

## 研究業績 英文表記

和文	
表題	筋弾性率は腓腹筋筋腹の他動的性質を反映する再現性の高い指標である
著者名	中村雅俊 <sup>1)</sup> , 池添冬芽 <sup>2)</sup> , 梅垣雄心 <sup>2)</sup> , 小林拓也 <sup>2)</sup> , 西下智 <sup>2)</sup> , 市橋則明 <sup>2)</sup>
所属	1) 新潟医療福祉大学 運動機能医科学研究 2) 京都大学大学院医学研究科人間健康科学系専攻
英文	
Title	Shear elastic modulus is a reproducible index reflecting the passive mechanical properties of medial gastrocnemius muscle belly
Author	Nakamura M <sup>1)</sup> , Ikezoe T <sup>2)</sup> , Umegaki H <sup>2)</sup> , Kobayashi T <sup>2)</sup> , Nishishita S <sup>2)</sup> , Ichihashi N <sup>2)</sup>
Affiliation	1) Institute for Human Movement and Medical Sciences, Niigata University of Health and Welfare 2) Human Health Sciences, Graduate School of Medicine, Kyoto University
Abstract	<p><b>Background:</b> Passive mechanical properties are important in muscle function because they are related to the muscle extensibility. Recently, the assessment of muscle shear elastic modulus using shear-wave elastographic (SWE) imaging was developed. However, reliability and validity of shear elastic modulus measurements during passive stretching remain undefined.</p> <p><b>Purpose:</b> To investigate the reproducibility and validity of the shear elastic modulus measured by SWE imaging during passive stretching.</p> <p><b>Material and methods:</b> Ten healthy men volunteered for this study. The shear elastic modulus of medial gastrocnemius (MG) muscle belly was measured using ultrasonic SWE imaging during passive dorsiflexion. To assess the intra-session and inter-day reliabilities, the protocol was performed twice by the same investigator with a 5-min rest period between measurement sessions and twice on two different days by the same investigator with a 1-2-week interval between the two sessions. To assess the inter-investigator reliability, the protocol was performed on the same day by two investigators with a 5-min rest between measurement sessions. In addition, B-mode ultrasonography was used to determine the displacement of myotendinous junction (MTJ) of MG during passive ankle dorsiflexion.</p> <p><b>Results:</b> The intra-session, inter-day, and inter-investigator reliabilities of the method was confirmed on the basis of acceptably low coefficient of variations and substantially high intraclass correlation coefficients. In addition, a significant correlation was found between MTJ displacement and shear elastic modulus.</p> <p><b>Conclusion:</b> These results suggested that shear elastic modulus measured using SWE imaging is a reproducible index reflecting the passive mechanical properties.</p>
keyword	Shear-wave elastographic imaging; myotendinous junction displacement; shear elastic modulus.

※本データの英文表記は実際の論文上の表記とは異なります。