been described by other authors as the 'reversed halo sign'.

Zompatori *et al*[2] first used the term 'atoll sign' in 1999 to describe the imaging finding of a focal rounded area of ground-glass opacity surrounded by a more or less complete ring of consolidation.[3] Although the abnormality frequently resembles an atoll, the Fleischner Society[4] prefers the term 'reversed halo sign', as initially proposed by Kim *et al*.[3] Although both terms adequately describe the imaging characteristics of the lesion, the term 'reversed halo sign' should be used to avoid confusion and to standardise the keywords used in literature searches. A review of the US National Institutes of Health digital archive of biomedical and life sciences journal literature (PubMed) found only three occurrences of the term 'atoll sign', whereas the term 'reversed halo sign' was found in 22 articles. The uniform use of descriptors is critical when reporting on lesions, to avoid the overlooking of otherwise important articles, such as the one presented by Walsh and Robertson, in literature reviews.

Edson Marchiori,[1] Klaus L Irion,[2] Gláucia Zanetti,[1] Bruno Hochhegger[1]

[1]Rio de Janeiro Federal University, Rio de Janeiro, Brazil; [2]Liverpool Heart and Chest Hospital, NHS Trust, Liverpool, UK

Correspondence to Edson Marchiori, Rio de Janeiro Federal University, Rio de Janeiro, Brazil, Rua Thomaz Cameron, 438. Valparaiso, Petrópolis 25.685.120, Brazil; edmarchiori@gmail.com

Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 20 November 2010
Published Online First 13 January 2011

Thorax 2011;**66**:1009–1010.
doi:10.1136/thx.2010.155481

REFERENCES

1. **Walsh SL,** Roberton BJ. Images in thorax. The atoll sign. *Thorax* 2010;**65**:1029–30.
2. **Zompatori M,** Poletti V, Battista G, *et al*. Bronchiolitis obliterans with organizing pneumonia (BOOP), presenting as a ring-shaped opacity at HRCT (the atoll sign). A case report. *Radiol Med* 1999;**97**:308–10.
3. **Kim SJ,** Lee KS, Ryu YH, *et al*. Reversed halo sign on high-resolution CT of cryptogenic organizing pneumonia: diagnostic implications. *AJR Am J Roentgenol* 2003;**180**:1251–4.
4. **Hansell DM,** Bankier AA, MacMahon H, *et al*. Fleischner Society: glossary of terms for thoracic imaging. *Radiology* 2008;**246**:697–722.

UK immigrant screening is inversely related to regional tuberculosis burden

We read with interest the editorial by Moore-Gillon *et al*,[1] which advocated a more comprehensive system of immigrant screening/treatment for latent tuberculosis infection (LTBI) as a means of augmenting tuberculosis (TB) control in the UK.

A recent comprehensive, national evaluation of local TB services/primary care organisations(PCOs) in the UK, which provides key insights into UK screening practices,[2] found that the existing National Institute for Health and Clinical Excellence (NICE) guidance from 2006 was often not followed. While all TB services would follow-up new entrants referred to them with suspected active TB, only just over half attempt to screen migrants with normal chest x-rays for LTBI; more pertinently it was those local TB services/PCOs that served the highest TB burden areas that were four times less likely to undertake LTBI screening. There was also deviation from NICE guidance in the LTBI screening methods employed (tuberculin skin test vs interferon gamma release assays). Therefore, there is a need for effective national coordination if a new strategy is to be effective in controlling TB.

Furthermore, while we agree with Moore-Gillon *et al* on the need to change policy, we believe that there needs to be an expanded evidence base to determine which specific immigrants we should screen, where we should screen them and what tools we should use as well as a change in attitude about the importance of tackling LTBI in migrants to drive down the UK's TB burden. Crucially, in an increasingly cost-constrained environment, comprehensive health-economic analyses will be required to determine which changes in policy are justified.

