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Images in Cardiology: Pericardial Yolk Sac Tumor Presenting as Cardiac Tamponade in a 21-Month-Old Child

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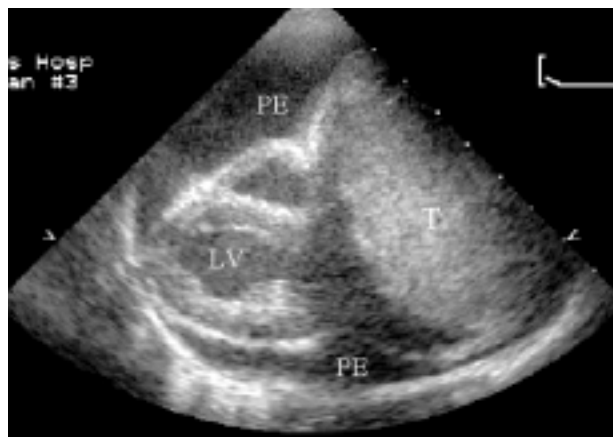


FIG. 1 Two-dimensional echocardiogram in parasternal long-axis view, showing a large mass (T) at the base of the heart with global pericardial effusion (PE). LV = left ventricle.

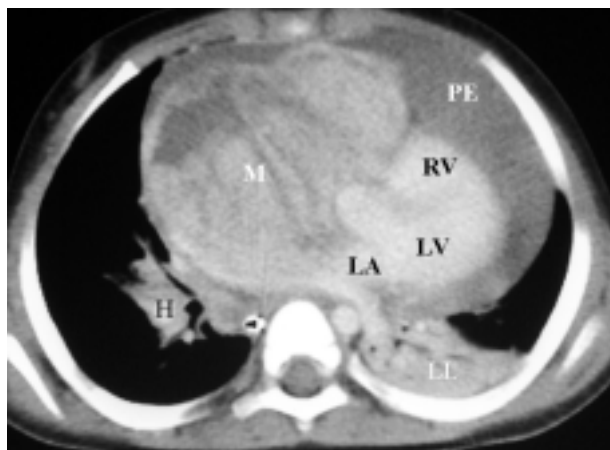


FIG. 2 Single axial image from spiral computed tomography of the chest shows a large, heterogeneous enhancing mass (M) located anterior and to the right of the cardiac structures. It extends towards the right hilum (H) with atelectasis of the left lower lobe of the lung (LL). LA = left atrium, RV = right ventricle.

A previously healthy 21-month-old girl presented with fever, cough, and respiratory distress. She was restless, with marked tachypnea, tachycardia, and hepatomegaly. Chest x-ray showed markedly enlarged cardiac silhouette consistent with pericardial effusion (PE). Two-dimensional echocardiography revealed a large global PE with signs of cardiac tamponade. A large intrapericardial mass was noted at the base of the heart (Fig. 1).

Computed tomography scan of the thorax with contrast (Fig. 2) showed a heterogenous $7 \times 6 \times 5.5$ -cm intrapericardial tumor inseparable from the right ventricle (RV), right pulmonary artery, and ascending aorta. There was compression of the right atrium (RA), superior and inferior vena cavae (SVC, IVC) with extension to the right hilum, and atelectasis of the left lower lobe of the lung. After pericardiocentesis of 200 cc of hemorrhagic fluid (that contained no tumor cells), her clinical condition improved. The only significant hematological finding was markedly elevated alpha fetoprotein of 44,810 ng/ml (normal value 0–15 ng/ml). Extensive evaluation revealed no metastatic disease. On the next day, she underwent subtotal resection of the tumor, which was hemorrhagic and friable with adherence to the RA, SVC, IVC, RV, and aorta (Fig. 3). Histopathologic findings were consistent with yolk

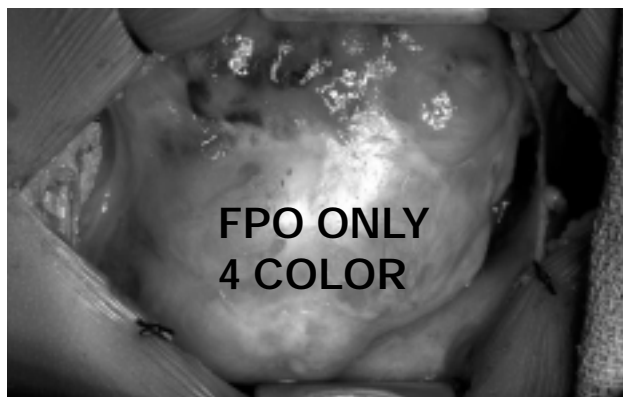


FIG. 3 Intraoperative view of the tumor through a median sternotomy incision. The tumor covered the anterior surface of the RV, RA, both vena cavae, and the aorta.

sac tumor with mature teratomatous elements. After an uneventful postoperative period, she underwent chemotherapy and is doing well.