

## SHORT CASES IN CARDIOLOGY

## Acute tamponade in a newborn infant caused by a massive cystic teratoma

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A female infant of 3500 g born at term presented with bradycardia, respiratory distress, and severe metabolic acidosis. Polyhydramnios had been noted at 15 weeks' gestation but no fetal abnormality was detected at that stage. The rest of the pregnancy was uneventful. Echocardiography showed a large collection of pericardial fluid and a giant multicystic mass within the pericardium. The tumour appeared larger than the heart itself and was attached to the anterior aspect of the ascending aorta (fig 1). At thoracotomy a large cystic tumour occupying most of the pericardial space was found. Serous fluid (200 ml) was removed from the intrapericardial space, and myocardial function rapidly improved. The mass was dissected off the aorta and was completely removed. Histological study of the mass revealed a mature cystic teratoma measuring  $6 \times 5.5 \times 2.8$  cm. The cysts, 0.3 cm to 1 cm diameter, were lined by mucus-secreting epithelium of the respiratory type (fig 2). The patient remained symptom free with no signs of tumour recurrence at follow up five months later.

Teratomas are usually benign tumours in childhood. They are often cystic, most commonly located in the pericardium, and may be attached to the ascending aorta.<sup>1</sup> Clinical manifestations of benign pericardial teratomas tend to be secondary to the degree of pericardial effusion. This occurs when cysts within the tumour rupture or when lymphatic

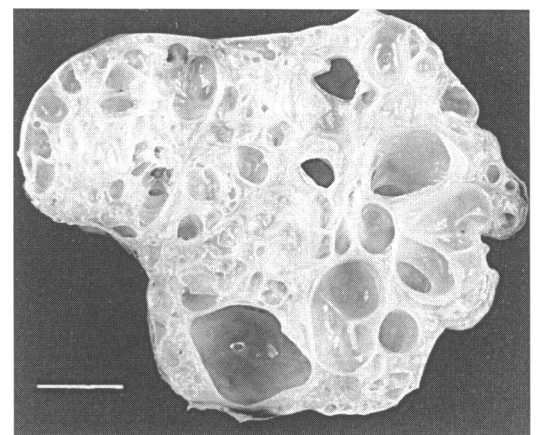


Figure 2 Macroscopic appearance of the cystic mass. Bar = 1 cm.

drainage from the heart or pericardium is obstructed. Although the pericardial effusion tends to accumulate slowly, sudden accumulation and acute tamponade may occur.<sup>1</sup> Cardiac function may also be impaired as a result of direct compression of the cardiac chambers or great vessels.

Cardiac tumours are rare causes of heart failure and respiratory distress in newborns, but when they occur they may be life-threatening. Prompt diagnosis followed by surgical treatment may be not only lifesaving but also curative.

1 Reynolds JL, Donahue JK, Pearce CW. Intrapericardial teratoma: a cause of acute pericardial effusion in infancy. *Pediatrics* 1969;43:71-8.

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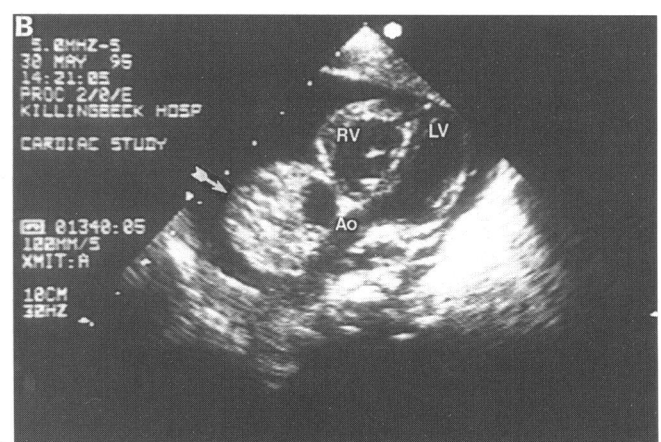
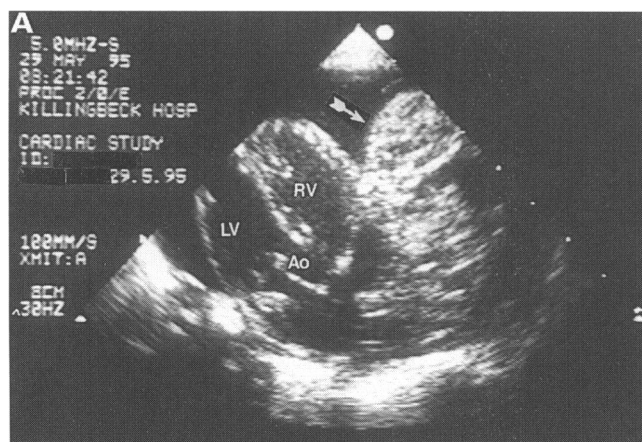


Figure 1 (A) Long axis echocardiogram. The tumour (arrowed) is seen in the anterior pericardial space. (B) In a subcostal view the tumour (arrowed) appears to be larger than the heart itself and its attachment to the ascending aorta is clearly seen. RV, right ventricle; LV, left ventricle; Ao, ascending aorta.