Spontaneous Regression of Squamous Cell Lung Carcinoma with Adrenal Metastasis*

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A 61-year-old man was found to have squamous cell carcinoma of the left hilum with metastasis to the left adrenal gland documented by needle aspiration. About two years later, the primary tumor is not detectable, and the adrenal gland is of normal size on follow-up computerized tomography. To our knowledge, this is the first documented case of spontaneous regression of squamous cell carcinoma of the lung with adrenal metastasis. (Chest 1988; 94:887-89)

The literature remains relatively sparse on the topic of spontaneous regression of cancer in general, and nearly nonexistent regarding primary carcinoma of the lung. A computerized search (MEDLINE) covering the past 20 years revealed no such cases; however, two more remote cases1,4 without metastases were found. To our knowledge, we report herein the first documented case of spontaneous regression of squamous cell carcinoma of the lung with documented metastasis.

**CASE REPORT**

A 61-year-old white man presented with left flank pain that was similar to his previous attacks of nephrolithiasis. A routine chest x-ray film on admission showed a left hilar mass (Fig 1), and the patient was referred for pulmonary evaluation. His history was significant for smoking more than one pack of cigarettes per day for all of his adult life, moderate chronic obstructive pulmonary disease

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**FIGURE 1.** Posteroanterior chest x-ray film taken in October 1985, showing large left hilar mass.

**FIGURE 3.** Mammary artery to the corresponding artery of the anterior descending artery, right anterior oblique projection.

**DISCUSSION**

As previously mentioned, dextrocardia is rarely associated with situs inversus. To the best of our knowledge, this is the first case in which myocardial revascularization with anastomosis of the right mammary artery to the anterior descending coronary artery was performed on this kind of patient. Resection of a ventricular aneurysm after myocardial infarction in a patient with persistent ventricular tachycardia was previously reported.4 Another patient underwent myocardial revascularization with saphenous vein graft anastomoses to the anterior descending, circumflex and right coronary arteries.4 The use of right mammary artery for the anastomosis is very practical in this peculiar anatomic situation and should be used more widely in dextrocardia. Long-term follow-up is not available.

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with chronic productive cough, and excision of multiple basal cell skin carcinomas. In addition, the patient had a diagnosis of anxiety and depression with auditory hallucinations, for which he had been receiving amitriptyline and perphenazine daily in recent years. He denied taking any other medications or having any other new symptoms.

Physical examination revealed a well-developed well-nourished man, who was mentally clear and in no acute distress. He had a hearing aid and was oriented and communicating well. Vital signs were normal. He was 173 cm tall, weighing 72.5 kg. Chest examination revealed some scattered expiratory rhonchi. Findings from the physical examination were otherwise unremarkable.

Laboratory evaluation included a normal complete blood cell count and serum chemistry (Chem 18). Pulmonary function tests revealed a forced vital capacity of 2.32 L (50 percent of predicted) and forced expiratory volume of 1.22 L (38 percent), with values after bronchodilator administration of 2.72 L and 1.45 L, respectively. While breathing room air, arterial blood gas levels were as follows: pH 7.39; arterial oxygen pressure, 63 mm Hg (91 percent saturation); and arterial carbon dioxide tensions, 42 mm Hg.

Computerized tomography of the chest and upper abdomen revealed a 3-cm mass in the posterior left hilum and a 6-cm left adrenal mass (Fig 2). Fiberoptic bronchoscopy failed to detect any intrabronchial findings. The patient underwent a left anterior thoracotomy for diagnostic biopsy. Needle biopsy (Tru cut) of the left hilar mass revealed squamous cell carcinoma. Computerized tomographically guided needle aspiration of the left adrenal gland revealed numerous malignant cells, compatible with metastatic squamous cell carcinoma. These slides were reviewed by three independent pathologists. No treatment was undertaken, and the patient was discharged in November 1985.

Since discharge the patient has remained asymptomatic and has been followed in the pulmonary clinic every three months. He stopped smoking cigarettes and has continued his previous medications (amitriptyline and perphenazine) prescribed from the psychiatry clinic. The patient did not receive any treatment for his cancer. Follow-up chest x-ray films showed a gradual decrease in the size of the left hilar mass, and the last x-ray film (Fig 3) showed a normal lift hilum. Computerized tomography of the chest failed to show a left hilar mass, and computerized tomography of the upper abdomen revealed a left adrenal gland of normal size (Fig 4).

