Setting the Stage: A novel approach to utilizing ultrasound in carpal tunnel syndrome

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Objective

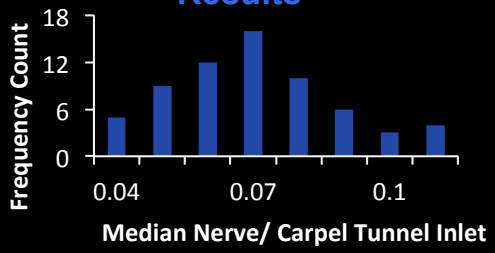
Focus: determine the normal distribution of the ratio between the cross-sectional area of the median nerve to the inlet of the carpal tunnel (CT) determined by ultrasound measurement

Goal: provide valuable normative data to set the stage for utilizing diagnostic ultrasound to efficiently diagnosis carpal tunnel

Design

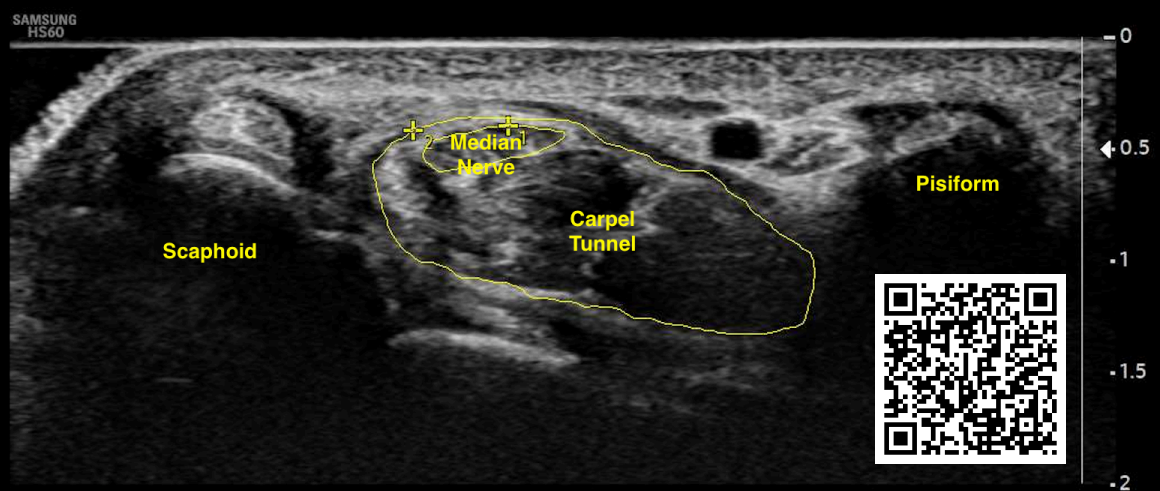
- 34 medical students' wrists scanned
- 4 wrists excluded due to sxs (n=64)
- Measurements: CT inlet & Median Nerve
- Calculated: Median Nerve/CT inlet ratio

Results



Conclusions

Advances in ultrasound imaging technology allow for measurements to be taken that were not as accurate or even possible before. Precise measurements of the carpal tunnel inlet and the median nerve can serve to validate symptoms along with physical exam findings in the diagnosis of carpal tunnel syndrome. Future studies could expand upon these findings by helping to identify at-risk populations through ultrasound screening, and furthermore, by determining the distribution of the ratio of symptomatic individuals.

Take Home Point:

Median Nerve/Carpal Tunnel Inlet ratio measured with **ultrasound** could be a more **rapid and reliable diagnostic measure** to determine **Carpel Tunnel Syndrome**