percutaneous or bronchoscopic aspiration, avoiding contamination by bacteria in the upper airway.

Enterococci have been implicated primarily in the genitourinary, endocardial, and abdominal infections. Few reports have considered them as a cause of a bacterial pneumonia or lung abscess. Rantz and Kirby, in a review of streptococcal infections, reported none. Duma et al reviewing 154 streptococcal blood isolates at the Massachusetts General Hospital found that 29 percent could be classified as group D. Only one case involved the lower respiratory tract, producing necrotizing pneumonia.

Enterococci are members of group D streptococci and consist of Streptococcus faecalis and Streptococcus faecium. They can grow in the presence of 6.5 percent NaCl, at a pH of 9.6, at 10°C, and 45°C, and withstand heating at 60°C for 30 minutes.

In the two cases reported, combination antimicrobial therapy of penicillin G or ampicillin with an aminoglycoside agent was used. This combination was selected because of the severity of the infection and the reported synergism of penicillin and aminoglycoside drugs. The mechanism is believed to be increased susceptibility of the enterococcus to the bactericidal effects of streptomycin or gentamicin following damage to the bacterial cell wall by the penicillin. The use of 2 gm of streptomycin daily for 23 days produced persistent impairment of equilibrium in the first patient. In view of the reported value of gentamicin in combination with penicillin in the treatment of enterococcal infections and a lesser degree of vestibular toxicity, it was selected for the second patient. Duma et al found that a significant number of enterococci required optimal, but unpredictable concentrations of penicillin and streptomycin, and determination of in vitro synergism was essential for each strain. Watanakunakorn found that all enterococci were not killed by the synergistic action of penicillin G and aminoglycoside antimicrobics and that he could not predict effectiveness of therapy without actual in vitro testing.

Suppurative destruction of lung parenchyma usually creates access to bronchi, which permits internal drainage of most pyogenic lung abscesses. Frequent therapeutic bronchoscopy is often used to enhance this drainage, and surgical therapy is usually not required. Abscesses that do not drain adequately, or that respond poorly to medical treatment, necessitate surgical drainage or removal for cure. Percutaneous transthoracic drainage of the above described cases resulted in dramatic decompensation and closure of large abscess cavities, with eradication of the infection and subsequent healing. Although reference has been made to transthoracic drainage of abscess cavities, lobectomy or pneumonectomy has been the procedure of choice in this country. This report is in no way intended to suggest that transthoracic tube drainage of a lung abscess should be routinely used. The procedure is mentioned as a possibility to be considered in patients who are too ill to tolerate thoracotomy or to prevent sudden catastrophic evacuation of purulent drainage or blood into the tracheobronchial tree, with resulting airway occlusion and asphyxiation.

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Pulmonary Pseudolymphoma Presenting as a Solitary Nodular Density with an Air Bronchogram*

Irwin Buchwald, M.D.

This case report describes a 73-year-old woman who presented with a solitary nodular lung density due to pseudolymphoma. The entity is of interest in that the tumor has a characteristic roentgenographic appearance and a benign prognosis.

A solitary nodular density appearing in the chest roentgenogram of an asymptomatic person more than 50 years of age frequently represents malignant disease; roentgenographic examination of the lesion before operation often is not helpful in making the distinction between malignant and benign disease.* This report presents a case of pulmonary pseudo-

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dysplasia occurring in a 73-year-old woman. This is a benign entity which may present as a solitary nodular density and which has a characteristic (but not pathognomonic) x-ray film finding: the air bronchogram.

CASE REPORT

This 73-year-old woman was admitted to the hospital for elective cataract surgery. She did not smoke cigarettes. She had been hospitalized for one year in the 1930’s with pulmonary tuberculosis; at this time she was treated with left pneumothorax which was continued for three years on an outpatient basis. Three years prior to admission she had “bronchial pneumonia.” There was no history of cough, exertional dyspnea, chest pain or wheezing. Her occupational history was unremarkable. The patient did not use anticonvulsants.

