

Sensory Neuropathic Symptoms in Postural Tachycardia Syndrome (POTS): Insights from a Cross-Sectional Community-Based Survey

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Disclosures: S.R. Raj: Compensation for Services - GE Healthcare, Lundbeck; Research Grants - Medtronic, Inc. & Canadian Institute of Health Research; C.A. Shibao: Research Grants - National Institutes of Health; E.M. Garland: Research Grants - National Institutes of Health; I. Biaggioni: Compensation for Services - Lundbeck; Research Grants - National Institutes of Health; D. Robertson: Compensation for Services - Lundbeck; Research Grants - National Institutes of Health. All other authors report no disclosures.



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AIM

Identification of patient-reported sensory symptoms in postural tachycardia syndrome (POTS).

BACKGROUND

POTS is a common form of orthostatic intolerance defined as an increase in heart rate of ≥ 30 beats per minute (bpm) when moving from a supine to standing position (≥ 40 bpm in children ages 12-19) with chronic symptoms of orthostatic intolerance, in the absence of orthostatic hypotension (>20 mmHg drop in systolic blood pressure).

Prior literature on POTS has primarily focused on autonomic symptoms. We report on a large survey of POTS patients that suggests sensory neuropathic symptoms are common in this population.

METHODS

- Structured, web-based, REDCap survey
- “Diagnosis and Impact of POTS” study
- Vanderbilt IRB approval
- Survey links posted to Dysautonomia International website & social media
- Parents could complete survey for children <18
- Data collected July 2015 - October 2016
- Cross-sectional analysis

RESULTS

- 4178 individuals with a physician diagnosis of POTS completed the survey
- Individuals from 15 countries participated

- POTS patients were 94% female and 93% Caucasian
- Peak age of onset: 14 years
- Median age of onset: 17 years
- 47% with POTS onset after age 18
- 45% report numbness or tingling of the face (33% and 41%, respectively)
- 81% report burning, numbness or tingling of the hands (32%, 65% and 76%, respectively)
- 75% of patients report burning, numbness or tingling of the feet (40%, 58% and 67%, respectively)

