

## Significance of color doppler imaging in leprosy

Sir,

I read with great interest the article titled, "Role of ultrasound in evaluation of peripheral nerves" by Lawande *et al.* in the July–September 2014 issue of the *Indian Journal of Radiology and Imaging*, Volume 24, Issue 3.<sup>[1]</sup> The article is informative and intelligently written with excellent depiction of pathologies on ultrasound. However, I would like to make the following contributions.

In the section on "Infective lesions" in the manuscript, the authors mention that there is presence of increased peri-, endoneural vascularity on Doppler in leprosy affected nerves.<sup>[1]</sup> This, however, is not in accordance with the prevailing body of literature.<sup>[2,3]</sup> In the study conducted by Jain *et al.*<sup>[2]</sup> and Martinoli *et al.*,<sup>[3]</sup> none of the patients with leprosy had an increase in neural vascularity. Increased vascularity in peri-, endoneurium, unlike nerve enlargement and architectural distortion, is both a marker of acute neuritis as well as a differentiating factor between leprosy and leprosy-associated lepra reactions (an immunologically mediated inflammatory state during leprosy).<sup>[2,3]</sup> The differentiation is critical on account of two reasons; first, increased vascularity

suggests lepra reactions, identification of which should prompt immediate antireaction therapy.<sup>[4]</sup> Failure to institute immediate treatment may result in irreversible nerve damage; sometimes in as less as 24 hours within the onset of lepra reactions.<sup>[4]</sup> Second, lepra reactions are characterized by recurrence.<sup>[2,4]</sup> Hence, ultrasound depiction of neural vascularity may help guide the duration of antireaction therapy.<sup>[2]</sup> Recurrence is postulated to occur because the treatment is discontinued on clinical betterment without ultrasound evidence of nondetection of vascularity on Doppler.<sup>[2]</sup> Lepra reactions are potentially treatable, fairly common, and are a cause of significant morbidity.<sup>[4]</sup>

To conclude, an increased vascularity on Doppler interrogation helps differentiate leprosy from lepra reactions and is a marker of acute neuritis.

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### Conflicts of interest

There are no conflicts of interest.

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