Bochdalek diaphragmatic hernia masquerading as tension hydropneumothorax in an adult

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CLINICAL SUMMARY

A 25-year-old man presented with upper abdominal pain and respiratory distress lasting for 4 days. On initial evaluation, he was having mild tenderness in the epigastrium and

reduced air entry on the left side of the chest. A succussion splash was heard on the left side of chest. A chest x-ray showed tension hydropneumothorax on the left side (Figure 1). In view of respiratory distress, an intercostal drain was inserted on the left side of the chest. The chest tube did not drain pleural fluid. The next day, a 64-slice computed tomography scan of the chest was done that showed a Bochdalek hernia with the stomach, colon, and left lobe of the liver in the thorax. The patient underwent operation, and at laparotomy the Bochdalek hernia was seen on the left side of the diaphragm posteriorly. The stomach, splenic flexure of colon, and left lobe of the liver were seen passing through the hernia into the thorax. The stomach had ischemic changes that reverted back to normal on

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FIGURE 1. A, Chest x-ray showing the picture mimicking tension hydropneumothorax. B, C, 64-slice computed tomography scan of the chest and upper abdomen showing the herniation of the stomach and left lobe of the liver. D, Chest x-ray after surgery showing normal position of stomach and expanded left lung.

reperfusion and application of hot packs. The stomach, colon, and liver were reduced, and the hernia was repaired. The patient's condition improved clinically, and the chest x-ray showed a well-expanded left lung. The patient was discharged on the seventh day.

Congenital diaphragmatic hernias result from failure of fusion of the multiple developmental components of the diaphragm. Bochdalek hernias occur posterolaterally at the lumbocostal junctions of the diaphragm. Only a few Bochdalek hernias are first discovered in adulthood.¹ Bochdalek hernias occur on the left side in approximately 80% of cases.² In older children and adults, a Bochdalek hernia may manifest as an asymptomatic chest mass. The differential diagnosis includes mediastinal or pulmonary cyst or tumor, pleural effusion, or empyema. Symptoms, when present, are due to herniation of the stomach, omentum, colon, or spleen.

A Bochdalek diaphragmatic hernia that was initially misdiagnosed as pneumonia with massive pleural effusion has been described.³ A report of a 76-year-old man with a right-sided Bochdalek hernia who was admitted acutely with dyspnea has been described;⁴ computed tomography of the abdomen revealed marked elevation of the right hemidiaphragm caused by herniation of the colon. The prevalence of the incidentally diagnosed asymptomatic posterior diaphragmatic hernias in the age groups 50 to 59 years, 60 to 69 years, and 70 to 79 years was 10.5%,

13.7%, and 20.3%, respectively, in a prospective study of chest computed tomography.⁵

CONCLUSIONS

Laparoscopic and thoracoscopic repair of the Bochdalek hernia have been described.^{6,7} There were no statistically significant differences in complications, additional related operative procedures, use of prosthetic patch, recurrence, length of stay, or postoperative mortality between the thoracoscopic repair and open repair groups.⁷

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“Freezing” the left ventricular outflow tract for homograft reconstruction in aortic root endocarditis

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Root replacement with cryopreserved homografts is frequently used to treat active endocarditis. To alleviate concerns with tissue fragility, it would be desirable to stabilize the left ventricular outflow tract (LVOT) and aortic annulus. We report the case of a patient with active endocarditis who underwent placement of an aortic root homograft

protected by a novel technique of “freezing” the LVOT with a circumferential continuous suture and a sizer.

CLINICAL SUMMARY

A 35-year-old man with a history of intravenous drug abuse and aortic valve replacement with a mechanical prosthesis 7 years previously for a bicuspid valve with severe regurgitation was transferred to our institution with the diagnosis of complicated prosthetic valve endocarditis. The diagnosis was made after the incidental finding of multiple embolic infarcts in brain, liver, kidney, and spleen after a motor vehicle accident. Serial blood cultures grew methicillin-sensitive *Staphylococcus aureus*, and transesophageal echocardiography revealed extensive perivalvular involvement with periannular abscess and cavitation on the mitroaortic curtain.

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