Assessment of Foot Alignment in Patients with Hallux Rigidus: The Role of Weightbearing CT Scan

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Disclosure

No Conflicts to disclose

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We have no potential conflicts with this presentation
Association between Hallux Rigidus and Metatarsus Elevatus

- Correlations between hallux rigidus and metatarsus elevatus have been made, but have not found a general consensus.
- The aims of this study were to assess foot alignment in patients affected by hallux rigidus using 3D reconstructions from a weighbearing CT scan.
50 patients with hallux rigidus underwent a weightbearing CT scan.

Two investigators measured each foot twice, 1 month apart.
Measurements: 1st and 2nd Metatarsal Length
Measurements: 1st and 2nd Metatarsal Declination Angle
Measurements: Hallux Valgus Angle and Intermetatarsal Angle
Measurements: Foot Width
Results

• Intra and inter-observer reliability excellent.
• Statistically significant difference between the declination ratio in the hallux rigidus group (0.81) compared to the control group (0.92).
• Hallux valgus angle was significantly lower in the hallux rigidus group (12 degrees) compared to the control group (15 degrees).
Conclusions

• Patients with hallux rigidus demonstrated a lower declination of the 1st to 2nd metatarsal, indicating presence of metatarsus elevatus.

• Not possible to determine whether elevatus is a cause or a consequence of hallux rigidus.

• Weightbearing CT imaging proved to be a reliable method of assessing foot alignment.