

Paper Category:	Locomotive Syndrome
Paper Title: (Arial Font; 14 Pt Size)	Association between osteosarcopenia and freezing of gait in Parkinson's disease
Abstract Body: (Arial Font; 12Pt Size)	<ul style="list-style-type: none"> • Background • Objectives • Method • Results • Discussions and Conclusions
(Maximum word limit - 300 words)	
<p>Background: Osteosarcopenia is a syndrome defined by the combination of low bone mineral density (BMD) and poor muscle mass. Freezing of Gait (FOG) is an inability to initiate steps while walking and one of the most disturbing symptoms in Parkinson's disease (PD). FOG and osteosarcopenia are both a significant cause of falls and loss of quality of life (QoL) in PD. However, the association between osteosarcopenia and FOG has not been studied in PD before.</p> <p>Objectives: To study the association between osteosarcopenia and FOG in persons with PD (PwPD).</p> <p>Method: 139 PwPD underwent clinical assessments. BMD and lean muscle mass were measured with dual-energy X-ray absorptiometry (DEXA). Presence of FOG was determined using the Movement Disorder Society-Sponsored Revision of the Unified Parkinson's Disease Rating Scale (MDS-UPDRS) part III. Logistic stepwise regression was used to determine risk factors for FOG.</p> <p>Results: 24 (17.3%) of 139 PwPD had FOG (19/Males and 5/Females) Osteopenia/osteoporosis in the lumbar spine was found more in females ($p<0.001$). In contrast, sarcopenia and osteosarcopenia was found more in males ($p<0.001$). Total lean muscle ($p=0.017$), lean trunk muscle ($p=0.02$), lean leg muscle ($p=0.02$) mass as well as 1st to 3rd lumbar BMD ($p<0.05$) were found lower in males with FOG than no FOG group while no difference between groups were found in females. Logistic stepwise regression showed that lower lean leg muscle (OR:1.00; $p=0.025$) was a significant risk factor of FOG in males with PD.</p> <p>Discussions and conclusions: These observations suggest a gender specific association between lower lean muscle and BMD in PD. Osteosarcopenia was found more common in male PD freezers. Lower lean leg muscle was found to be a significant risk factor for FOG in males PD. Further studies should address the prognosis and treatment effect of lower lean muscle mass and BMD in PD with FOG.</p>	

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