The Journal of Laryngology & Otology (2010), ***124***, *352*.
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doi:10.1017/S0022215109992568

Letters to the Editors

Diffusion-weighted magnetic resonance imaging: its uses in otolaryngology

J Laryngol Otol 2009;**123**:1199–203

Dear Sirs

We read the above article[1] with interest. It provides a good overview of the current areas of research interest regarding diffusion-weighted imaging in ENT. The authors have alluded to the potential of diffusion-weighted imaging to differentiate between malignant and benign lesions. This technology may enable a radical overhaul of the pre-operative evaluation of patients with head and neck cancer.

We would like to highlight some exciting new research utilising diffusion-weighted imaging in the thyroid. Bozgeyik *et al.*[2] evaluated 93 thyroid nodules using diffusion-weighted imaging. They found malignant nodules to have a significantly lower Apparent Diffusion Coefficient (ADC) value than benign nodules. Schueller-Weidekamm *et al.*[3] found diffusion-weighted imaging to have a high sensitivity and a high specificity when differentiating between malignant and benign 'cold' thyroid nodules. An obvious clinical use of such imaging would be to differentiate between benign and malignant follicular thyroid nodules. This would remove the need for a diagnostic lobectomy followed by a completion thyroidectomy and central compartment dissection. Our department is currently investigating the usefulness of diffusion-weighted imaging to evaluate indeterminate (Thy 3) lesions.

We agree that radiologists and otolaryngologists need more experience with diffusion-weighted imaging, prior to routine use. Further research, with greater sample numbers, is needed.

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Authors' reply

Dear Sirs

We thank Nagala *et al.* for their letter and their interest in our paper.

A quick scan through the PubMed database shows that, since our literature review was undertaken in February 2008, at least a further 25 papers have been published on diffusion-weighted magnetic resonance imaging associated with otolaryngology applications. These papers include potential new applications, such as differentiating between benign and malignant thyroid disease[1,2] (as Nagala *et al.* describe) and identifying an intraorbital abscess in patients with orbital cellulitis when contrast media is contraindicated.[3] Many of the other papers expand upon the otolaryngology applications already discussed in our review paper.[4]

This plethora of published work reflects the high level of current interest in this imaging technique. It also re-emphasises otolaryngologists' need to have a greater understanding of diffusion-weighted magnetic resonance imaging and its potential role in the pre- and post-operative assessment of otolaryngology patients.

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First published online 6 January 2010.

https://doi.org/10.1017/S0022215109992568 Published online by Cambridge University Press