

the UK may not see a single case of tuberculosis in several years.

Nevertheless, given the consequence of pulmonary tuberculosis to the individual and society, it is appropriate for clinicians and general practitioners to ensure that tuberculosis is among the differential diagnoses in patients with relevant symptoms and signs and to investigate for tuberculosis fairly promptly. Every attempt should be made to obtain a microbiological diagnosis. As Jolobe points out, it is also true that patients with smear-negative culture-positive tuberculosis can transmit infection, although less so than those who have a positive smear from direct sputum examination.⁴ Exclusive extrapulmonary tuberculosis is, however, not infectious and the suggestion to the contrary is erroneous.

In view of the current rise in the incidence of tuberculosis, without high case detection and the adequate treatment of cases, tuberculosis may not remain an uncommon illness in the UK. Vigilance for both

pulmonary and extrapulmonary tuberculosis is required.

Ibrahim Abubakar, Michelle E Kruijshaar

Tuberculosis Section, Health Protection Agency Centre for Infections, London, UK

Correspondence to Ibrahim Abubakar, Tuberculosis Section, Health Protection Agency, 61 Colindale Avenue, Colindale, London NW9 5EQ, UK; ibrahim.abubakar@hpa.org.uk

Competing interests None.

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

Accepted 24 August 2010
Published Online First 1 October 2010

Thorax 2010;**65**:1117–1118.
doi:10.1136/thx.2010.149708

REFERENCES

1. **Kruijshaar ME**, Abubakar I. Increase in extrapulmonary tuberculosis in England and Wales 1999–2006. *Thorax* 2009;**64**:1090–5.

2. **French CE**, Kruijshaar ME, Jones JA, *et al*. The influence of socio-economic deprivation on tuberculosis treatment delays in England, 2000–2005. *Epidemiol Infect* 2009;**137**:591–6.
3. **Abubakar I**, Crofts JP, Gelb D, *et al*. Investigating urban-rural disparities in tuberculosis treatment outcome in England and Wales. *Epidemiol Infect* 2008;**136**:122–7.
4. **Behr MA**, Warren SA, Salamon H, *et al*. Transmission of *Mycobacterium tuberculosis* from patients smear-negative for acid-fast bacilli. *Lancet* 1999;**353**:444–9.

CORRECTION

doi:10.1136/thx.2005.040444

The paper entitled “Anticholinergics in the treatment of children and adults with acute asthma: a systematic review with meta-analysis” by G J Rodrigo and J A Castro-Rodriguez (*Thorax* 2005;**60**:740–746. doi:10.1136/thx.2005.047803) was published twice online first, on one of those occasions with an incorrect DOI (doi:10.1136/thx.2005.040444).

Table 1 Statistical analysis of the case-control study

	Co-dominant			Dominant (AA/AG v GG)				Recessive (AA v AG/GG)				
	AA	AG	GG	P value	AA/AG	GG	OR (95% CI)	P value	AA	GG/AG	OR (95% CI)	P value
Controls	84 (41%)	82 (41%)	36 (18%)		166	36			84	116		
Cases	99 (47%)	93 (44%)	18 (9%)	0.021	192	18	2.31 (1.27 to 4.23)	0.006	99	111	1.25 (0.85 to 1.85)	0.276
Acute	30 (42%)	32 (45%)	9 (13%)	0.576	62	9	1.49 (0.68 to 3.28)	0.358	30	41	0.99 (0.57 to 1.71)	0.97
Chronic	59 (52%)	47 (41%)	8 (7%)	0.021	106	8	2.87 (1.29 to 6.42)	0.007	59	55	0.67 (0.43 to 1.07)	0.095

Significant associations are shown in bold.

(95% CI 1.29 to 6.42), $p < 0.0069$; table 1) with a PAR for AA homozygotes and AG heterozygotes of 50%.

This study underlines the importance of the association of *BTNL2* rs2076530 variant with the susceptibility to develop sarcoidosis in a German population. Furthermore, our data suggest that susceptibility is preferentially towards the chronic form of the disease.