Fig. 1 – Regions of Sensory Symptoms in POTS

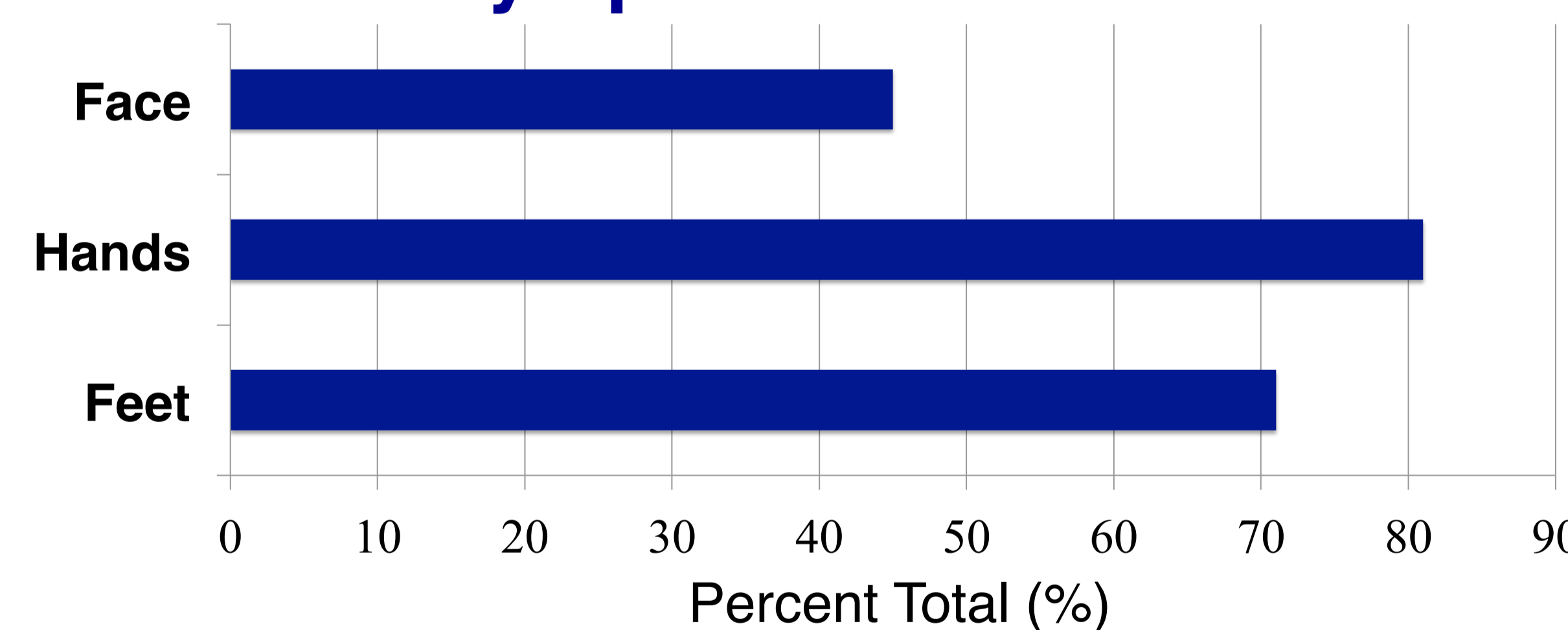


Fig. 2 – Facial Sensory Symptoms in POTS

Data on burning sensations in the face was not collected.

