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POSTER ABSTRACT

Impact of vision impairment on gait speed relating to eventual risk of developing sarcopenia

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Gait speed is one of the modality to diagnose sarcopenia. Sarcopenia and frailty are both public health priorities associated with adverse outcomes and possibly reversible with interventions. While most interventions have focussed on exercise and diet, there has not been any study to analyse association of vision impairment with gait speed. If vision impairment is not addressed and corrected, the elderly may not be able to participate fully in the interventions, and exercise may also increase fall risk. In addition, we also evaluated quality of life in well elderly Singaporeans. In this study, visual acuity (VA) was measured using the 3m Snellen's chart and gait speed was measured using the 10m walk test. EuroQol five dimensions (ED-5Q) was used to evaluate quality of life (QoL). A total of 86 community dwelling elderly were involved and 57 had visual impairment (6/18 vision or worse). Those with visual impairment had significantly slower gait speed (1.2 +/- 0.1m/s versus 1.4 +/- 0.1m/s), $p<0.05$. They also reported more problems in their daily activities, $p<0.05$, with no significant difference in other components of EQ-5D. It is evident from our study that vision impairment is associated with slower gait speed. Those with vision impairment also reported more problems in their usual activities. Most of them who were screened positive for visual impairment were unaware and up to 2/3 of vision impairment was correctable with pin hole. From our study, we are unable to identify if screening for vision impairment and correction would improve their gait speed which in turn could reduce sarcopenia and frailty. However, regular screening for vision impairment would help identify this problem before onset of any adverse effects associated with vision impairment including falls and problem with usual activities. Vision screening should be given priority in population screening to prevent sarcopenia and frailty.

Vision screening and intervention could be one of the many aspects of an overall integrated care approach towards healthy ageing, prevention of sarcopenia and frailty, alongside increased physical activity, nutritional advice and management of chronic disease.

Keywords: frailty; sarcopenia; vision impairment; gait speed