

Dextroposition Due to Massive Lung Fibrosis Presented as Congenital Heart Disease

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CASE REPORT

A 17 year-old man with history of dyspnea on exertion (DOE) was referred to our echo lab as a case of congenital heart disease, dextrocardia. He was come from Afghanistan and because of lung tuberculosis about three years ago he received antituberculosis drugs for 6 months. He complained of DOE FCII from 2-3 months ago (before this admission) and his internist requested chest X-Ray and because of right sided position of heart in chest X-Ray (Fig. 1) he was referred to our echo lab. Transthoracic and transesophageal echocardiography was done. In sub costal view, apex was directed toward left and abdominal and atrial situs were solitus. There was dextroposition with normal related heart that was displaced to the right side. An ill defined cystic mass with flow through it was detected in anterior part of thoracic vertebral column, so we recommended CT scan of thorax for ruling out, tuberculosis abscess of vertebral column and better evaluation of lung parenchyma.

Chest CT scan showed: cystic lesion of right lower lobe with fibrotic change around it and a cavity with about 20x20 mm with thick wall, suggestive of destructive lung lesion due to chronic infective process. Right ward shift of all mediastinum structure (trachea, major vessels, heart) toward lung lesion. In posterior part of right atrium at right parasternal a focus with about 50x30 mm was found that was suggestive of pleural collection, so the patient was referred to pulmonologist and his evaluation showed severe decreased in pulmonary function tests and no evidence for active tuberculosis. Finally the patient underwent medical therapy.

RESULTS AND DISCUSSION

A 17 year-old man with history of dyspnea presented for evaluation of congenital heart disease. Transthoracic echocardiography and transesophageal echocardiography revealed dextroposition of heart (and no dextrocardia) and chest CT scan showed massive

pulmonary disease that resulted to right ward shift of mediastinum structure and heart(dextroposition)

In dextrocardia the heart is located primarily in the right hemi thorax with the apex in the midclavicular line^[1]. In dextroversion there is failure of apical pivoting. The cardiac apex is to the right of midline and the atria are usually in their normal position or shifted slightly to the right chest, either because of a space-occupying mass in the left chest or because of the absence of the normal lung volume filling the right chest^[2-5].

Our patient was referred as a case of congenital heart disease and our finding in echocardiography was dextroposition of heart and an ill defined cystic mass in anterior side of vertebrae suggestive of cold abscess but CT scan showed severe destruction of lung parenchyma and that cystic mass was pleural collection due to chronic infective process. This showed that end stage pulmonary disease and massive fibrosis due to tuberculosis results in complete right ward shift of heart and mimic congenital abnormalities. Also its complications such as chronic infective collections can mimic cystic lesions. This patient had severe impairment in pulmonary function tests. We hope he could compensate by increasing in number of alveoli (because of his young age) nevertheless he should undergo lung transplantation.

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