

Combined treatment including resection and postoperative systemic chemotherapy for intrapericardial yolk sac tumor presenting with pericardial tamponade in a 15-month-old boy

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Mediastinal germ cell tumors account for only 2-5% of all germinal tumors, but they constitute 50-70% of all extragonadal tumors in which yolk sac tumor (YST) is a malignant variant. Although their peak incidence is in the third decade, several cases have been reported in infantile age group. Herein, we report management of an infant with an unusual location of YST who presented with signs of pericardial tamponade.

Case: A previously healthy, 15-month-old boy was admitted to a state hospital with complaints of malaise and respiratory distress for several days. Because of cardiomegaly was noted on chest x-ray, echocardiography was performed and referred to our clinic for drainage of large pericardial effusion. At admission, he had tachypnea, tachycardia, and poor peripheral perfusion. Immediate echocardiography revealed a massive pericardial effusion with signs of cardiac tamponade and a large intrapericardial mass was noted anterior to the right ventricle (Figure). His serum AFP was increased to 8167 ng/ml (reference range: 8.5 ± 3.5 ng/ml) and serum human chorionic gonadotropin level was normal. To better define the anatomical relationship of the mass, a computerized tomography was performed. A heterogenous 4 x 3.5 x 5 cm intrapericardial tumor inseparable from the right ventricle was detected and there was compression of the superior vena cavae and atelectasis of the left lower lobe of the lung. After pericardiocentesis of 150 cc of hemorrhagic fluid his clinical condition improved. Due to the suitable location of the mass, a needle biopsy under fluoroscopy was also performed and diagnosis of YST was confirmed. The next day, he underwent surgical resection of the tumor via median sternotomy. After an uneventful postoperative period, he was started on BEP (Bleomycin, Etoposide, Cisplatin) regimen and is doing well.

Conclusion: Yolk sac tumor should be added to the differential diagnosis of intrapericardial masses. Early recognition of intrapericardial YST is important because of its rapid course and fatal outcome.

Figure. Echocardiographic view showing a massive pericardial effusion and a large intrapericardial mass.