Y Li, B Wollnik

Center for Molecular Medicine Cologne (CMMC) and Institute of Human Genetics, University of Cologne, Germany

S Pabst, M Lennarz

Medizinische Universitäts-Poliklinik, Rheinische-Friedrich-Wilhelms Universität Bonn, Germany

E Rohmann

Center for Molecular Medicine Cologne (CMMC) and Institute of Human Genetics, University of Cologne, Germany

A Gillissen

Städtisches Klinikum St Georg, Leipzig, Germany

H Vetter, C Grohé

Medizinische Universitäts-Poliklinik, Rheinische-Friedrich-Wilhelms Universität Bonn, Germany

Correspondence to: Professor Dr med C Grohé, Medizinische Universitäts-Poliklinik, Wilhelmstr, 35-37, D-53111 Bonn, Germany; c.grohe@uni-bonn.de

doi: 10.1136/thx.2005.056564

Competing interests: none.

References

- 1 Newman LS, Rose CS, Maier LA. Sarcoidosis. *N Engl J Med* 1997;**336**:1224-34.
- 2 Rybicki BA, Iannuzzi MC, Frederick MM, et al. ACCESS Research Group. Familial aggregation of sarcoidosis. A case-control etiologic study of sarcoidosis (ACCESS). *Am J Respir Crit Care Med* 2001;**164**:2085-91.
- 3 Valentonyte R, Hampe J, Huse K, et al. Sarcoidosis is associated with a truncating splice site mutation in *BTNL2*. *Nat Genet* 2005;**37**:357-64.
- 4 Rybicki BA, Walewski JL, Maliarik MJ, et al. ACCESS Research Group. The *BTNL2* gene and sarcoidosis susceptibility in African Americans and Whites. *Am J Hum Genet* 2005;**77**:491-9.
- 5 Costabel U, Hunninghake GW. Statement on sarcoidosis. Joint Statement of the American Thoracic Society (ATS), the European Respiratory Society (ERS) and the World Association of Sarcoidosis and Other Granulomatous Disorders (WASOG) adopted by the ATS Board of Directors and by the ERS Executive Committee. *Am J Respir Crit Care Med* 1999;**160**:736-55.

Asthma and allergies in Germany

We read the study by Zöllner and colleagues published recently in *Thorax* about the levelling off of asthma and allergies among

children in Germany between 1992 and 2001.¹ We have published a study looking at the same issue and using a similar protocol (ISAAC)² to assess the symptoms, diagnosis, and severity of asthma and allergies in more than 15 000 children aged 6-7 and 13-14 years between 1995 and 2000 in Münster, Germany.³ We found a tendency towards an increase in current symptoms of asthma and allergies in both age groups, but more so among girls.³

Indices of diagnosis either remained the same or increased in parallel with the increase in symptoms, arguing against a change in diagnostic behaviour as an explanation for our results. Indices of severity also showed a homogenous increase in the 5 year study period, pointing towards an increase in the overall burden of asthma and allergies within the society.³

Regrettably, these results, coming from Germany, were not considered in either the discussion of Zöllner's report or in the affirmative title that no increase in asthma and allergies occurred in Germany in the 1990s. Even more regrettable is the fact that when our study was alluded to in the discussion and conclusion of the paper by Zöllner *et al*, it was cited—contrary to our results—as one of the studies showing a decrease or levelling off of asthma and allergies among children.¹

W Maziak, U Keil

Institute of Epidemiology and Social Medicine, University Clinic of Muenster, Muenster, Germany; maziak@net.sy

References

- 1 Zöllner IK, Weiland SK, Piechotowski I, et al. No increase in the prevalence of asthma, allergies, and atopic sensitisation among children in Germany: 1992-2001. *Thorax* 2005;**60**:545-8.
- 2 Asher MI, Keil U, Anderson HR, et al. International Study of Asthma and Allergies in Childhood (ISAAC): rationale and methods. *Eur Respir J* 1995;**8**:483-91.
- 3 Maziak W, Behrens T, Brasky TM, et al. Are asthma and allergies in children and adolescents increasing? Results from ISAAC phase I and phase III surveys in Münster, Germany. *Allergy* 2003;**58**:572-9.

