

## Poster 1

노인재활

게시일시 및 장소 : 10 월 18 일(금) 08:30-12:20 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 10:00-10:04 Room G(3F)

### P 1-1

#### **Correlation of lumbar multifidus with parameters of sagittal balance and sarcopenia in elderly women**

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##### **Purpose**

The purpose of this study was to investigate the correlation of lumbar multifidus muscle assessed by ultrasound with sagittal spinal alignment and sarcopenia related parameters in elderly women.

##### **Participants and methods**

23 community-dwelling elderly women were enrolled. Ultrasound images of the multifidus were obtained at L5 level to measure its muscle thickness (MT) and cross sectional area (CSA). The radiographic parameters of sagittal spinal alignment examined were lumbar lordosis, sagittal vertical axis (SVA), pelvic tilt, sacral slope, and pelvic incidence. Body composition was assessed by dual-energy X-ray absorptiometry (DXA) and bioelectrical impedance analysis (BIA). Muscle strength was measured by grip strength test and isometric knee extension strength test. Physical performance was measured by 10 meter walk test (10WT), Time up and go (TUG) test and Berg balance test (BBS). Spearman's correlation coefficients were used in the statistical analysis.

##### **Results**

MT of multifidus had significant correlations with SVA ( $r_s=-0.568$ ,  $P<0.01$ ) and BBS ( $r_s=0.511$ ,  $P<0.05$ ). CSA of multifidus had significant correlation with SVA ( $r_s=-0.586$ ,  $P<0.01$ ), 10WT ( $r_s=-0.463$ ,  $P<0.05$ ), BBS ( $r_s=0.441$ ,  $P<0.05$ ), TUG ( $r_s=-0.457$ ,  $P<0.05$ ). Muscle strength and lean body mass had no significant correlations with the ultrasound findings of multifidus.

##### **Conclusion**

Our results suggest that the morphology of lumbar multifidus measured by ultrasound has close associations with sagittal vertical axis and physical performances in old women.