

An Early Assessment of the Association Between Pectoralis Muscle Measures and Frailty

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Background

- Pectoralis muscle measurements - powerful predictors of mortality on continuous flow LVAD support
- Association between pectoralis muscle measurements and frailty measurements not previously reported

Purpose

To determine the association between pectoralis muscle measurements and objective frailty assessments

Methods

Study design: Retrospective

- Single center, CF LVAD implantation database, between 2017 – 2018
- Inclusion:
Pre-operative Chest CTs an frailty assessments within 3 months of LVAD implantation (n=27)
- Unilateral pectoralis muscle mass and attenuation (approximated by mean Hounsfield units) measured on pre-operative chest CT scans using Slice-O-Matic software.
- Frailty was assessed with a 6 point Clinical Frailty Scale
- Multi- variable linear regression

Frailty Assessment



Results

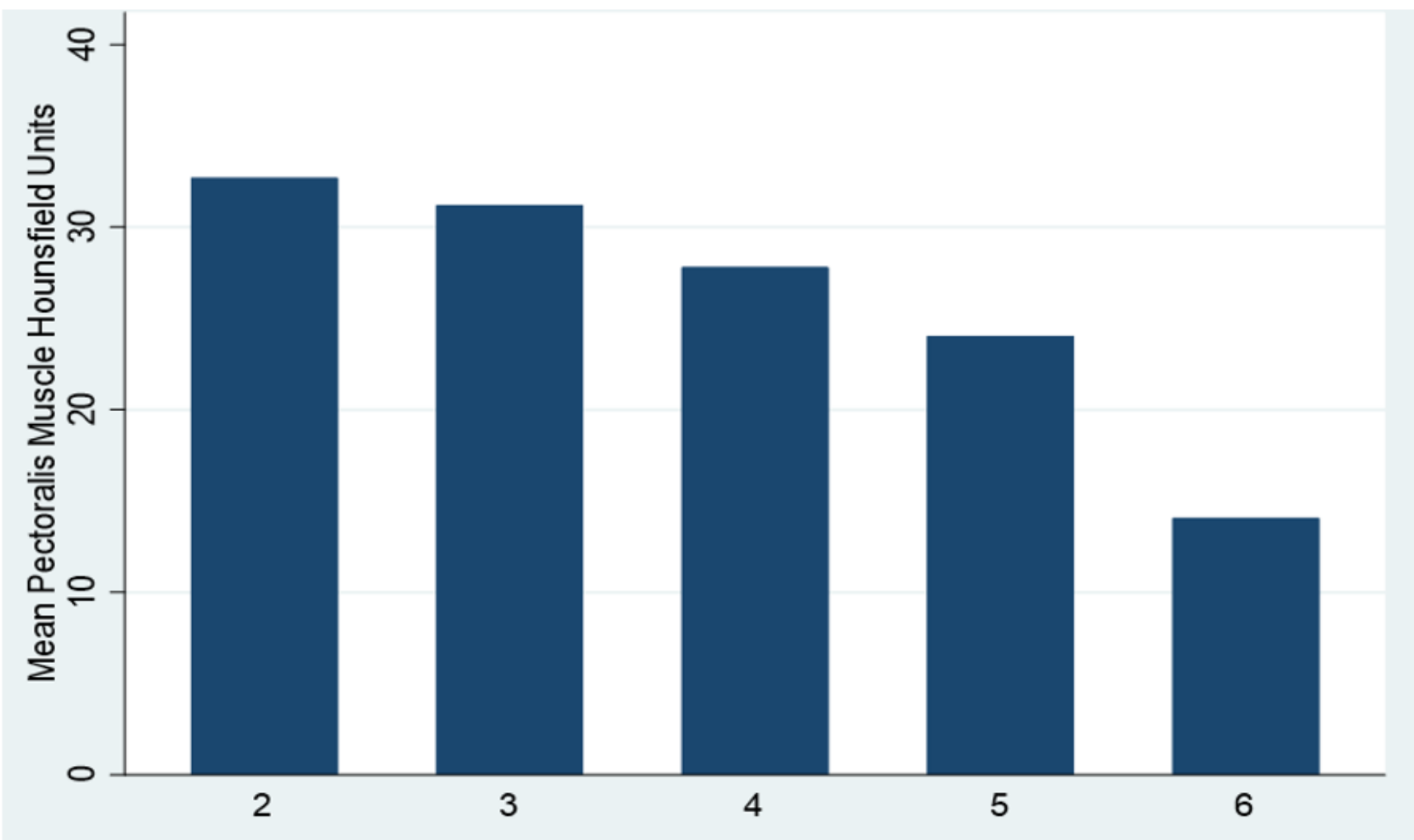
Pectoralis Tissue Attenuation

- Each frailty score increase was associated with an adjusted decrease of 3.9 in the mean pectoralis Hounsfield units (95% VI: -0.74 to -0.41, p = 0.03)
- Adjusted for age, sex, INTERMACS

Mean Pectoralis Mass

- An association between pectoralis muscle mass index and frailty scores was not detected (-0.61 95% CI = -1.4 to 0.2; p =0.15)

Mean Pectoralis Muscle Tissue Attenuation By Frailty Scores



Conclusion

- In this small sample of patients with simultaneous frailty and pectoralis muscle measurements, a significant association was detected between tissue attenuation and frailty.
- Further data needed to confirm this finding
- Further work needed to determine component of frailty can be reversed with LVAD support

DISCLOSURES :
I will not discuss off label use and/or investigational use of the following drugs/devices:
Ranjit John: Abbott : speakers bureau, research grants
Rebecca Cogswell : Abbott : speakers bureau. Medtronic : speakers bureau, advisory board, consultant