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. 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. This, however, is not in accordance with the prevailing body of literature. In the study conducted by Jain et al. and Martinoli et al., 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). The differentiation is critical on account of two reasons; first, increased vascularity suggests lepra reactions, identification of which should prompt immediate antireaction therapy. Failure to institute immediate treatment may result in irreversible nerve damage; sometimes in as less as 24 hours within the onset of lepra reactions. Second, lepra reactions are characterized by recurrence. Hence, ultrasound depiction of neural vascularity may help guide the duration of antireaction therapy. Recurrence is postulated to occur because the treatment is discontinued on clinical betterment without ultrasound evidence of nondetection of vascularity on Doppler. Lepra reactions are potentially treatable, fairly common, and are a cause of significant morbidity.

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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Nil.

Conflicts of interest
There are no conflicts of interest.
Beyond warfarin: The advent of new oral anticoagulants

Sir,

We congratulate the authors for their well-drafted article published in the 2015 November issue of the Indian Journal of Radiology and Imaging.

We read the article entitled “Beyond warfarin: The advent of new oral anticoagulants” with interest and would like to humbly highlight few of our observations and comments from our experience.

1. Majority of non-vitamin K antagonist (VKA) oral anticoagulants (NOACs) have shown their efficacy over Vitamin K anticoagulants, but with few major limitations including a lack of antidote to reverse hemorrhage and overdose in emergent situations. However, the expedited approval of a new reversal agent for dabigatran by the Food and Drug Administration in October 2015 deserves a special mention in this context. Praxibind (idarucizumab) is a monoclonal antibody that has been approved for the reversal of anticoagulant effects of dabigatran during emergent surgical procedures and in life-threatening or uncontrolled bleeding situations. Similarly, andexanet alfa (a recombinant form of Factor Xa) that reverses the anticoagulant effect of Factor Xa inhibitors has been studied in Phase I and II clinical trials, and is currently being investigated in Phase III trials.

2. The authors mentioned that there is twice the risk of major gastrointestinal (GI) bleeding with both apixaban and dabigatran. The RE-LY trial showed similar rates of major hemorrhage (especially GI bleeding) with 150 mg dose of dabigatran in comparison to warfarin.

3. We beg to defer for apixaban as we tend to prefer it in our practice as an initial choice of anticoagulant for patients with a history of GI bleeding. The ARISTOTLE study showed reduced bleeding rates according to Global Use of Strategies to Open Occluded Coronary Arteries (GUSTO) criteria for severe bleeding and thrombolysis in myocardial infarction (TIMI) criteria for major bleeding.

4. Edoxaban is the most recently approved (January 2015 in the United States and June 2015 in Europe) Factor Xa inhibitor that needs special mention among the list of novel anticoagulants mentioned in this article. It has the best time to peak effect (1–2 h) and provides option for once-daily dosing. ENGAGE AF-TIMI 48 trial compared its efficacy with warfarin in patients with atrial fibrillation. It was found to be non-inferior to warfarin for stroke or systemic embolism risk reduction and with significantly reduced risk of any major bleeding. The risk of all-cause mortality and major bleeding of edoxaban versus warfarin was significantly reduced with edoxaban 30 mg dose, but was similar or increased with edoxaban 60 mg dose. Of note, the study showed that patients with creatinine clearance of >95 ml/min had higher rates of ischemic stroke as compared to warfarin, likely due to its 50% renal excretion, resulting in black box warning of edoxaban in the United States.

4. One of the major advantages of NOACs as compared to warfarin has been better food-drug interaction and minimal drug-drug interactions. As described by the authors, dabigatran etexilate is the prodrug that is a substrate of P-glycoprotein (P-gp) efflux transporter, whereas rivaroxaban is metabolized by cytochrome P450 enzymes and acts as a substrate of P-gp transporters. However, we beg to defer with the authors regarding the drug interactions for apixaban because it acts...