Authors' reply

Unfortunately, the paper by Maziak *et al* published in *Allergy* was listed as reference number 18 instead of number 21 in the reference list of our paper.² We apologise for any misunderstanding which may have arisen from this error. A correction is published below.

In the paper by Maziak *et al*¹ the prevalences in 1994/5 and 1999/2000 are compared. As we know from our own studies, trend analyses based on (only) two time points may be difficult and should be interpreted with caution. Indeed,

in their investigation Maziak *et al* did not find a significant increase in the lifetime prevalence of asthma and hay fever, except in one subgroup. The effect found in 13-14 year old girls could also be due to a former underdiagnosis of asthma in girls, as discussed in their paper.

Since our results are based on six cross sectional surveys, we consider the title and the conclusion—that we did not see an increase in asthma and allergies from 1992 to 2001—to be appropriate.

I Zöllner

Department of Epidemiology and Health Reporting, Baden-Wuerttemberg State Health Office, Wiederholdstr 15, D-70174 Stuttgart, Germany; Iris.Zoellner@rps.bwl.de

Reference

- 1 Maziak W, Behrens T, Brasky TM, et al. Are asthma and allergies in children and adolescents increasing? Results from ISAAC phase I and phase III surveys in Münster, Germany. *Allergy* 2003;**58**:572-9.
- 2 Zöllner IK, Weiland SK, Piechotowski, et al. No increase in the prevalence of asthma allergies, and atopic sensitisation among children in Germany: 1992-2001. *Thorax* 2005;**60**:545-8.

CORRECTIONS

doi: 10.1136/thx.2005.029561corr1

In the paper entitled "No increase in the prevalence of asthma, allergies, and atopic sensitisation among children in Germany: 1992-2001" by I K Zöllner *et al* which appeared in the July 2005 issue of *Thorax* (2005;**60**:545-8), the authors apologise for a mistake which occurred in the reference list. Reference number 18 should be number 21 and references 19-21 should be listed as 18-20.

doi: 10.1136/thx.2005.040444corr1

The paper entitled "Anticholinergics in the treatment of children and adults with acute asthma: a systematic review with meta-analysis" by G J Rodrigo and J A Castro-Rodriguez (10.1136/thx.2005.040444) has been published previously on 17 June 2005 as a *Thorax* Online First article but under the incorrect DOI (10.1136/thx.2005.047803). The publishers apologise for this error. The definitive version of the article can be found at the following citation: *Thorax* 2005;**60**:740-6.

doi: 10.1136/thx.2005.040881corr1

In the paper entitled "Hormone replacement therapy, body mass index and asthma in perimenopausal women: a cross sectional survey" by F Gómez Real *et al* published in the January 2006 issue of *Thorax* (2006;**61**:34-40), the fourth author should be **K A Franklin**, not K Franklin.

References

- 1 **Gibson PG**, Ram FSF, Powell H. Asthma education. *Respir Med* 2003;**97**:1036–44.
- 2 **National Institutes of Health**. *Global initiative for asthma. Global strategy for asthma management and prevention*, NIH Publication No 02-3659. Bethesda, MD: National Institutes of Health, 1995 (updated 2004).
- 3 **Frey U**, Brodbeck T, Majumdar A, *et al*. Risk of severe asthma episodes from fluctuation analysis of airway function. *Nature* 2005;**438**:667–70.
- 4 **Kamps AWA**, Roorda RJ, Brand PLP. Peak flow diaries in childhood asthma are unreliable. *Thorax* 2001;**56**:180–2.
- 5 **Juniper EF**, O'Byrne PM, Guyatt GH, *et al*. Development and validation of a questionnaire to measure asthma control. *Eur Respir J* 1999;**14**:902–7.
- 6 **Reddel HK**, Toelle BG, Marks GB, *et al*. Analysis of adherence to peak flow monitoring when recording of data is electronic. *BMJ* 2002;**324**:146–7.

