



AB156. SOH23ABS_038. The relationship between radiological paraspinal lumbar measures and clinical measures of sarcopenia in older patients with chronic lower back pain

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Background: Sarcopenia is postulated to be an influential factor in chronic low back pain. The aim of this study is to evaluate the relationship between traditional clinical measures of sarcopenia and novel radiographic methods which evaluate overall muscle status, such as adjusted psoas cross-sectional area (APCSA) and degree of fat infiltration (%FI) in paraspinal muscles, in patients with chronic low back pain.

Methods: Prospective study performed at our institution from 01/01/2019–01/04/2019. Inclusion criteria were patients ≥ 65 years old not requiring surgical intervention presenting to a low back pain assessment clinic.

Results: Twenty-five patients were identified (mean age: 73 years, 62% male). On spearman's analyses, %FI shared a significant relationship with hand grip strength ($r=-0.37$; $P=0.03$), chair rise ($r=0.38$; $P=0.03$), stair climb ($r=0.64$; $P<0.01$), and visual analogue scale scores ($r=-0.14$; $P=0.02$). Comparably, a statistically significant correlation was evident between APCSAs and %FI ($r=-0.40$; $P=0.02$) on analysis.

Conclusions: The results of our study demonstrate a

statistically significant relationship between APCSAs and %FI in the multifidus and erector spinae muscles. Further significant associations of reliability were depicted with traditional clinical measures of sarcopenia. Thus, %FI may be a supplemental indicator of the sarcopenic status of patients presenting with chronic low back pain.

Keywords: Sarcopenia; chronic low back pain; muscle cross-sectional area; muscle fat infiltration; magnetic resonance imaging

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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