explains that the desaturated blood is directed into the left atrium.³

This situation has been previously reported following lung resection of varying magnitude, mainly of the right lung.²⁶ To our knowledge, this is the first reported case of almost identical mechanical distortions of the cardiac structures, but in the absence of previous lung resection. However, it is unlikely that this problem may be more common than diagnosed clinically. Its diagnosis should be contemplated in patients with unexplained dyspnea and cyanosis. Clinical complaint, such as platypnea (or upright dyspnea), has already been reported in this entity suggesting positional modification of the abnormal shunting.¹ Assumption of the upright position could have aggravated the shift or widened the orifice of the foramen ovale, thus allowing more streaming of blood flow through the lesion.

A definitive diagnosis can be made easily by contrast two-dimensional echocardiography or, more invasively as in our patient, by a right atrial angiogram. As magnetic resonance imaging has a high sensitivity and specificity in the diagnosis and location of atrial level shunts, it should also be considered as a further interesting noninvasive technique of diagnosis.⁷ In clinical practice, confirmation may need catheterization and determination of physiologic data. Awareness of this entity is important because a definitive treatment is generally obtained after surgical correction.

REFERENCES

MRI of Askin's Tumor*

Case Report at 1.5 T

Holly J. Burge, M.D.; Debra B. Novotny, M.D.; Mark L. Schiebler, M.D.; David J. Delany, M.D.; and William H. McCartney, M.D.

This represents the first case of an Askin's tumor demonstrated on MRI. It showed a large pleural-based mass which trapped pleural fluid in large pseudotumors. The disease was unilateral and involved the mediastinum as well. Magnetic resonance imaging was helpful in demonstrating extrathoracic disease in the area of the right brachial plexus.

(CHEST 1990; 107:252-54)

| MRI = magnetic resonance imaging; LCA = leukocyte common antigen; NSE = neuron-specific enolase |

Askin's tumor is a separate clinicopathologic entity that is a primitive neuroectodermal tumor of the thoracopulmonary region.¹ The histogenesis of this tumor remains uncertain.¹¹ It is suspected to arise from intercostal nerves.¹² Frequently, this entity presents as a chest wall mass, with rapid growth that may involve the pleura.¹³ It tends to occur in young females, it is seen almost exclusively in one hemithorax and commonly presents with local rib destruction.¹⁴

CASE REPORT

A 20-year old black woman was admitted to the hospital after a two-month history of "cold" symptoms and a 13-pound weight loss. The patient's initial chest x-ray film showed a small pleural effusion. She was treated for pneumonia. Two weeks later, a repeat chest x-ray film revealed a much larger right pleural effusion (Fig

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Thoracentesis revealed an exudative effusion with 100 percent lymphocytes. This effusion recurred in 48 h. A pleural biopsy was subsequently performed which revealed chronic inflammation.

Six weeks later, the patient was referred to this institution whereupon a biopsy, via a Chamberlain procedure, was performed. At surgery, a mass associated with the parietal pleura with multiple large mediastinal lymph nodes and a right pleural effusion were found.

Pathologic examination of this tissue by standard hematoxylin and eosin staining revealed a neoplasm composed of compact sheets and lobulated nests of small, hyperchromatic, round or spindle-shaped cells with scant cytoplasm and indistinct cell borders. Rosettes or rosette-like structures were not identified. By immunohistochemistry, the tumor was negative for LCA, desmin and muscle-specific actin but demonstrated focal positive staining for NSE, suggesting neural differentiation. This tumor was best classified as a malignant small-cell tumor of thoraco pulmonary origin (MSCT or Askin's tumor).

Magnetic resonance imaging then was performed to evaluate the brachial plexus for the patient's new onset of right arm pain. The MRI showed evidence of an axillary lymph node on the right, which was presumed to represent tumor extension into the infromedial aspect of the axilla. In addition, the pleural rind of tumor was well demonstrated along with the pseudotumors (Fig 2 and 3). A bone scan performed approximately two weeks later revealed increased activity in the right fifth rib indicative of local destruction. The patient is currently undergoing intensive chemotherapy for this tumor.

**Discussion**

Askin's tumor is a relatively rare, highly aggressive neoplasm of the thorax which typically occurs in young women, with a median survival of eight months. The principal differential diagnosis of small round cell tumors occurring in the chest wall of a child or young adult is extraosseous Ewing's sarcoma or Askin's tumor. These tumors can be distinguished from one another by clinical and morphologic criteria. These two entities have similar features by conventional light microscopy. Although both tumors are composed of small round cells which may have similar growth patterns, immunohistochemical or ultrastructural evidence, or both, of neural differentiation in Askin's tumor helps to distinguish it from Ewing's sarcoma. In this case, the tumor had focal positive immunohistochemical staining for NSE. The clinical and morphologic findings in the present case also were compatible with Askin's tumor.

The significance of this case is twofold. First, MRI showed extrathoracic extension into the region of the right brachial plexus, corresponding with the patient's symptoms in that region; however, a biopsy of tissue from this area was not
Tension Hydrothorax in a Patient with Renal Failure*

Arthur Trust, D.O.; and Leonard J. Rossoff, M.D.

A patient with renal failure who received acute peritoneal dialysis rapidly developed a tension hydrothorax which required immediate drainage of the pleural space. Rapid identification and therapeutic intervention for this rare complication of peritoneal dialysis is necessary because of its life-threatening potential. (Chest 1990; 97:1254-55)

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Common causes of respiratory insufficiency in patients with renal failure includes infection, fluid overload, and chronic pleural effusions.1 Massive unilateral hydrothorax, although rare, has been reported.1,4 Our case demonstrates the development of a life-threatening tension hydrothorax with cardiovascular instability due to the institution of acute peritoneal dialysis in a patient with renal failure.

CASE REPORT

A 59-year-old woman with anuric renal failure presented in pulmonary edema which required ventilatory support. One month prior, a diagnosis of uterine carcinoma was made, and intravenous pyelogram documented bilateral ureteral obstruction with mild hydronephrosis. Renal function was normal at that time.

On admission, her blood pressure was 160/90 mmHg; pulse rate was 120 beats per minute; temperature was 37.8°C, and respiratory rate was 40 per minute. Physical examination revealed jugular venous distention, and auscultation of the lungs was significant for diffuse crackles bilaterally. Examination of the heart revealed normal results. Bilateral pitting edema of her lower extremities was noted.

Figure 1 represents her emergency room AP chest roentgenogram consistent with pulmonary edema. The blood urea nitrogen value was 178 mg/dl and the creatinine was 35 mg/dl. Arterial blood gas analysis revealed pH, 7.17; PaCO₂, 17 mmHg; and PaO₂, 90 mmHg while receiving 100 percent oxygen from a nonbreathing mask. The electrocardiogram showed a sinus tachycardia.

Therapy was instituted with acute peritoneal dialysis. She received 1.5 percent dialysate solution alternating with 4.25 percent for a total of 22 exchanges over 24 hours. Peritoneal dialysis was discontinued when she was found to be hypotensive and in atrial fibrillation. Physical examination now revealed decreased breath sounds and dullness to percussion over the entire right hemithorax. The AP chest roentgenogram confirmed the findings of a massive right pleural effusion under tension with a shift of mediastinal structures (Fig 2).

She underwent an immediate thoracentesis which revealed clear colorless fluid and a small chest tube drained a total of 3 L over an