Asymptomatic paracardiac giant mass in a young adult

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Case Report

A 26-year-old female applied to our hospital with common cold complaints. On admission, physical examination was normal except common cold findings. The laboratory findings were normal. Chest radiography was ordered for routine investigation.

There was enlargement of cardiac image size on left-upper border on chest radiography (Fig. 1). In order to reveal the relation of abnormal appearance with cardiac structures echocardiography was planned. Echocardiography showed a 5.0 x 8.0 cm heterogeneous mass adjacent to pericardium (Fig. 2). Finally, we decided to perform thoracic CT.

Thoracic CT scanning demonstrated an 11x7x5cm-sized, well-demarcated, slightly lobulated, heterogeneous mass with hyperdense and liquid density components that were considered to contain fat and teeth. The mass was localized mainly in the upper mediastinum, anteromedially to the right atrium and anterosuperior to the left ventricle, in contact with ascending aorta and hilus of the lung, and adjacent to the main pulmonary trunk (Fig. 3).

Although the mass was consistent with teratoma on CT, it required histopathological diagnosis. Echocardiography-guided fine needle aspiration biopsy was performed. Histopathological findings confirmed diagnosis of a benign teratoma (Fig.4).

The mass was removed at a university hospital and the patient is performing well now. Postoperative chest radiography and tomography were normal.

Discussion

Mediastinal teratomas are frequently discovered incidentally on chest radiography performed for other reasons (7). Rupture of a mediastinal cystic teratoma is rare but is always symptomatic. Common clinical symptoms following rupture are haemoptysis and chest pain, and treatment of the ruptured tumors is essential because of development of acute respiratory distress. Occasionally, the mass effect on adjacent structures or the functional activity of dermal derivatives may cause signs and symptoms.

The aetiology of mediastinal teratomas rupture is still controversial although ischaemia, infection and inflammation have been proposed as causes. Tumor size and tumor wall thickness are not significant predisposing factors for tumor rupture. Inhomogeneity of the internal components of tumor on CT is the most important factor for rupture tendency (6). Besides, cystic teratomas can produce proteolytic or digestive enzymes, leading to adhesion and erosion of surrounding structures (8).

In our case, we discovered the mass incidentally on the chest plain radiography. Tumor size was large, but the patient was asymptomatic. The mass effect on adjacent structures did not cause any signs or symptoms. Although the mass exhibited inhomogeneous internal density on CT, surprisingly it was unruptured.

Although benign teratoma is histopathologically non-malignant, surgical resection is recommended because of its life-threatening nature and potential to rupture.

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References


Figure 1. Chest radiography of the case before operation

Figure 2. Echocardiographic image of paracardiac heterogeneous mass

Figure 3. Thoracic computerized tomography image of teratoma

Figure 4. Histopathological section of teratoma