Bronchiectasis and non-tuberculous mycobacterial pulmonary infection

We read with great interest the paper by Wickremasinghe *et al* on the prevalence of non-tuberculous mycobacteria (NTM) in patients with bronchiectasis.¹ They showed that the prevalence of NTM was uncommon (only 2%) both in 50 newly referred patients and 50 follow up patients. However, the authors stated in the Discussion that “it is now our practice to screen our patients routinely once a year” because a large number of NTM isolates (28%) were detected by routine surveillance in their retrospective analysis of 71 patients with NTM sputum isolates.¹

NTM pulmonary infection associated with bronchiectasis is increasing worldwide.² However, should routine periodic screening for NTM infection be necessary for all adult patients with bronchiectasis? Is sputum culture a sufficiently sensitive method to exclude active NTM infection? Are negative sputum studies sufficient to dissuade one from the diagnosis of active NTM infection?

Bronchiectasis in general can manifest in one of two forms: as a local or focal obstructive process of a lobe or segment of a lung or as a diffuse process involving most of the lungs.³ In patients with diffuse bronchiectasis the disease is more likely to be associated with specific causes such as infection (NTM infection, *Aspergillus* infection), congenital conditions (primary ciliary dyskinesia, cystic fibrosis), or immunodeficiency.³

High resolution computed tomography (HRCT) has proved to be a reliable and non-invasive method for the diagnosis of bronchiectasis. The pattern and distribution of abnormalities revealed by HRCT scanning are influenced by the underlying cause of bronchiectasis. Multiple small nodules (and sometimes cavity or cavities) combined with diffuse (or widespread) bronchiectasis are reported to be the typical HRCT findings of NTM pulmonary infection associated with bronchiectasis,^{4–6} which was also suggested by Wickremasinghe *et al*.¹ In patients with these characteristic HRCT findings, 34–50% of patients have active NTM pulmonary infection, especially *Mycobacterium avium* complex infection.^{4–6} These abnormalities are usually confined to, or most severe in, the right middle lobe and the lingular segment of the left upper lobe in NTM pulmonary infection. This presentation is therefore now

referred to as “nodular bronchiectatic disease”.² Multiple small nodules around ectatic bronchi on the HRCT scan have been reported to represent peribronchial granuloma and caseous material.^{4–5}

The diagnosis of this type of NTM pulmonary infection is often delayed because symptoms are mild and excretion of NTM in sputum is intermittent with few colonies retrievable in culture. Many patients therefore require bronchoscopic examination or lung biopsy for diagnosis of NTM pulmonary disease.⁷ In clinical practice, HRCT scans should therefore be performed in patients with suspected bronchiectasis. NTM pulmonary infection could be suspected in selected patients who have multiple pulmonary nodules combined with diffuse bronchiectasis on the HRCT scan. Multiple sputum specimens should be examined in these patients. However, the poor sensitivity of sputum cultures suggests that, in situations where multiple sputum cultures are non-diagnostic, bronchoscopy should be performed to adequately exclude or diagnose NTM pulmonary disease.

We consider that there is no clear evidence to support the routine surveillance for NTM infection in all adult patients with bronchiectasis.

W-J Koh, O J Kwon

Division of Pulmonary and Critical Care Medicine, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

Correspondence to: Dr W-J Koh, Division of Pulmonary and Critical Care Medicine, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, 50 Irwon-dong, Gangnam-gu, Seoul, 135-710, Republic of Korea; wjkoh@smc.samsung.co.kr

Funding: none.

Competing interests: none.

