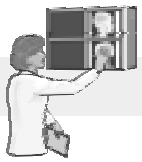

A Patient with Fever and Pulmonary Infiltrates

Tatiana Fadeeva MD[1], Yair Levy MD[1], Gisele Zandman-Goddard MD[1], Tal Segal MD[2] and Marina Perelman MD[3]

[1]Department of Medicine B, [2]Department of Radiology, and [3]Department of Pathology, Sheba Medical Center, Tel Hashomer, Israel
Affiliated to Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel

IMAJ 2002;4:395–396

A 53 year old woman was admitted to the hospital for fever and lung infiltrates. Her past history was unremarkable. Before hospitalization, she was treated with cefuroxime and roxythromycin for suspected pneumonia. The first X-rays demonstrated diffuse infiltrates in both lung bases. She was admitted because of fever and aggravation of her pneumonia. The physical examination was interpreted as normal except for room air saturation of 95% and rales auscultated on bilateral lung bases. Laboratory data revealed the following: erythrocyte sedimentation rate 100 mm/hour, leukocytosis 17,800 cells/L with a left shift, hemoglobin 9.8 g/dl and thrombocytosis 645,000 cells/L. Raised liver enzymes with aspartate aminotransferase 71 IU/L, alanine aminotransferase 81 IU/L, alkaline phosphatase 312 IU/L, and low albumin level of 3.2 g/dl were recorded. The patient was treated with different antibiotic regimes without improvement for 14 days. Radiography and chest computerized tomography demonstrated worsening of the lung infiltrates [Figure 1 A and B]. Repeated blood tests revealed hemoglobin of 7.8 g/dl, albumin 2.7 g/dl, globulins 3.7 g/dl, alkaline phosphatase 577 IU/L, aspartate aminotransferase 125 IU/L, and alanine aminotransferase 156 IU/L. Her fever continued to be around 39°C. Bronchoalveolar lavage did not demonstrate bacteria or inflammation. Closed endoscopic biopsy of the lung revealed organizing inflammation

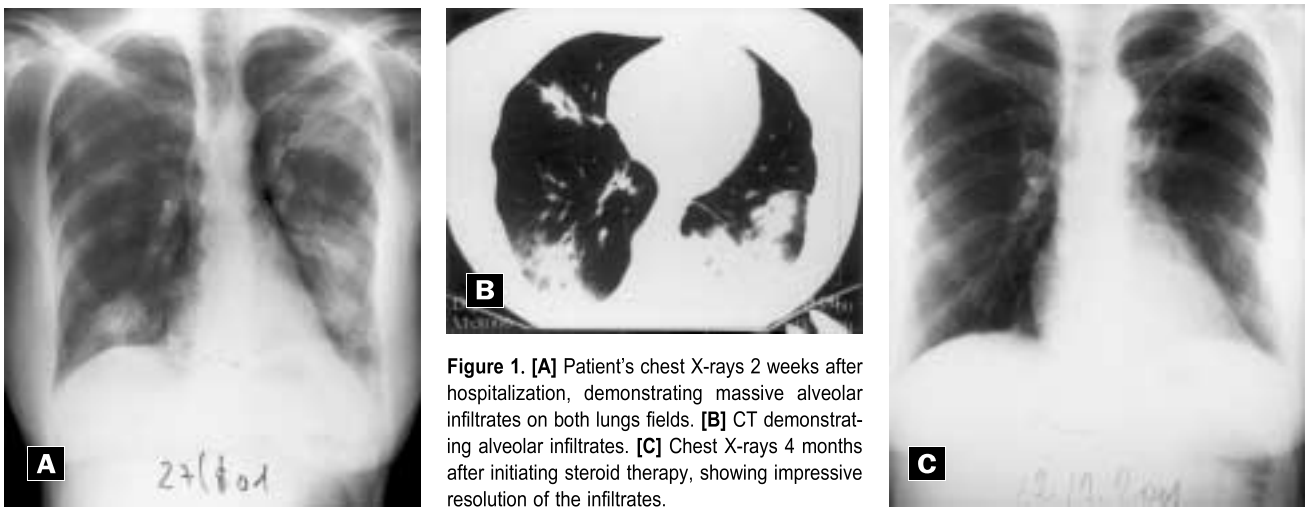

Figure 1. [A] Patient's chest X-rays 2 weeks after hospitalization, demonstrating massive alveolar infiltrates on both lungs fields. **[B]** CT demonstrating alveolar infiltrates. **[C]** Chest X-rays 4 months after initiating steroid therapy, showing impressive resolution of the infiltrates.