Manish Pareek,[1,2] Ibrahim Abubakar,[3,4] Peter J White,[5,6] Geoffrey P Garnett,[6] Ajit Lalvani[2]

[1]Department of Infectious Disease Epidemiology, Imperial College London, London, UK; [2]Tuberculosis Research Unit, Department of Respiratory Medicine, National Heart and Lung Institute, Imperial College London, London, UK; [3]Tuberculosis Section, Centre for Infections, Health Protection Agency, London, UK; [4]School of Medicine, Health Policy and Practice, University of East Anglia, Norwich, UK; [5]Modelling and Economics Unit, Centre for Infections, Health Protection Agency, London, UK; [6]MRC Centre for Outbreak Analysis and Modelling, Department of Infectious Disease Epidemiology, Imperial College London, London, UK

Correspondence to Professor Ajit Lalvani, Chair of Infectious Diseases, Director, Tuberculosis Research Unit, Department of Respiratory Medicine, National Heart and Lung Institute, Imperial College London, Norfolk Place, London W2 1PG, UK; a.lalvani@imperial.ac.uk

Competing interests AL is inventor for patents underpinning T cell-based diagnosis. The IFN-gamma ESAT-6/CFP-10 ELISpot was commercialised by an Oxford University spin-out company (T.SPOT-*TB*, Oxford Immunotec Ltd, Abingdon, UK) in which Oxford University and AJ have minority shares of equity and royalty entitlements.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 2 December 2010
Published Online First 16 February 2011

Thorax 2011;**66**:1010.
doi:10.1136/thx.2010.152280

REFERENCES

1. **Moore-Gillon J,** Davies PD, Ormerod LP. Rethinking TB screening: politics, practicalities and the press. *Thorax* 2010;**65**:663–5.
2. **Pareek M,** Abubakar I, White PJ, *et al*. TB screening of migrants to low TB burden nations: insights from evaluation of UK practice. *Eur Respir J* 2011;**37**:1175–82.

Rethinking TB screening: politics, practicalities and the press

In support of the urgent need for improvements to new entrant TB screening,[1] which must encourage the diagnosis of both active and latent forms of TB, we would like to offer two audits of new entrant screening from an area with a low TB incidence (4.3/100 000).[2]

In 2006, we audited 29 new entrant referrals, all of whom had a chest x-ray reported by the Port Health Control Unit at Heathrow Airport as 'abnormal' (predominantly hilar calcification).[3] Of the 29 referrals, 22 attended for local screening. Each received a tuberculin skin test (TST) and a repeat chest x-ray that was reported by a respiratory consultant and then by a consultant radiologist. Sixteen (73%) were subsequently reported as having a normal chest x-ray (and negative TST).

While the practical difficulties of screening large numbers of new entrants at the point of entry (in a short space of time) are high, inaccurate reporting of chest x-rays results in wasted resource and a financial burden that is passed on to both the new entrant and local TB services through the need for repeated screening.

Further, the NICE new entrant TB screening guidelines (2006)[4] allow certain groups of new entrants to be screened solely via chest x-ray (CXR), limiting a TST to all those aged 0–15 and those aged 16–34 from sub-Saharan Africa. As the authors highlight, this potentially under-diagnoses the latent TB infection (LTBI).

To investigate this, we undertook a retrospective case-note analysis of 547 new entrants over a 44-month period (2006–2009).[5] All patients were invited for screening using a locally adapted 'Dorset' algorithm that combined CXR and TST unless contraindicated. Each case was then re-evaluated using the NICE algorithm. This allowed direct comparison of each algorithm's ability to detect LTBI. Results: 397 (72%) new entrants attended screening, 41 (10.3%) patients were diagnosed with LTBI (all HIV negative). Comparison of the algorithms showed that only 27/41 cases (65.8 %) were detected when using the NICE algorithm. This represents a 34.1% shortfall in LTBI detection when following NICE guidance (95% CI 19.63% to 48.67%, 99% CI 15.04% to 53.26%).

The results from these two audits lend strength to the authors' argument that over-reliance on CXR alone is inadequate;