A very rare Cause of Dyspnea in a Child

Hydatid cyst is a human parasitic disease caused by echinococcus granulosus that affects mainly the liver or the lungs but may be found in any organ, including the heart. Humans are infected as accidental hosts by contaminated vegetables or water. Although cardiac echinococcosis can be fatal, it is rare and often asymptomatic in early stage.

We report on a 12-year old boy that suffered from mild exertional dyspnea and presented with a thorax deformity. On clinical examination, there was no inspiration-related excursions on the right side and no respiratory sound could be auscultated.

Following CT-scan and echocardiography, strong suspicion of pulmonary and cardiac echinococcosis was made. Because of the risk of cyst leakage or rupture with consecutive allergic reaction and potential significant morbidity and mortality, indication to surgical exploration and resection was made.

Surgical approach was performed through median sternotomy to allow access to both the right pulmonary and the left ventricular localizations. Following opening of the right pleural cavity, the cyst could be resected in toto. However, a communication to the bronchial system was observed and closed using the thick membrane of the cyst itself. No residual leak was observed thereafter. Following heparinization, cardiopulmonary bypass was instituted in normothermia and excision of the left-ventricular cyst was performed on beating heart through an incision at the level of the apex. This incision was closed using direct running polypropylene suture. The cavities were rinsed with hyperosmotic glucose solution during 20 minutes. The postoperative recovery was completely uneventful and the boy was discharged at postoperative day 5 after surgery. He was put on albendazole during 3 months.

This case report with the impressive imaging and intraoperative pictures confirm that the majority of the hydatid cysts are discovered incidentally. Intracardiac rupture of a cyst can cause germinative membrane or secondary cysts embolization to the lungs or to organs supplied by the systemic circulation. Intrapericardial rupture of a cardiac hydatid cyst can lead to acute pericarditis, cardiac tamponade or eventually constrictive pericarditis. Cysts may also cause valvular dysfunction and/or arrhythmias.

Combined surgical resection of pulmonary and intracardiac echinococcosis, washout of the remaining cavity with hypertonic solution and adjuvant albendazole therapy (2x 400 mg) show excellent results.

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