

An operated pleuro pericardial cyst with an unusual presentation and evolution

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Abstract: Pericardial cyst is a relatively rare coelomic malformation, often asymptomatic, usually presenting as a round opacity in the right cardio phrenic angle .We report a case of pleuro -pericardial cyst with an unusual presentation in a 52 year-old woman who accused chest pain .The chest radiograph showed an elevation of the right diaphragmatic dome .The chest scan showed a cystic fluid in the right cardiophrenic right angle. Thoracoscopy was indicated, finding a cystic formation which histological examination revealed a pleuro -pericardial cyst. The course was marked, five weeks later, by the occurrence of mediastinal lymph node tuberculosis. An antibacillary treatment was prescribed with good clinical and radiological evolution .The pleuro -pericardial cyst is a rare disease. Surgery is not always recommended.

Keywords: Pericardial cyst, coelomic malformation, Thoracoscopy.

INTRODUCTION

Pleural pericardial cysts are coelomic cysts relatively rare and usually asymptomatic. Positive diagnosis can be made either on CT or surgical course. Evolution is generally favorable after surgical resection, if it is indicated. We report a pleuropericardic cyst case of unusual revelation and complicated by mediastinal lymph node tuberculosis five weeks after surgery.

CASE PRESENTATION

This case is about a 52 years old female patient, treated for peripheral lymph node tuberculosis 31 years ago and for squamous cell carcinoma of the cervix for 10 years now. She has been suffering for 6 months from right basithoracic pain described as burning in a context of declined general health. Chest examination was substantially normal, and so was the rest of physical examination including gynecological one. Chest radiography showed out an elevation of the right diaphragmatic dome (Fig.1a). Chest CT scan showed a cystic lesion of anterior mediastinal fluid density, well limited at the cardiophrenic right angle (Fig.1,b). Diagnosis and therapeutic thoracoscopy was suggested. It underlined a little vascularized cystic formation containing a clear pink liquid (Fig.2, a).The anatomopathological analysis of the surgical specimen

revealed a fibro adipose-wall, lined by flattened mesothelial regular coating without atypia or mitosis. The underlying connective tissue is dissociated by hemorrhagic suffusions seat and discrete inflammatory infiltrate with many mononucleated congestive vessels more or less thick wall (Fig.2, b). The underlined diagnosis was mesothelial pleuro pericardial cyst. The evolution was good, with pain disappearance and thoracic imaging normalization (Fig.3a). Five weeks after surgery, the patient was suffering again, from chest pain. Chest CT scan highlighted multiple mediastinal lymph nodes, at the Baretty lodge, the aortopulmonary fenestra, bilateral hilar and subcarinal, necrotic in some sites (Fig.3,b). The tuberculin skin test was positive and the search for Koch bacillus in the sputum was negative. Mediastinal lymph node biopsy was then performed by mediastinoscopy, the anatomopathological examination found out granulomatous tuberculoid adenitis with caseous necrosis. Given these elements, antibacillary treatment was administered for the patient made by rifampicin, isoniazid, pyrazinamide and ethambutol for two months, followed by four months of rifampicin associated with isoniazid. The outcome noted clinical improvement and mediastinal adenopathy disappearance on chest control scanner.

