 18 to 89 years old). There were 6 patients excluded from the control group due to calcification at the Achilles tendon insertion since this was likely indicative of subacute insertional achilles tendinitis.

We introduced two new measurements of the Haglund’s deformity in this study – the Haglund’s deformity height and peak angle. A lateral foot or ankle radiograph was analyzed for each patient and the following measurements were made: Haglund deformity height and peak angle; Bohler's angle; Fowler-philip angle; and parallel pitch sign. We also looked for the presence of calcification in the study group and the length and width of the calcification.

Unpaired t-test was used to analyze the measurements between the groups. Ten patients' radiographs were re-measured and correlation coefficients were obtained to assess the reliability of the measuring techniques.

Results:
For the insertional Achilles tendinitis group, the mean Haglund's deformity height was 9.6mm (5.3-15.3) and the mean Haglund's deformity peak angle was 105 degrees (87-123). Calcification was present in 35 of 48 or 73% of patients with a mean length of 13.3mm (3.2-41.9) and mean width of 4.5mm (1.0-10.4). In the control group, the mean Haglund's deformity height was 9.0mm (5.2-12.1) and the peak angle was 105 deg (91-124). Bohler's angle and Fowler-Philips Angle were also very similar between the groups and the positive parallel pitch sign was actually more prevalent in the control group (60% vs. 41.7%).

None of the differences in measurements between the groups achieved statistical significance. Correlation coefficients were all above 0.90 for the ten patients measurements which were repeated.

Conclusion:
From our study, we were able to conclude that a Haglund’s deformity is not indicative of insertional Achilles tendinitis and is present in asymptomatic patients. Also, a majority of the insertional Achilles tendinitis patients have calcification at the tendon insertion. Finally, our results show that removing the Haglund's deformity may not be necessary in the operative treatment of insertional Achilles tendinitis given that it is present to the same degree in asymptomatic patients.