Jumping to conclusions: Things are never what they seem

Sarah Broder MD FRCPC

S Broder. Jumping to conclusions: Things are never what they seem. Can Respir J 2005;12(3):149-150.

A 46-year-old Aboriginal man presented with a massive pleural effusion. A diagnosis of sarcoidosis was established. To the author's knowledge, this is the first reported case of sarcoidosis in a North American Aboriginal patient.

Key Words: *Interstitial lung disease; Massive effusion; Sarcoidosis*

The patient was a 46-year-old Aboriginal man who worked as a camera operator and presented with a two-month history of productive cough, increasing shortness of breath, daily low-grade fevers up to 38.5° C and a 15 kg weight loss. He was previously able to walk unlimited distances and to attend to all the chores on his acreage, taking care of livestock and horses. For the three weeks before admission, he was unable to perform his activities of daily living without shortness of breath and had new-onset orthopnea and nocturnal dyspnea. His past medical history was significant for alcohol use. He had no history of intravenous drug use or tuberculosis. He had never travelled outside of British Columbia. The patient did eat wild game.

An initial examination of the patient showed a low grade fever of 38.2°C, dullness throughout the right chest and no right-sided breath sounds. His left chest was clear and heart sounds were normal. An abdominal examination showed mild hepatosplenomegaly with left upper quadrant tenderness. He had no lymphadenopathy. The results of the laboratory tests (Table 1) included microcytic hypochromic anemia, moderate leukocytosis and markedly elevated gamma-glutamyl transpeptidase and alkaline phosphatase. Figure 1 shows the chest radiographs before and after thoracentesis, and an image from high-resolution computed tomography of the patient's chest following thoracentesis.

Bronchoscopy was negative for pus within the airways and acid-fast bacilli. His cultures were positive for *Streptococcus pneumoniae* and *Staphylococcus aureus*. He was started on levofloxacin and deferred while in hospital. He was then sent home with a 14-day course of antibiotics and a discharge diagnosis of community-acquired pneumonia with complicated parapneumonic effusion.

Ten days later, the patient re-presented with recurrent shortness of breath and fever. The chest radiograph showed that the effusion was increasing, and the effusion was tapped

Ne pas se fier aux apparences avant de sauter aux conclusions

Un Autochtone de 46 ans s'est présenté avec un épanchement pleural massif. Un diagnostic de sarcoïdose a été établi. À la connaissance de l'auteur, il s'agit du premier cas de sarcoïdose signalé chez un Autochtone d'Amérique du Nord.

again. The effusion continued to be exudative, was negative for acid-fast bacilli and showed no growth on routine culture. He was reassured that this was a parapneumonic effusion and would resolve on its own. Follow-up was scheduled to occur at one month. He returned to the emergency room again two weeks later, still complaining of shortness of breath. The effusion had partially recurred and he was admitted for a thoroscopic evaluation and multiple biopsy procedures (Figure 2).

COMMENTS AND FOLLOW-UP

Sarcoidosis can present in an acute, subacute or chronic form, usually affecting those between 20 and 40 years of age (1). It

TABLE 1
Laboratory results

Laboratory test	Result
Complete blood count	White blood cell 15.6 g/L
	Hemoglobin 86 g/L
	Mean corpuscular volume 72 fL
Liver function test	Aspartate aminotransferase 20 U/L
	Alanine aminotransferase 35 U/L
	Gamma-glutamyl transpeptidase 856 U/L
	Alkaline phosphatase 493 U/L
Electrolytes	Normal
Renal function	Normal
Bilirubin	Normal
Hepatitis A, B and C	Negative
HIV	Negative
Effusion	Exudate negative for acid-fast bacillus, no growth on routine culture and class II cytology
Abdominal ultrasound	Normal liver with mild splenomegaly and small quantity of ascites

Penticton Regional Hospital, Penticton, British Columbia

Correspondence: Dr Broder, 102 Westview Medical, 550 Carmi Avenue, Penticton, British Columbia V2A 3G6.

Telephone 250-493-0887, fax 250-943-7484

Figure 1) Chest imaging studies. **A** Initial chest radiograph showing 'white out' of the right lung. **B** Chest radiograph after thoracentesis showing right middle lobe infiltrate and atelectasis. **C** Computed tomography scan of the chest showing no interstitial disease or adenopathy

Figure 2) Photomicrographs of **A** lung; **B** liver and **C** bone marrow biopsy specimens, each of which shows 'tight', non-necrotizing granulomatous inflammation with a prominent component of multinucleated giant cells (hematoxylin and eosin stain; scale bar 50 µm)

can affect any organ system of the body, although it typically presents in an asymptomatic patient with an abnormal chest x-ray showing hilar and paratracheal lymphadenopathy, parenchymal disease or both. Generalized symptoms such as fatigue, weight loss or fever occur infrequently. Pleural involvement without lymphadenopathy or parenchymal abnormalities has been described (1); however, the effusions are usually small and asymptomatic. The present case is unusual due to the size of effusion at presentation, the extent of constitutional complaints and because sarcoidosis has never, to my knowledge, been described in a North American Aboriginal.

Thus, it was very important to confirm the diagnosis through multiple biopsies in the present case.

The patient was treated with high-dose corticosteroids initially and tapered over a total of 12 months. He has had no recurrence after having been off all steroids for 24 months. There has been complete resolution of the right-sided effusion, near normalization of his liver function abnormalities and correction of anemia.

REFERENCE

1. Murray JF, Nadel JA, eds. Textbook of Respiratory Medicine, 3rd edn. Philadelphia: WB Saunders Company, 2000.