References

- 1 **Wickremasinghe M**, Ozerovitch LJ, Davies G, *et al*. Non-tuberculous mycobacteria in patients with bronchiectasis. *Thorax* 2005;**60**:1045–51.
- 2 **American Thoracic Society**. Diagnosis and treatment of disease caused by nontuberculous mycobacteria. *Am J Respir Crit Care Med* 1997;**156**:S1–25.
- 3 **Barker AF**. Bronchiectasis. *N Engl J Med* 2002;**346**:1383–93.
- 4 **Tanaka E**, Amitani R, Niimi A, *et al*. Yield of computed tomography and bronchoscopy for the diagnosis of *Mycobacterium avium* complex pulmonary disease. *Am J Respir Crit Care Med* 1997;**155**:2041–6.
- 5 **Jeong YJ**, Lee KS, Koh WJ, *et al*. Nontuberculous mycobacterial pulmonary infection in immunocompetent patients: comparison of thin-section CT and histopathologic findings. *Radiology* 2004;**231**:880–6.
- 6 **Koh WJ**, Lee KS, Kwon OJ, *et al*. Bilateral bronchiectasis and bronchiolitis at thin-section CT: diagnostic implications in nontuberculous mycobacterial pulmonary infection. *Radiology* 2005;**235**:282–8.
- 7 **Huang JH**, Kao PN, Adi V, *et al*. *Mycobacterium avium*-intracellulare pulmonary infection in HIV-negative patients without preexisting lung disease: diagnostic and management limitations. *Chest* 1999;**115**:1033–40.

Authors' reply

We would agree with much of the content of the interesting letter from Drs Koh and Kwon, particularly the details of

Mycobacterium avium complex infection and the use of CT scans in making the diagnosis.¹ We have also had experience of bronchoscopy and biopsy being necessary to make the diagnosis in some cases with suggestive radiology. The one point on which we disagree is the value of routine annual screening of sputum for acid fast bacilli, and our practice of sending three samples in all patients with a deterioration in their clinical condition which is not explained or not reversed by usual treatment.

The value of this practice will require a large prospective study with cost-benefit analysis and attention paid to false negative results. However, we would argue in favour of this approach for the following reasons. Most patients have a CT scan when bronchiectasis is first suspected. Our study² has shown that these patients may (rarely) in the future contract NTM infection which adversely affects their condition.

As Drs Koh and Kwon state, this may be insidious and go unsuspected for long periods. In our study² most patients with infection (rather than colonisation) had a heavy bacterial load (smear positive) which would make it likely that routine screening would detect the patient. Repeat CT scans in all cases that might raise suspicion of NTM is impractical. Lastly, about 50% of cases with diffuse bronchiectasis remain idiopathic even after full investigation,³ and our understanding of the pathogenesis of NTM infection is just beginning to increase. The data produced from closely studying NTM in our population of bronchiectatic patients may provide useful information in the future.

R Wilson, M Wickremasinghe, L J Ozerovitch, G Davies, T Wodehouse, M V Chadwick, S Abdallah, P Shah

Host Defence Unit, Royal Brompton Hospital, London, UK

Correspondence to: Dr R Wilson, Host Defence Unit, Royal Brompton Hospital, London SW3 6NP, UK; r.wilson@rbh.nthames.nhs.uk

References

- 1 **Hollings NP**, Wells AU, Wilson R, *et al*. Comparative appearances of non-tuberculosis mycobacteria species: a CT study. *Eur Radiol* 2002;**12**:2211–7.
- 2 **Wickremasinghe M**, Ozerovitch LJ, Davies G, *et al*. Non-tuberculous mycobacteria in patients with bronchiectasis. *Thorax* 2005;**60**:1045–51.
- 3 **Pasteur MC**, Helliwell SM, Houghton SJ, *et al*. An investigation into causative factors in patients with bronchiectasis. *Am J Respir Crit Care Med* 2000;**162**:1277–84.

CORRECTION

doi: 10.1136/thx.2005.47803corr1

The paper entitled “Anticholinergics in the treatment of children and adults with acute asthma: a systematic review with meta-analysis” by G J Rodrigo and J A Castro-Rodriguez (10.1136/thx.2005.040444) has been published previously on 17 June 2005 as a Thorax Online First article but under the incorrect DOI (10.1136/thx.2005.047803). The publishers apologise for this error. The definitive version of the article can be found at the following citation: *Thorax* 2005;**60**:740–6.