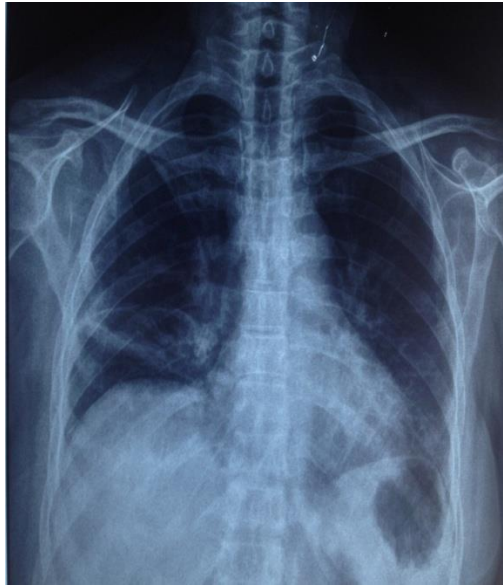


Fig-1a: Front Chest X-ray showing an elevation of the right diaphragmatic dome

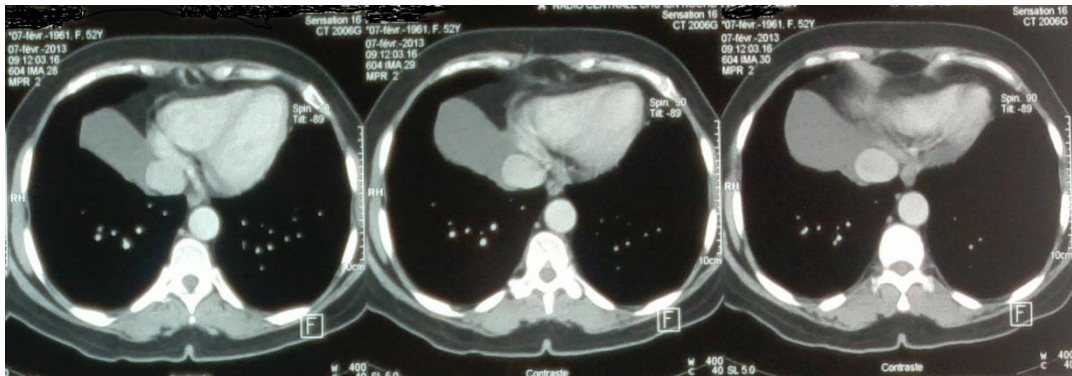


Fig-1b: Thoracic CT scan showing a cystic lesion of anterior mediastinal fluid density, well limited at the right cardiophrenic angle



Fig 2 a: Operative specimen showing pleuro pericardial cyst

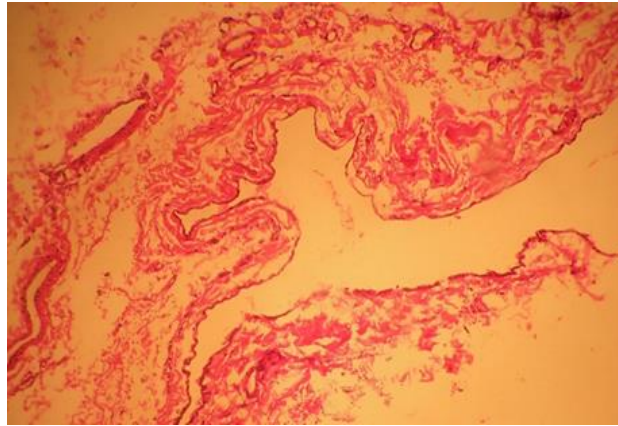


Fig -2 b: Histological section showing mesothelial coating with flattened cells without atypia or cytonuclear mitosis (HE staining, magnification)

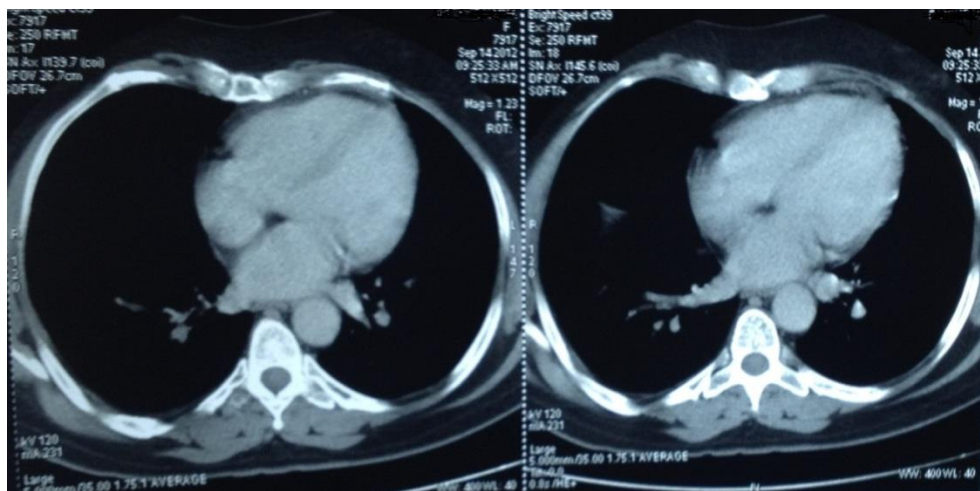


Fig 3 a: Chest CT scan showing pleuropericardic cystic lesion disappearance.

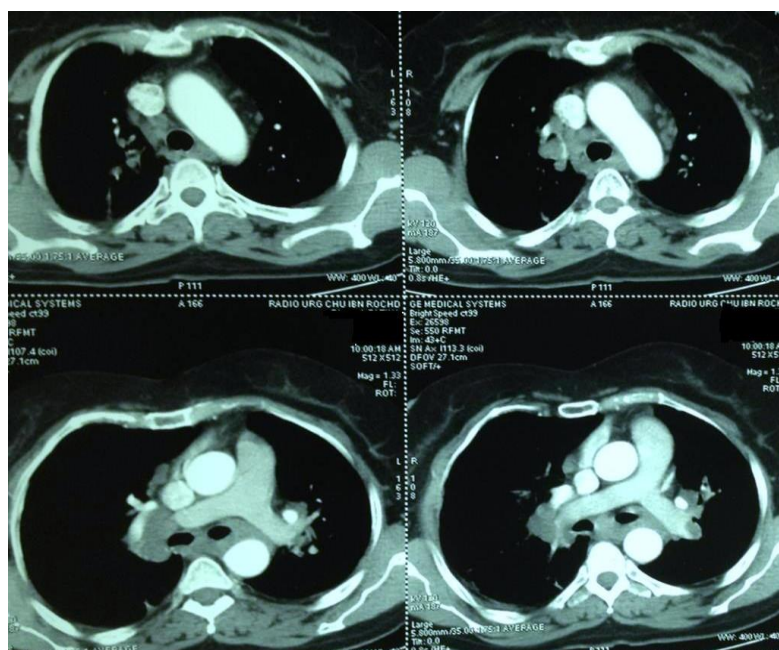


Fig 3 b: Thoracic CT scan showing multiple necrotic mediastinal lymph nodes.