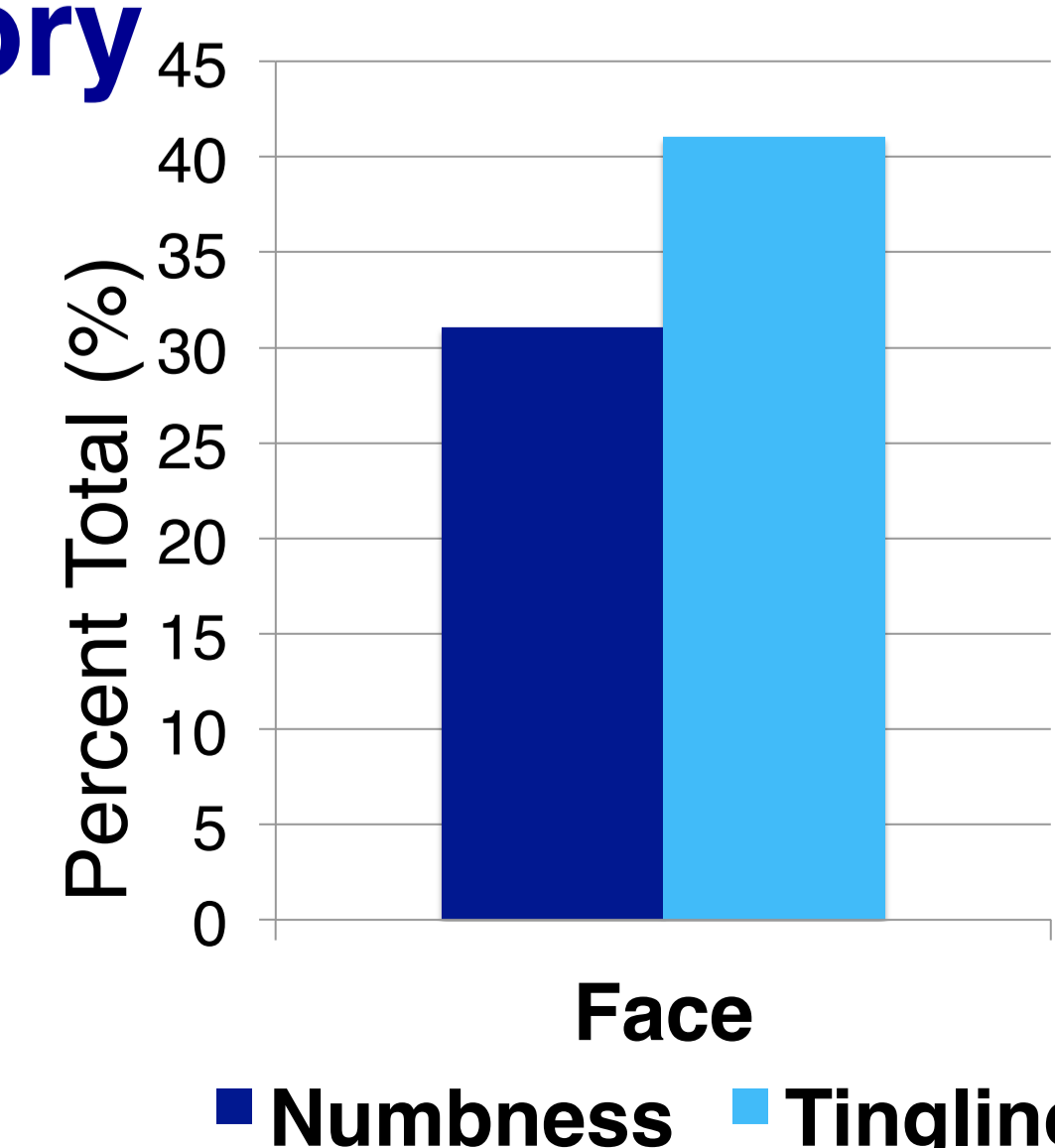


Fig. 3 – Hand & Foot Sensory Symptoms in POTS

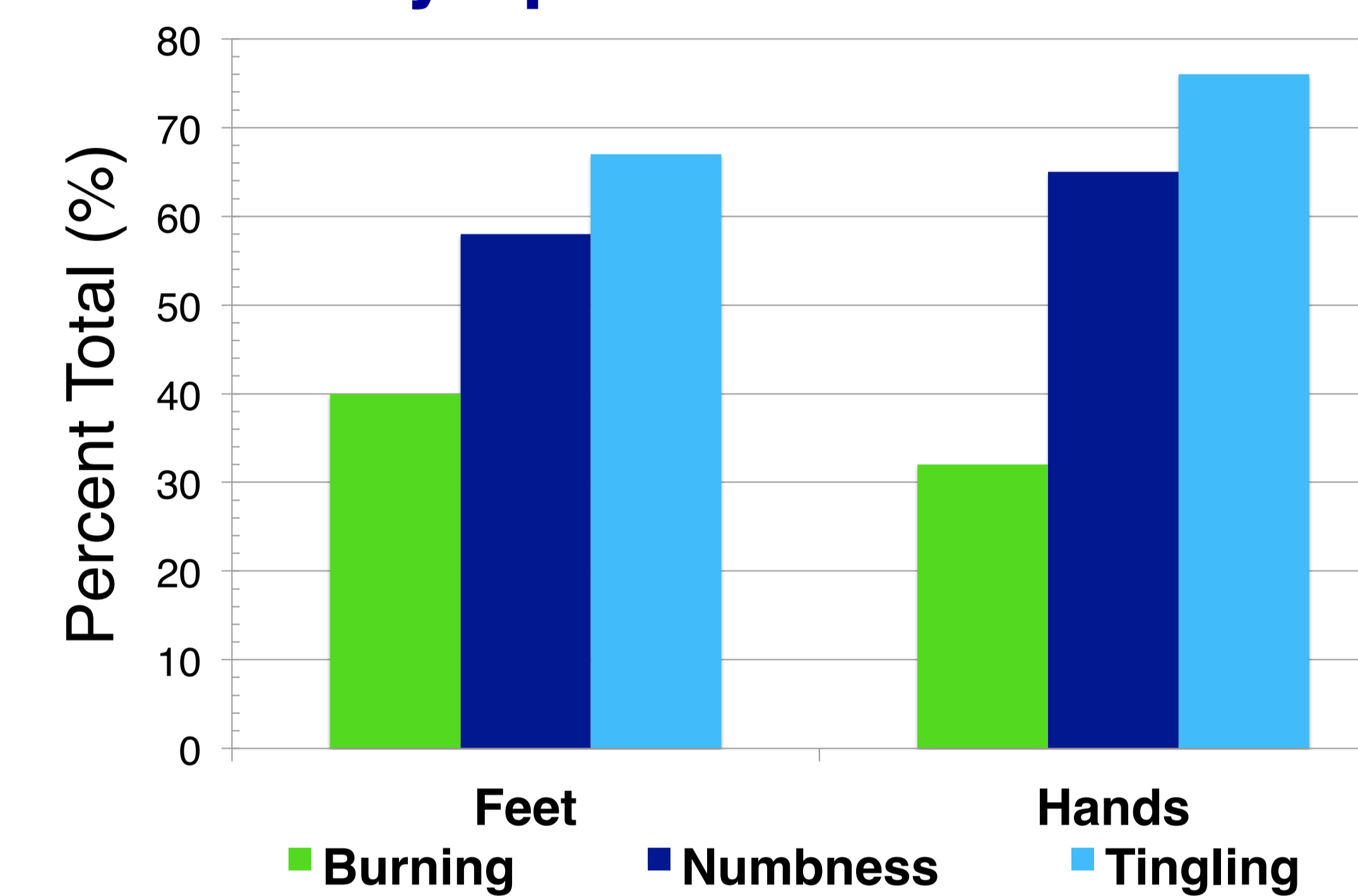
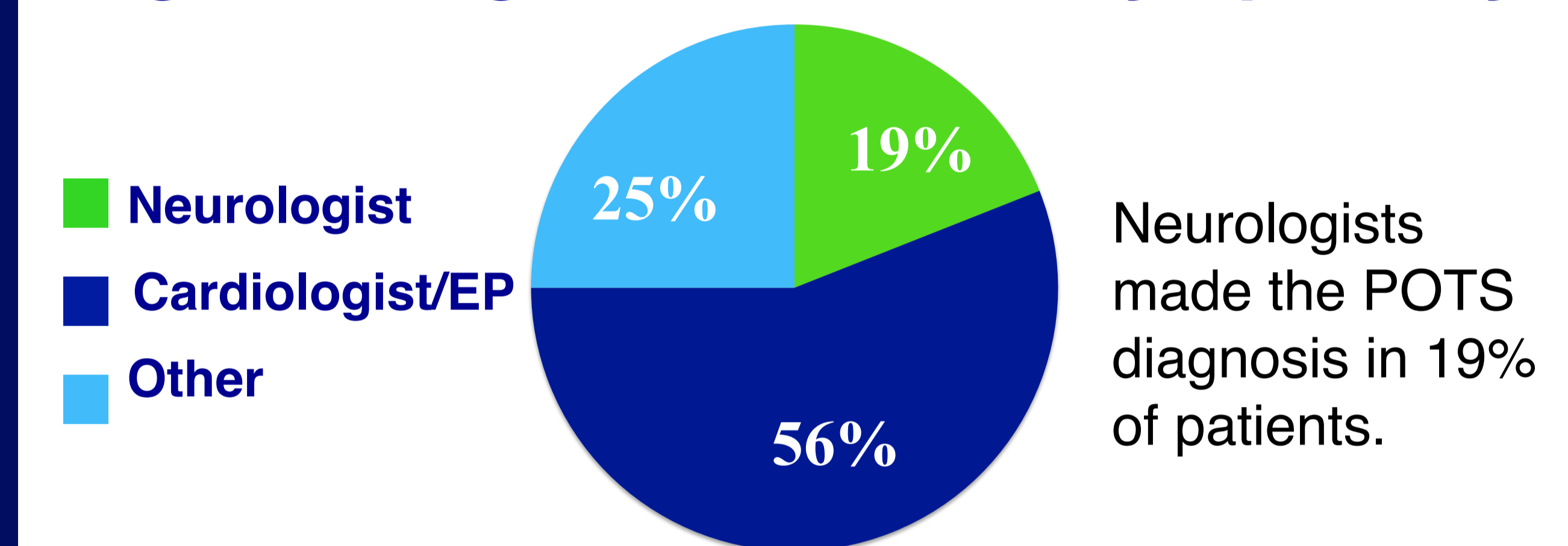


Table 1 – Other Symptoms in POTS

Symptoms	Percent Total (%)
Lightheadedness	99
Pre-syncope	94
Difficulty concentrating	94
Headache	94
Shortness of breath	87
Muscle pain	84
Muscle weakness	83
Constipation	70
Diarrhea	69
Dry mouth	66
Dry eye	60
Swallowing problems	57
Double vision	33
Difficulty urinating	27

Fig. 4 – Diagnosis of POTS by Specialty



CONCLUSIONS

- POTS is primarily seen in Caucasian females.
- While the peak age of onset is 14, approximately half of POTS cases develop in adulthood.
- Upper limb and facial sensory symptoms and widespread autonomic symptoms are common in POTS. Whether this is due to a non-length dependent polyneuropathy in some patients warrants further research.
- Better recognition of POTS symptoms by neurologists may lead to reduced diagnostic delays and improved care of neurological symptoms in POTS.