- 10 Marras TK, Daley CL. Epidemiology of human pulmonary infection with nontuberculous mycobacteria. *Clin Chest Med* 2002;**23**:553–67.
- 11 Martin Casabona N, Bahrmand AR, Bennedsen J, et al. Non-tuberculous mycobacteria: patterns of isolation. A multi-country retrospective survey. *Int J Tuberc Lung Dis* 2004;**8**:1186–93.
- 12 Hanna BA, Ebrahimzadeh A, Elliott LB, et al. Multicenter evaluation of the BACTEC MGIT 960 system for recovery of mycobacteria. *J Clin Microbiol* 1999;**37**:748–52.
- 13 Butler WR, Guthertz LS. Mycolic acid analysis by high-performance liquid chromatography for identification of Mycobacterium species. *Clin Microbiol Rev* 2001;**14**:704–26.
- 14 Arnov PM, Bakir M, Thompson K, et al. Endemic contamination of clinical specimens by Mycobacterium gordonae. *Clin Infect Dis* 2000;**31**:472–6.
- 15 Vik J. Epidemiology of tuberculosis in Ontario, 1999–2001. *Public Health and Epidemiology Report Ontario* 2003;**14**:105–15.
- 16 Ministry of Health and Long-Term Care. Summary of reportable diseases in Ontario - 4th quarter 2003. *Public Health and Epidemiology Report Ontario* 2004;**15**:73–5.
- 17 Haverkort F. National atypical mycobacteria survey, 2000. *Commun Dis Intell* 2003;**27**:180–9.
- 18 Donnellabla V, Salazar-Schicchi J, Bonk S, et al. Increasing incidence of Mycobacterium xenopi at Bellevue Hospital: an emerging pathogen or a product of improved laboratory methods? *Chest* 2000;**118**:1365–70.
- 19 Prince DS, Peterson DD, Steiner RM, et al. Infection with Mycobacterium avium complex in patients without predisposing conditions. *N Engl J Med* 1989;**321**:863–8.
- 20 Fagan L. PPD antigens and the diagnosis of mycobacterial diseases. *Arch Intern Med* 1969;**124**:49–54.
- 21 Ahn CH, Lowell JR, Onstad GD, et al. A demographic study of disease due to Mycobacterium kansasii or M. intracellulare-avium in Texas. *Chest* 1979;**75**:120–5.
- 22 Trnka L, Dankova D, Svandova E. Six years' experience with the discontinuation of BCG vaccination: 4. Protective effect of BCG vaccination against the Mycobacterium avium intracellulare complex. *Tuberc Lung Dis* 1994;**75**:348–52.
- 23 Romanus V, Hallander HO, Wahlen P, et al. Atypical mycobacteria in extrapulmonary disease among children. Incidence in Sweden from 1969 to 1990, related to changing BCG vaccination coverage. *Tuberc Lung Dis* 1995;**76**:300–10.
- 24 Ohkusu K, Bermudez LE, Nash KA, et al. Differential virulence of Mycobacterium avium strains isolated from HIV-infected patients with disseminated M avium complex disease. *J Infect Dis* 2004;**190**:1347–54.
- 25 Meyer M, von Grunberg PW, Knoop T, et al. The macrophage-induced gene mig as a marker for clinical pathogenicity and in vitro virulence of Mycobacterium avium complex strains. *Infect Immun* 1998;**66**:4549–52.
- 26 Gangadharam PR, Perumal VK, Jairam BT, et al. Virulence of Mycobacterium avium complex strains from acquired immune deficiency syndrome patients: relationship with characteristics of the parasite and host. *Microb Pathog* 1989;**7**:263–78.
- 27 O'Brien DP, Currie BJ, Krause VL. Nontuberculous mycobacterial disease in Northern Australia: a case series and review of the literature. *Clin Infect Dis* 2000;**31**:958–68.
- 28 O'Brien RJ, Geiter LJ, Snider DE Jr. The epidemiology of nontuberculous mycobacterial diseases in the United States. Results from a national survey. *Am Rev Respir Dis* 1987;**135**:1007–14.
- 29 Good RC. Isolation of non-tuberculous mycobacteria in the United States, 1979. *J Infect Dis* 1980;**142**:779–83.
- 30 Good RC, Snider DE Jr. Isolation of nontuberculous mycobacteria in the United States, 1980. *J Infect Dis* 1982;**146**:829–33.
- 31 Contreras MA, Cheung OT, Sanders DE, et al. Pulmonary infection with nontuberculous mycobacteria. *Am Rev Respir Dis* 1988;**137**:149–52.
- 32 Simor AE, Salit IE, Vellend H. The role of Mycobacterium xenopi in human disease. *Am Rev Respir Dis* 1984;**129**:435–8.
- 33 Jiva TM, Jacoby HM, Weymouth LA, et al. Mycobacterium xenopi: innocent bystander or emerging pathogen? *Clin Infect Dis* 1997;**24**:226–32.

PULMONARY PUZZLE

A pleural mass with pulmonary infiltrates

Clinical presentation

A healthy 34-year-old woman had a 1-month history of dyspnoea and an abnormal chest radiograph. A course of erythromycin was unhelpful. Further details of her history did not suggest an aetiology. Physical examination showed only mild hypoxia on exertion.

A high-resolution chest CT scan was performed, revealing a left apical and hilar mass extending posteriorly to encase the lung, particularly along the mediastinal aspect (fig 1). There was also bilateral airspace opacification in a bronchocentric distribution. Bronchoscopy and thoracentesis were non-diagnostic.

Question

What is your diagnosis?

See page 695

This case was submitted by:

C J Ryerson, S Malhotra, S Lam

Department of Respiratory Medicine, Vancouver General Hospital, Vancouver, Canada

J C English, D N Ionescu

Department of Pathology and Laboratory Medicine, Vancouver General Hospital, Vancouver, Canada

Figure 1 Coronal CT scan of the chest showing ground glass and dense airspace opacification in a bronchocentric distribution throughout both lungs. There is also left hilar enlargement and multiple pleural masses.

Correspondence to: Dr Chris Ryerson, Department of Respiratory Medicine, Gordon & Leslie Diamond Health Care Centre, 2775 Laurel St, Vancouver General Hospital, Vancouver, Canada V5Z 1M9; cryerson@interchange.ubc.ca

doi: 10.1136/thx.2007.084806