Hypernephroma: A Rare Cause of Bilateral Adenopathy, and an Example of the Importance of Tissue Diagnosis in Suspected Cases of Sarcoidosis

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A 52-year-old white man with minimal symptoms consisting only of weakness and cough, manifested as his only initial clinical abnormality the radiographic finding of bilateral hilar adenopathy resembling sarcoidosis. Unexpectedly, the diagnosis of lymph nodes obtained at scalene node biopsy was metastatic hypernephroma, and thereafter the primary tumor was localized in the left kidney. We emphasize the rarity of this radiographic manifestation and stress the necessity of obtaining tissue confirmation of sarcoidosis in patients in whom the disease is suspected radiographically due to the finding of bilateral hilar adenopathy.

The etiology of sarcoidosis is still unknown. However, from an epidemiologic standpoint, enormous changes have taken place in our knowledge of the disease. Once considered a medical rarity involving the skin, and existing primarily among black patients, it is now recognized to be not an uncommon illness.1,2 An example of the prevalence of sarcoidosis is seen in the experience of the

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Figure 1. Chest x-ray film on admission showing right paratracheal and hilar adenopathy.
man, who presented with a two-week history of cough, fever, and purulent sputum. He had been in good health prior to this episode. Physical examination revealed the patient to be well developed, well nourished, and in no distress. His blood pressure was 120/80 mm Hg, pulse rate 88/min, respiratory rate 22/min. Examination of head, neck, chest and abdomen were all within normal limits. Laboratory studies, including CPC, urine, BUN, and creatine were normal. The chest x-ray film showed bilateral hilar and right paratracheal adenopathy (Fig. 1). This finding was confirmed by tomography.

A clinical diagnosis of sarcoidosis was made, and a right scalene node biopsy was performed to confirm the diagnosis of sarcoidosis. The scalene node biopsy revealed metastatic hypernephroma.

Intravenous pyelogram followed by nephrotomograms confirmed the presence of a mass in the lower pole of the left kidney which resembled a hypernephroma. The patient was started on chemotherapy for metastatic hypernephroma with medroxyprogesterone (Provera), 100 mg daily, and was discharged.

Six months later, the patient developed shortness of breath, first on exertion, and later at rest, and was rehospitalized. At this time, examination revealed enlarged matted nodes in the right supraclavicular area, an enlarged nodular liver, and diffuse bilateral rales, more marked in the right lung.

The chest x-ray film showed diffuse nodular and alveolar shadows, especially in the right lung. The patient's condition deteriorated continuously, and he died eight months after the initial diagnosis of metastatic hypernephroma. Permission for autopsy was denied.

**Discussion**

According to the conclusions reached at the Second International Congress on Sarcoidosis held in Washington in 1961,7 sarcoidosis may be diagnosed in any patient in whom there is a compatible clinical and radiographic picture, plus the findings of noncaseating granuloma on biopsy or in the tissue taken from the nodule at the site of injection of Kveim-Siltzbach antigen.

We feel that this patient is important not only in pointing out a previously unrecognized pulmonary metastatic pattern of hypernephroma, but perhaps more significantly, in emphasizing the importance of the principle of tissue diagnosis in cases of bilateral hilar lymphadenopathy suspected of being sarcoidosis.

**References**


**Experimental Study for Rapid Sterilization of the Flexible Fiberoptic Bronchoscope**

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The flexible fiberoptic bronchoscope is usually sterilized by ethylene-oxide gas at 1.5 atmospheres of pressure for five hours, or by formalin gas for 24 hours. However, when more than one patient is examined with the same instrument, these gas sterilization techniques are inadequate because of time limitations. For this reason, the complete rapid sterilization of the flexible fiberoptic bronchoscope instead of gas sterilization is done in necessary cases. For the purpose of this investigation, we selected five organisms (Candida albicans, Klebsiella, Pseudomonas aeruginosa, Escherichia coli and Staphylococcus aureus) as possible sources of contamination.

**Method**

The mixed bacterial growth was prepared using a sample taken from pure culture of each of the above. In each experiment, the bacterial growth medium was checked by colony count after being cultured for 24 hours, using the wire-loop method of 100 and 1000 dilutions. The number of colonies produced ranged between 1.5 x 10^4 and 3.1 x 10^6 colonies/ml.

Culture medium was drawn into the channel of the flexible fiberoptic bronchoscope using a sterile syringe. Then the flexible fiberoptic bronchoscope, which had been sterilized completely by ethylene oxide gas or formalin gas, was immersed in the mixed bacterial growth in the flask for 15 to 20 minutes. The syringe operator scrubbed using surgical technique and wore sterile gloves.

Benzalkonium chloride 0.1 percent solution, Bronopol (0.02 percent bronopol) and sterile water were used for the rapid sterilization for the surface and channel of the flexible fiberoptic bronchoscope.

After contamination of the flexible fiberoptic bronchoscope it was subsequently wiped with either the sterilizing solutions or sterile water. The same materials were flushed through the channel in 10 ml aliquots.

Before contamination, the surface and channel of the flexible fiberoptic bronchoscope were examined bacteriologically. In cases where there was suspicion of contamination, the gloves of the operator were also cultured. No growth resulted in any instance. In the endoscopic room, there was no ambient bacterial contamination after exposure of a Petri dish for five minutes.

**Results**

After rapid sterilization, cultures were taken from the surface and channel of the flexible fiberoptic bronchoscope. Specimens were cultured using wire loop dilutions of 0.1 percent and 1.0 percent as well as mixed culture techniques. In the positive cases the range was between 1,000 and 70,000 colonies/ml. Conclusive results were obtained.

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