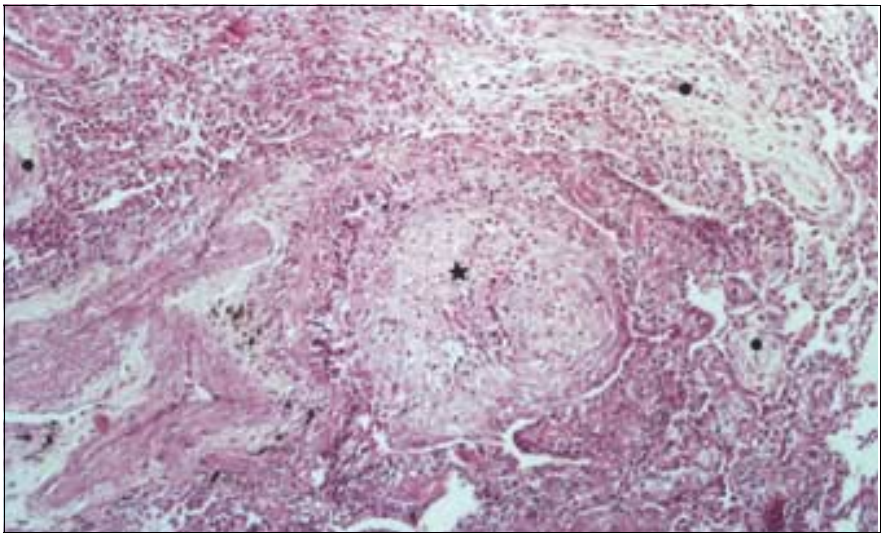

Figure 2. The lumens of the respiratory bronchiole (large asterisk), alveolar duct and alveolar spaces (small asterisks) contain myxoid fibroblastic tissue. Adjacent lung parenchyma shows mild septal inflammation. (Hematoxylin & eosin x 100).

showing both intra-alveolar and intra-bronchiolar foci of organization compatible with a pattern of bronchiolitis obliterans organizing pneumonia [Figure 2]. Prednisone treatment (60 mg qd) was initiated with rapid improvement. The patient is presently on a regimen with tapering of steroids (decrease of 10 mg/month). The lung infiltrates have almost completely disappeared [Figure 1 C].

BOOP was described in 1985 as a distinct entity, with different clinical, radiographic and prognostic features than seen in the airway disorder obliterative bronchiolitis [1]. BOOP is an inflammatory lung disease characterized by polyploid, endobronchial connective tissue masses. These masses consist of myxoid fibroblastic tissue resembling granulation tissue filling the lumens of terminal and respiratory bronchioles and extending in a continuous fashion into alveolar ducts and alveoli, representing an organizing pneumonia [2]. The typical chest radiograph shows bilateral patchy (alveolar) infiltrates. Lung biopsy continues to be the preferred method for establishing a diagnosis. Prednisone is recommended as a first-line treatment for patients with symptomatic and progressive disease.

The dosage is generally 1 mg/kg for 1 to 3 months, then 40 mg/day for 3 months, then 10–20 mg/day or every other day for a total period of 1 year. A shorter 6 month course may be sufficient in certain situations. Total and permanent recovery is seen in most patients and is dependent on the cause or associated systemic disorders.

BOOP might recur in one-third of patients treated for less than 1 year. It can be successfully treated a second and third time with the previously responsive dosage level of prednisone [3].

BOOP = bronchiolitis obliterians organizing pneumonia

References

1. Epler GR, Colby TV, McLoud TC, Carrington CB, Gaensler EA. Bronchiolitis obliterans organizing pneumonia. *N Engl J Med* 1985;312:152–8.
2. Colby TV. Bronchiolitis. *Am J Clin Pathol.* 1998;109:101–9.
3. Epler GR. Bronchiolitis obliterans organizing pneumonia. *Arch Intern Med* 2001;161:158–64.

Correspondence: Dr. G. Zandmann-Goddard, Dept. of Medicine B, Sheba Medical Center, Tel Hashomer 52621, Israel.
Phone: (972-3) 530-2652
Fax: (972-3) 535-2855
email: shoenfel@post.tau.ac.il