An Abnormal Chest x-Ray

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A 51-YEAR-OLD white man with a 45-year history of smoking was noted to have an abnormality on a routine chest x-ray. He denied any history of cough, sputum production, chest pain, dyspnea, weight loss, weakness, or tuberculosis. There was no previous chest x-ray available for comparison. The patient's physical examination results were unremarkable. His chest x-ray is shown in Figure 1 and a computed tomographic (CT) scan of his chest is shown in Figure 2.

What Is the Diagnosis?
1. Morgagni hernia
2. Right middle lobe tumor
3. Pericardial cyst
4. An anterior mediastinal mass

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Answer

An Anterior Mediastinal Mass

Figure 1. Chest x-ray.

Figure 2. Computed tomographic scan of the chest. Computed tomography revealed an anterior mediastinal mass separated from the lung. The patient underwent a neck exploration and the mass was found to be a thymoma. Mediastinal tumors or cysts are grouped according to their location in the anterior, middle, or posterior mediastinum. The anterior mediastinum is defined as the area posterior to the sternum and anterior to the heart and great vessels. The middle mediastinum contains the heart and the pericardium, while the posterior mediastinum is posterior to the heart and anterior to the upper thoracic vertebrae. The most common lesions of the anterior mediastinum are thymomas (47%), lymphomas (22%), endocrine tumors (16%), and germ cell tumors (16%). Most patients with thymomas are asymptomatic on initial examination, although those with symptoms of chest pain, cough, or dyspnea are more likely to have a malignant type of thymoma. There is no characteristic radiographic appearance of a thymoma on chest x-ray but the CT scan can provide evidence of invasion into adjacent structures. The diagnosis is made when the mass is excised, usually through a median sternotomy. Thymomas are also associated with a wide variety of autoimmune abnormalities, such as myasthenia gravis, hypogammaglobulinemia, and pure red blood cell aplasia. The staging for a thymoma is according to clinical, anatomic, and histologic characteristics.

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getic men and women practicing in communities throughout the United States and abroad.

As Dr Charlie stated in 1905, “The only thing permanent is change.” Thus, the general surgery training program at the Mayo Clinic in Rochester continues to meet the ever-expanding demands of surgery and surgical education. The challenges of decreasing reimbursement, documenting competence, scrutinizing credentialing, and maintaining a work-life balance that respects the needs of students, residents, and staff will remain top priorities. Meeting these challenges and exceeding expectations with teamwork and efficiency will remain the legacy of the Mayo Clinic’s surgical-training programs.

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Correction

Error in Type of Procedure. In the article titled “An Abnormal Chest x-Ray: An Anterior Mediastinal Mass,” published in the October issue of the ARCHIVES (2002;137:1193-1194), on page 1194, the third sentence of the legend for Figure 2 should have read, “The patient underwent a right thoracotomy and the mass was found to be a thymoma.”