DISCUSSION

Pleural pericardial cysts (KPP) are malformed cysts resulting from division failure of primitive mesenchymalcoelomic cavities occurring during embryonic course. They represent 4 to 11% of mediastinal mass and 22 to 38% of mediastinal cysts [1]. This is the most common benign pericardium tumor. It is usually congenital but can be acquired, with an incidence of 1 per 100,000. It is usually in the right cardio-phrenic angle in 51% of cardiophrenic cases and in the left angle in 38% of the cases. It is bounded medially by the pericardium, but do not always communicate with the pericardial cavity and can be completely separated from it, apart from the middle and lower lung lobes, forward by stern costal wall and down through the diaphragm. It is most often rounded or elongated, plain or multilocular. Its diameter is between 3 and 8 cm, sometimes up to 28 centimeters, with a weight ranging between 100 and 200 grams. Natural Pleuropericardial cyst history is benign, which explains its discovery usually incidentally or post mortem, rarely after complications. It occurs especially in young adults, rarely in children. Indeed, less than 20 cases of children under 18 have been described in the literature. [2-3] clinically, over 50% of KPP are asymptomatic and discovered incidentally. Presence of clinical signs is mainly due to the increase more or less rapidly to the cyst's size, or after compression or invasion of adjacent organs, including heart, great vessels, or tree tracheo bronchial, [4] and can cause chest pain, feeling retro-sternal compression, dyspnea, cough, palpitations or heart rhythm disorders. The clinical signs can sometimes mimic other conditions, in particular, tricuspid and pulmonary stenosis or constrictive pericarditis.

Life-threatening complications have been reported in the literature, such as atrial fibrillation and tamponade that could be due to cyst intra-pericardial rupture or more rarely to spontaneous or posttraumatic intra-cystic hemorrhage. Absence of clinical symptoms is a good prognosis sign. No cases of malignant degeneration were described in the literature. [5- 8] .In our case, the patient presented right isolated basithoracic pain. Chest radiography, in typical cases, shows out oval or rounded opacity well limited, usually sitting at the anterior right cardiophrenic angle, rarely at the left cardiophrenic angle or other mediastinal locations rather not adjacent to the diaphragm. If the anomaly is located at the upper or middle mediastinum, other diagnoses can then be underlined, thus suggesting mediastinoscopy. The lateral view can support the mobile nature of the cyst. It can also highlight the teardrop aspect [9-10].

In our case, chest radiography showed out atypical aspect and unusual ascent of the right diaphragmatic dome. Chest CT is the key diagnosis

examination. It shows a lesion in the cardiophrenic right angle, rounded or oval, well-defined with thin wall and fluid density, up to 20-40 Hounsfield units, not taking contrast since it is largely avascular. Other locations can be found, especially at the left cardiophrenic angle, upper cardiophrenic angle below carinaire, in the left hilum or in the Barety lodge [11]. Calcifications or associated pericardial effusion are rarely found. Note also that it is not always possible to specify the exact location of KPP or even to maintain the positive diagnosis due to the similarities that may have with other mediastinal masses including bronchogenic cyst or pericardial cyst.

Hence the MRI importance, which shows out a hypo dense fluid on T1 and hyper dense fluid on T2 [11], When radiological diagnosis is made, drug therapy is recommended for asymptomatic patients. Surgical resection is indicated for symptomatic cases, questionable or if large cyst and / or compressing adjacent organs. The first recommended tract is video thoracoscopy for a complete resection of all cyst wall. Other authors suggest endoscopic resection or percutaneous aspiration [12-14]. KPP's pathological study include thin-wall cavity containing clear liquid and made of a single mesothelial layer cells. 5 If no treatment, evolution is generally good, except for few cases described in the literature with bleeding complications or even more rarely cyst twist or rupture without degeneration risk. [3] In surgery case, evolution is generally favorable. One case of recurrence after surgical resection is described by Chataigner and al. [9]. In our case, postoperative evolution was good, however, it noted, a month later, and given the context of endemic tuberculosis in our country, lymph node mediastinal tuberculosis occurrence that evolved after adequate antibacillary treatment.

CONCLUSION

Pleuropericardic cyst is a rare affection, often asymptomatic and discovered incidentally. Surgical resection by Video thoracoscopy is suggested in complicated cases. The postoperative tuberculosis occurrence is rare but it is not unusual in a TB endemic country like ours.

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