## Comment on: Clinics in diagnostic imaging (205)

Singapore Med J 2020; 61(6): 339-340 https://doi.org/10.11622/smedj.2020090

Dear Sir,

I read Ong et al's article on Baxter's neuropathy, "Clinics in diagnostic imaging (205)", with interest. (1) It is informative and provides a good summary of the various pain generators in a person presenting with heel pain.

Although magnetic resonance (MR) imaging plays an important role in the evaluation of heel pain, we should not forget the humble ultrasonography. Ultrasonography, which is widely available and cheaper relative to MR imaging, should be considered as a first-line imaging modality. The Baxter nerve can be visualised using high-frequency linear transducers. This has been validated in cadaveric models using cart-based and portable ultrasonography systems.<sup>(2)</sup> In cases where direct visualisation of the Baxter's nerve is challenging, the abductor digiti minimi can be evaluated for denervation changes characterised by isolated atrophy and echogenic changes of the muscle. This can be confirmed by comparison of the contralateral foot.

Reports have been published on clinical indications for musculoskeletal ultrasonography and the evaluation of gout. (3,4) Ultrasonography features of monosodium urate crystal deposition had high specificity and positive predictive value compared to joint aspiration. Ultrasonography of the plantar fascia can be easily performed to support the clinical diagnosis of plantar fasciitis. Plantar fibromatosis can also be characterised by the presence of hypoechoeic nodules within the plantar fascia on ultrasonography. In tarsal tunnel syndrome, ultrasonography can be used to evaluate both anatomical structures that may contribute to entrapment of the tibial nerve and morphological changes to the nerve. (5) Apart from imaging modalities, it is also important to consider electrodiagnostic testing for selected neuromuscular conditions.

Yours sincerely,

Tze Chao Wee

Department of Rehabilitation Medicine, Changi General Hospital, Singapore. wee.tze.chao@singhealth.com.sg

## References

- 1. Ong CYG, Chin TY. Clinics in diagnostic imaging (205). Singapore Med J 2020; 61:176-80.
- 2. Presley JC, Maida E, Pawlina W, et al. Sonographic visualization of the first branch of the lateral plantar nerve (Baxter nerve): technique and validation using perineural injections in a cadaveric model. J Ultrasound Med 2013; 32:1643-52.
- 3. Ogdie A, Taylor WJ, Neogi T, et al. Performance of ultrasound in the diagnosis of gout in a multicenter study: comparison with monosodium urate monohydrate crystal analysis as the gold standard. Arthritis Rheumatol 2017; 69:429-38.
- 4. Sconfienza LM, Albano D, Allen G, et al. Clinical indications for musculoskeletal ultrasound updated in 2017 by European Society of Musculoskeletal Radiology (ESSR) consensus. Eur Radiol 2018; 28:5338-51.
- 5. Walker FO, Cartwright MS, Alter KE, et al. Indications for neuromuscular ultrasound: expert opinion and review of the literature. Clin Neurophysiol 2018; 129:2658-79.