Letter to the Editor

The role of the iliotibial band cross-sectional area as a morphological parameter of the iliotibial band friction syndrome: a retrospective pilot study

Wei-Ting Wu¹ and Ke-Vin Chang^{1,2}

¹Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, BeiHu Branch and National Taiwan University College of Medicine, Taipei, Taiwan

²Center for Regional Anesthesia and Pain Medicine, Wang-Fang Hospital, Taipei, Medical University, Taipei, Taiwan

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Correspondence

Ke-Vin Chang

Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Bei-Hu Branch and National Taiwan University College of Medicine, No. 87, Neijiang St., Wanhua Dist., Taipei City 10845, Taiwan

Tel: +886-2-23717101, Fax: +886-2-2358363, E-mail: kvchang011@gmail.com

TO THE EDITOR

We would like to congratulate Dr. Park and the team for their recently published article titled “The role of the iliotibial band cross-sectional area as a morphological parameter of the iliotibial band friction syndrome: a retrospective pilot study” [1]. In the aforementioned study, they examined whether the cross-sectional area of the iliotibial band (ITB) was superior to its thickness for diagnosis of ITB friction syndrome. They demonstrated that the ITB cross-sectional area under magnetic resonance imaging (MRI) had better diagnostic accuracy than its thickness. We would like to add some comments on this clinically important study.

ITB friction syndrome is presented with discomfort over the anterolateral knee following repetitive friction between the ITB and distal femoral condyle [2]. Local tenderness at the distal attachment of the ITB might be identified on physical examination. A previous review reported that

the common MRI findings encompassed thickening of the ITB with increased signal intensity in short tau inversion recovery imaging and peri-ligamentous fluid accumulation [2]. The limitations of MRI include its considerable expense, time spent during the examination, and limited device accessibility.

In our opinion, ultrasound has more advantages than MRI in investigation of ITB friction syndrome. Using high-resolution ultrasound, the ITB pathology can be better delineated than with MRI. For example, in ITB enthesitis, the attachment of the ITB may reveal hypoechoic (Fig. 1A), thickened and hypervascular (Fig. 1B) features with presence of traction spurs (Fig. 1C). In ITB tears (Fig. 1D), a hypoechoic gap may be visualized in the middle of the tendon. Because the syndrome develops after repetitive friction between the ITB and underlying lateral femoral condyle, the investigators may identify distension and hypervascularity of the nearby bursa (Fig. 2A, B). Furthermore, ultrasound allows dynamic assessment, which is

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Fig. 1. Ultrasound imaging of the iliotibial band shows hypoechoic changes (white arrowhead) (A), intra-tendinous hypervascularity (B), spurs (black arrowhead) formation of the Gerdy's tubercle (C), and partial tear (arrow) (D).

Fig. 2. Bursitis (asterisk) of the iliotibial band (arrowheads) can be delineated in the panoramic view of ultrasound imaging (A) with peripheral hypervascularity (B). The thickness (double-headed arrow) (C) and cross-sectional area (yellow dashed line) (D) of the iliotibial band can be easily measured by using ultrasound.

helpful for recognizing the abnormal gliding pattern of the ITB during knee flexion and extension. Like MRI, the thickness and cross-sectional area of the ITB can be measured by using ultrasound imaging (Fig. 2C, D). Considering the aforementioned benefits, we suggest ultrasound should be prioritized as the first line imaging tool for assessment of ITB friction syndrome.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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ORCID

Wei-Ting Wu, <https://orcid.org/0000-0001-7511-9629>

Ke-Vin Chang, <https://orcid.org/0000-0002-7558-5651>

REFERENCES

1. Park J, Cho HR, Kang KN, Choi KW, Choi YS, Jeong HW, et al. The role of the iliotibial band cross-sectional area as a morphological parameter of the iliotibial band friction syndrome: a retrospective pilot study. *Korean J Pain* 2021; 34: 229-33.
2. Flato R, Passanante GJ, Skalski MR, Patel DB, White EA, Matcuk GR Jr. The iliotibial tract: imaging, anatomy, injuries, and other pathology. *Skeletal Radiol* 2017; 46: 605-22.