Physical examination revealed an afebrile, well-developed, well-nourished white woman in no acute distress. Bilateral cataracts were present. Neck veins were flat. Lungs were clear to percussion and auscultation. No gallop rhythm or murmurs were noted on examination of the heart. There was no hepatosplenomegaly or peripheral adenopathy. The nail beds showed no clubbing, and there was no evidence of thrombophlebitis.

Routine admission laboratory workup included a chest roentgenogram which revealed chronic pleural and parenchymal changes on the left and a 4-cm solitary nodular lesion in the right lower lobe (Fig 1). Tomography of the lesion revealed air-containing bronchi (Fig 2). The following negative studies were obtained: intravenous pyelogram, barium enema, liver scan, Papanicolaou smear, cytologic examination of sputum and urine and multiple smears of sputum for acid-fast bacteria. A first-strength PPD was positive.

On the seventh hospital day, bronchoscopy and mediastinoscopy were performed; both studies, including the histologic examination of four mediastinal lymph nodes, failed to reveal any evidence of malignancy. On the ninth hospital day, a right lower lobectomy was performed; microscopic examination of the resected lesion revealed pseudolymphoma

FIGURE 1. Admission chest roentgenogram.

Figure 2. Tomogram of right lower lobe lesion revealing air bronchograms.

(Fig 3). The patient was given no chemotherapy or radiotherapy and was discharged from the hospital on the 21st hospital day.

DISCUSSION

Pulmonary pseudolymphomas are benign lymphocytic infiltrations of unknown etiology. Most patients with pulmonary pseudolymphomas are over 45 years of age, and there is an almost equal sex distribution. Pathologically, the major problem is to separate pseudolymphoma from a primary pulmonary malignant lymphoma of the lymphocytic type. According to Saltstein, the two entities can be separated along the following lines: the pseudolymphoma has lymphoid ger-
Sarcoidosis of the Larynx Causing Airway Obstruction

Ben Carasso, M.D., F.C.C.P.**

Sarcoidosis of the larynx is an uncommon manifestation but can be potentially life threatening when progressive obstruction of the upper airway develops. A patient presented with sarcoid infiltration involving successively the skin, palate, nose, lymph glands, bones and finally the larynx. Local irradiation was instrumental in relieving a progressive airway closure.

Sarcoidosis is described as a multisystem disease of unknown etiology characterized by the formation of noncaseating granulomas. The word "protean" is so commonly used in conveying the variability of its manifestations that the adjective has now become a cliché. The organs predominantly involved are the lungs, lymph nodes, skin, liver and eyes. Less frequently any organ in the body with the exception of the adrenal glands is potentially receptive to the sarcoïd granulomatous infiltration.

Sarcoidosis of the upper airways is uncommon. While Boeck described nasal lesions along with lymph node involvement as early as 1899, it is only in 1940 that Poe¹ published the first report of histologically confirmed sarcoidosis of the larynx. The lesion occurs seldom enough to warrant reports of single or small group cases. A perusal of the literature shows that little is known of the course of sarcoidosis of the larynx, although it is generally recognized as torpid, similar to sarcoidosis of the skin and bones.

The disease is potentially life threatening, as in isolated instances it can cause obstruction of the upper airway requiring tracheostomy. Steroid therapy has proven generally disappointing in the treatment of skin or upper airway sarcoidosis, whether used systemically or in local depot injections.

**Case Report**

We are reporting the following case in which sarcoidosis has involved concurrently or successively skin, palate, nose, lymph gland, bones, possibly the knee joints, and finally the larynx. A course of x-ray therapy was successful in clearing a progressive obstruction of the upper airway.

The patient is a 29-year-old black woman who was admitted to the Mount Sinai Hospital of Chicago March 6, 1968 with a history of documented sarcoidosis since 1959 and onset of progressive hoarseness for three months preceding admission, later complicated by laryngeal stridor and inspiratory dyspnea in recumbency. The presenting symptoms, in 1959, were pain and swelling of several interphalangeal joints of fingers and toes and cervical adenopathy. A diagnosis of sarcoidosis was made by the finding of noncaseating granulomas in a cervical node biopsy.

Subsequently there occurred skin lesions of the maculopapular variety involving the cheeks, the extensor aspect of...