Cardiac Teratoma

Background

Pediatric cardiac tumours are rare, with a reported autopsy rate of 0.0017–0.28 %. [1] They are predominantly lesions characterised by benign histology (90%). However, due to the mass effect they often present with life-threatening problems such as cardiac outflow tract obstruction, heart failure or arrhythmias. Rhabdomyoma is the most common histological subtype tumor (60%). Other lesions include fibroma, teratoma, haemangioma and myxoma though far less common.

Methods

We report successful outcome of a newborn with a large cardiac teratoma and describe the unique presentation, diagnostic studies and definitive management.

Results

A baby girl was delivered prematurely by caesarean section due to reduced fetal movements at 33 + 1 weeks of gestation. Antenatal ultrasound had noted polyhydramnios and fetal hydrops, and a pericardial tumour with an associated pericardial effusion (Fig 1).

At birth, APGARS were poor (4 at 1min and 6 at 5 min). The patient was resuscitated and transferred emergently to a regional paediatric cardiac surgical center. Imaging after birth and delivery showed a large cardiac tumour (Fig 2). AFP and bHCG were normal. Complete resection of the tumour under cardiopulmonary byepass was successful, and the infant made an excellent recovery. Pathology showed an immature pericardial teratoma lesion with yolk sac elements microfoci. The infant remains healthy on follow up.

Conclusion

Cardiac teratomas in the pediatric age group are extremely rare. Echocardiography, Computed Tomography (CT) and Magnetic Resonance Imaging Studies (MRI) of the heart are the main diagnostic tools and important in the preoperative work-up. Prognosis is favourable following complete surgical resection and no further treatment is generally required. Gross total resection can be challenging due to the anatomical lesion location and cases of tumour recurrence and malignant differentiation have been described in the world literature. After care with surveillance imaging notably echocardiography and monitoring of tumour markers is mandatory.

[1] Uzun et al. Cardiac tumours in children. *Orphanet Journal of Rare Diseases* 2007, **2**:11.