**Discussion**

Review of the literature reveals spontaneous regression in a variety of tumors: testicular carcinoma, adenoid cystic carcinoma, transitional cell carcinoma, renal cell carcinoma; and, notably, pulmonary metastases of renal cell carcinoma after nephrectomy. Everson and Cole reported 176 cases of spontaneous regression of cancer which were obtained from the literature (1900 to 1964) or referred to the authors. They reported an incidence of about one in 60,000 to 100,000 cases of cancer. In their series, the duration of regression varied from less than one year to greater than ten years. Of the 176 cases, only two were primary pulmonary carcinomas (one squamous cell and one undifferentiated), and neither of these had documented metastasis. To the best of our knowledge, our patient is the first documented case of spontaneous regression of squamous cell lung cancer with metastasis.

Numerous hypotheses have been set forth in the literature.
regarding the mechanism of regression, but none has been borne out of the research laboratory. Immune system stimulation may play a role. The list of possible catalysts for this stimulation must include any of the biologic response modifiers, viral or bacterial products, enzymes, hormones, or surgical trauma itself.14 The numerous reports of regression of genitourinary cancers suggest a hormonal or germ cell mechanism.

There is one report, without histologic documentation, of remission of metastases of carcinoma of the lung associated with intensive meditation.15 Also, there is one other case in the literature of psychotic depression and extended survival (15 years) in a patient with squamous cell carcinoma of the lung.16 Our patient had a major endogenous depression with a history of auditory hallucinations and was treated with amitriptyline and perphenazine. Both of these drugs have anti-adrenergic effects. One could speculate on an association between psychotic depression or the medications used for this disease and the regression of the cancer, particularly the adrenal metastasis.

In conclusion, spontaneous regression of cancer seems to be a real phenomenon whose mechanism remains unknown. This area should continue to attract research, as it certainly harbors clues which may someday aid in further elucidating the mysteries of cancer.

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Aspergillus terreus as a Cause of Invasive Pulmonary Aspergillosis

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A 70-year-old woman with nodular, poorly differentiated lymphocytic lymphoma is the third reported patient with invasive pulmonary aspergillosis caused by Aspergillus terreus. This case differs from the two previously reported in that neither neutropenia nor broad spectrum antibiotics preceded the infection. A terreus should not be dismissed as a laboratory contaminant in pulmonary specimens, especially those from immunosuppressed patients. (Chest 1988; 94:889-91)

The lung is the most commonly involved organ in immunosuppressed patients with invasive aspergillosis.1 A fumigatus and A flavus account for the vast majority of cases. A terreus is a ubiquitous fungus found in soil, decaying vegetable matter and house dust. It was first described as a human pulmonary pathogen in 1972,4 and has subsequently been implicated as an etiologic agent in allergic bronchopulmonary aspergillosis,5 pulmonary mycetoma,6 and invasive pulmonary aspergillosis.6,7 Infection of other organ systems by A terreus has been reviewed by Tracy et al.8 We report a case of A terreus causing invasive pulmonary aspergillosis in a patient with nodular, poorly differentiated lymphocytic lymphoma.

CASE REPORT

A 70-year-old woman was diagnosed in October 1984 as having nodular, poorly differentiated lymphocytic lymphoma on the basis of left inguinal lymph node and bone marrow biopsies. The patient received various treatments, including chlorambucil, cyclophosphamide/vincristine/prednisone, and doxorubicin/vincristine/prednisone. Chemotherapy was discontinued in June 1986 due to poor response. In August 1986 she presented with a spinal cord compression syndrome caused by a lymphomatous lumbar paraspinal mass. This required treatment with dexamethasone and radiation therapy (3,000 rads). Despite gradual tapering of therapy with dexamethasone as an outpatient, a perineal Herpes simplex infection in September 1986 prompted readmission for intravenous therapy with acyclovir. A white blood cell count was 2600/µm with 97 percent neutrophils. Chest x-ray film revealed no parenchymal abnormality. She was discharged taking dexamethasone 2 mg daily.

On October 19, 1986, the patient was hospitalized with low-grade fever and malaise. Chest auscultation revealed only fine bibasilar inspiratory crackles. The white blood cell count was 4100/µm with 70 percent neutrophils. Arterial blood gas levels on room air were normal.

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