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# Catamenial Hemoptysis: A Case Report

Paul S. Harkaway, MD,\* and Michael S. Eichenhorn, MD\*

*A young woman presented with recurrent hemoptysis temporally associated with menstruation. Catamenial hemoptysis, an extremely uncommon disorder, is usually caused by the presence of ectopic endometrial tissue within the lung. The use of progesterone suppressed menstruation and hemoptysis during four months of treatment. Chest x-ray was normal. (Henry Ford Hosp Med J 1986;34:68-9)*

The differential diagnosis of hemoptysis is fairly limited. Frequently in the middle-aged and elderly it signals a serious underlying process such as bronchogenic neoplasm. In the younger patient the differential diagnosis is even shorter but still can reflect serious pathology. No cause of hemoptysis can be said to be common in the young, but some more likely possibilities include: pneumonia or lung abscess, bronchiectasis, pulmonary infarction, bronchial adenoma, or A-V malformation. Catamenial hemoptysis is an unusual and still poorly understood disorder in which hemoptysis recurs in a cyclical fashion in association with menstruation. Since it is so uncommon, little is known about its frequency, natural history, or response to therapy.

## Case Report

A 21-year-old woman was referred for evaluation of hemoptysis. She was well until the previous evening when she began to recurrently expectorate small quantities of maroon-colored sputum. The patient denied systemic symptoms, chest pain, or shortness of breath. She had no significant past medical history and was on no medications (including aspirin and oral contraceptives). The patient did describe a recent upper respiratory tract infection characterized by productive cough one week before presentation, but this had subsequently resolved. The patient was a cigarette smoker and had smoked one pack per day for the past two years.

On further questioning the patient recalled that she had had a similar episode of hemoptysis four months before the current episode. She was seen in a local emergency room and told that she had a "bleeding vein in the back of the throat." Follow-up by an otolaryngologist disclosed no abnormality to explain the bleeding.

Physical examination revealed a healthy woman. Vital signs were unremarkable as was the remainder of the physical exam including the pelvic examination. The chest x-ray was within normal limits (Figure) as were routine laboratory studies and a coagulation profile. The patient was treated with observation only, and the hemoptysis resolved spontaneously within the next two days.

The patient returned in four weeks with recurrence of the same symptoms. It was recognized at that time that all three episodes of hemoptysis occurred during menstruation. Bronchoscopy was performed and demonstrated old blood in the trachea and bronchus intermedius. No

endobronchial lesion was visualized. The patient had no symptoms of pelvic endometriosis and had no prior pregnancy, pelvic infection, or pelvic procedures.

Hemoptysis recurred with each menstrual period until administration of medroxy progesterone acetate (20 mg twice a day) six weeks later. The progesterone suppressed both menstruation and hemoptysis for four months but was discontinued because of poor patient tolerance. Menstruation and catamenial hemoptysis returned when the progesterone was discontinued.

## Discussion

Catamenial hemoptysis is one of three ways in which the presence of endometrial tissue within the lung can manifest itself. It is an uncommon disorder with only a small number of cases having been reported previously in the medical literature (1,2). Pulmonary endometriosis generally presents as cyclic hemoptysis, pneumothorax, or as an abnormal density on chest x-ray. All of these are uncommon, however. The explanation for these unusual menstrual-associated pulmonary disorders is based upon speculation. Ectopic endometrial tissue has been proposed to find its way into the thorax by one of three mechanisms: hematogenous spread, coelomic metaplasia, or passage from the peritoneal to the pleural cavity across the diaphragm (3-6). Associated pelvic endometriosis is present in 30% of patients with thoracic involvement (1).

Because of the small number of reported cases of catamenial hemoptysis, therapeutic experience has been purely anecdotal. Nonsurgical therapy has consisted of hormonal manipulation to suppress menstruation with progesterone or danazol (1,2,7,8). Cases have been described in which hemoptysis resolved permanently after several months of hormonal therapy, particularly with danazol (1,7,8). Pulmonary resection has been effective in

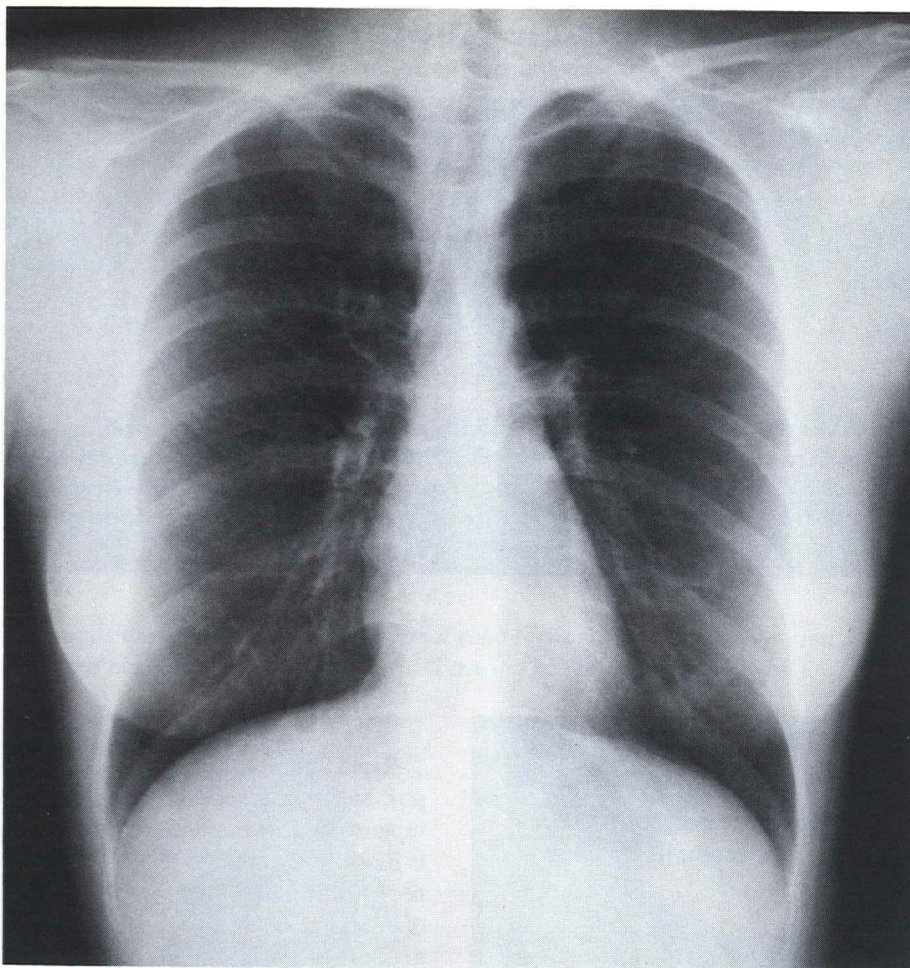
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*Figure—Chest x-ray within normal limits.*

two reported patients in whom a nodule composed of tissue histologically resembling endometrial tissue was identified and resected (1). One case report has suggested that recurrent pulmonary hemorrhage secondary to catamenial hemoptysis may predispose to the development of bronchiectasis (9).

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