



Multiple congenital pericardial cysts mimicking pleural effusion on diagnostic imaging

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A 3-year-old girl with a 1-month history of progressive dry cough and dyspnea presented to our center. She was 97 cm tall and weighed 13 kg. Chest X-ray and computed tomography suggested massive pleural effusion. Transthoracic echocardiography revealed a large echo-free space around the pericardium, which was visible only on the subcostal view. Percutaneous fine-needle aspiration yielded bloody fluid, and cytological examination indicated no inflammatory, hemorrhagic, or malignant cells. The patient was discharged with suspected tuberculosis, and oral isoniazid 0.1 g + pyrazinamide 0.375 g + rifampicin 0.15 g was prescribed.

On follow-up examination one month later, the patient's symptoms recurred. Repeated chest X-ray and computed tomography revealed abnormal soft tissue densities along the paracardiac silhouette on the left and right heart borders. Considering these findings, a clinical and radiological diagnosis of multiple pericardial cysts

was made. Because of the rapid growth, we performed a median sternotomy and completely excised the cysts, which measured 3×5 cm on the right and 5×8 cm on the left. The cysts were adherent to the pericardial surface and included mesothelial cells and collagenous tissue, which was compatible with congenital benign pericardial cysts.

Pericardial cysts are usually congenital in origin, but other causes such as hydatid infection have been described (1). The cysts can be single, unilocular or multilocular (2), and are most frequently located in the right costophrenic angle (3). To the best of our knowledge, this is the first report of multiple congenital pericardial cysts mimicking pleural effusion. Diagnosing this disorder as the current case (*Figure 1*) by imaging can be challenging.

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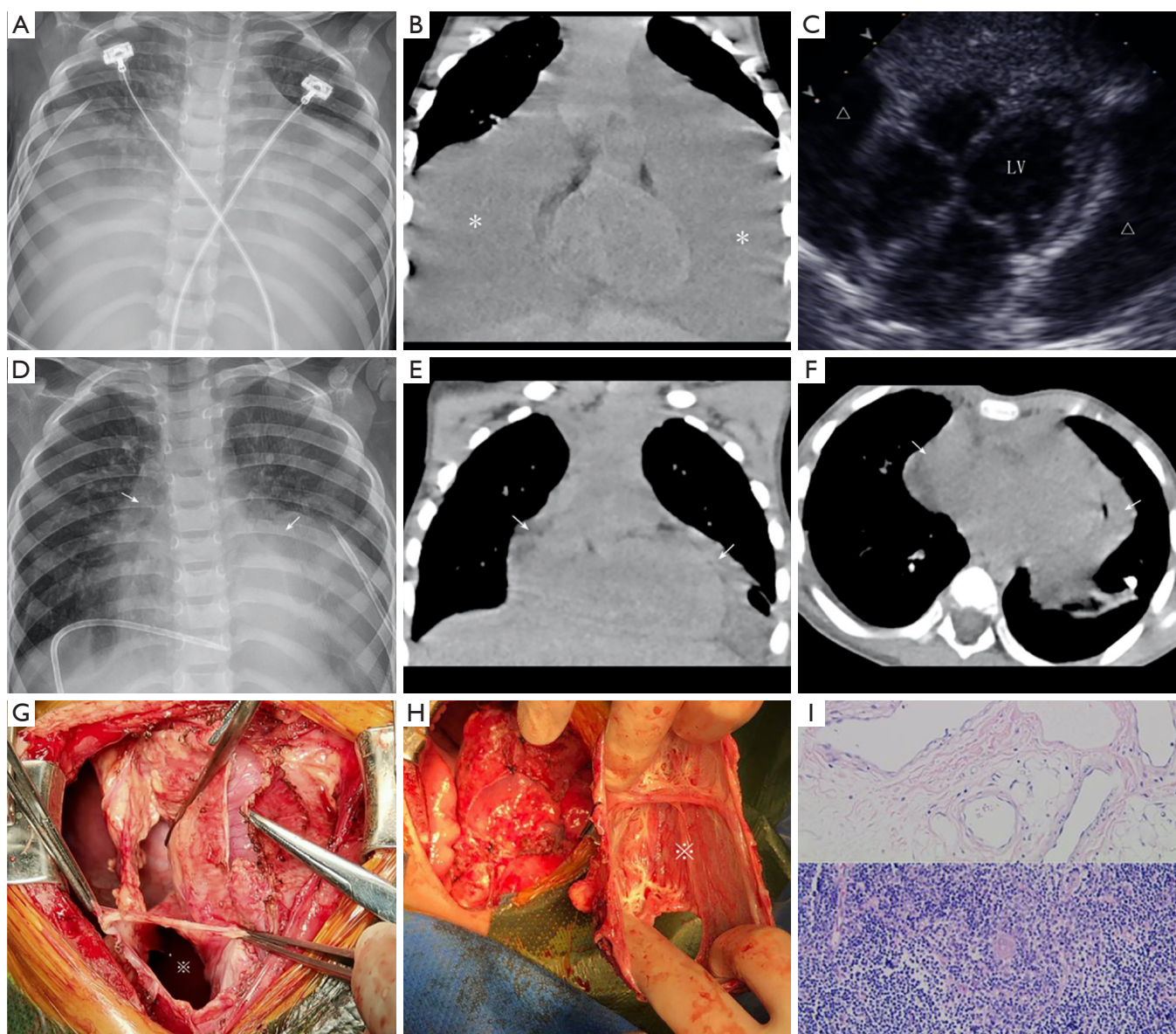


Figure 1 Multiple congenital pericardial cysts mimicking pleural effusion, Chest X-ray (A) and computed tomography (B) suggest massive pleural effusion (*). Transthoracic echocardiography (C) revealed a large echo-free space (Δ) around the pericardium. Repeated chest X-ray (D) and computed tomography (E,F) reveal abnormal soft tissue densities (→) along the paracardiac silhouette on the left and right heart borders. A median sternotomy and complete cysts excision (※) were performed (G,H). The cysts included mesothelial cells and collagenous tissue (I).

Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/qims-20-717>). The authors have no conflicts of interest to declare.

Ethical Statement: All procedures performed in studies

involving human participants were in accordance with the Declaration of Helsinki (as revised in 2013). The authors confirm that written consent for submission and publication of this report including images and associated text has been obtained from guardian of the patient.

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