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REPLY TO ATA AND COLLEAGUES' LETTER TO THE EDITOR

ADJUSTMENTS FOR ANTERIOR THIGH MUSCLE MEASUREMENTS IN SARCOPENIA

Dear Drs. Ata, Kara, and Özçakar,

Thank you for your letter (1) concerning our article entitled, «Association of muscle strength and gait speed with cross-sectional muscle area determined by mid-thigh computed tomography—a comparison with skeletal muscle mass measured by dual-energy X-ray absorptiometry» (2). We are pleased to know that you were interested in our work and have recognized the clinical relevance of measuring the quadriceps muscle mass for estimating the motor function.

Following your indications, we reviewed our data and statistical approach. We found that the methods we adopted for adjusting our analyses were different from those used by you and your colleagues (3). Unfortunately, it is very difficult for us to reperform our analyses in a short period of time due to the current situation in our country; currently, research is limited due to the COVID-19 pandemic.

However, compared to our results, we notice that in your study the anterior thigh muscle thickness, sonographic thigh adjustment ratio (STAR), skeletal muscle index assessed with ultrasound (SMIUS), and SMI assessed with bioelectrical impedance analysis (SMIBIA) showed weaker correlations with the hand grip strength. You also discovered marked differences between men and women for what concerns the correlation of these parameters with gait speed and knee extension strength; this also differs from our findings. It is possible these differences may have arisen from different recruitment strategies and possible selection biases.

While we have not found substantial sex differences in our data, we concur that sex may play a relevant role in the evaluation of muscle quality, in particular affecting the extent of intermuscular fat infiltration. Nevertheless, we wonder to what extent these differences are clinically meaningful.

We have data on quadriceps imaging (including the assessment of the computed tomography attenuation values) that we tried to use for more detailed analyses, but only part of the sample of our study had them available (2). We indeed intend to compare the data with the SMI or appendicular muscle mass data in future publications and cannot disclose them here.

Again, we thank you for your observations and comments on our article.

Conflict of interest: None declared by the Author.

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