PERICARDIAL CYST – DIAGNOSTIC CHALLENGES

Aurelian Corneliu Moraru^{1,2}, Noela Parteni^{1,3}, Mariana Floria^{1,3}

¹"Dr. Iacob Czihaç" Military Emergency Clinical Hospital Iași

²Romanian Academy

³"Grigore T. Popa" University of Medicine and Pharmacy Iași

Corresponding author:

Noela Parteni, "Grigore T. Popa" University of Medicine and Pharmacy,

16 University Street, 700115, Iași, Romania

Email: noelaparteni@yahoo.com

Pericardial cyst is an uncommon entity that occurs in 1 of 100.000 people, representing 5% of all thoracic cysts^(1,2). Diagnosis of pericardial cyst may represent a challenge when the patient has symptoms as chest pain.

Case presentation. A 40 years old man was admitted with atypical thoracic pain. Physical exam and blood tests showed no pathological changes. Thoracic X-ray showed cardiomegaly due to an enlarged contour of the right heart border (Figure A). ECG had no pathological signs (B) but two-dimensional transthoracic echocardiography raised the suspicion of locked pericarditis (C). Therefore, a computed tomography was performed and the diagnosis of pericardial cyst was established (D).

Discussion. Pericardial cysts are usually located on the right hemithorax at the cardiophrenic angle or rarely, in the posterior or anterior superior mediastinum⁽³⁾. It result from the lack of fusion of the mesenchymal lacunae, which unite and form the pericardial coelom. The persistence of pericardial coelom ventral recess form a diverticulum. The constriction of the proximal part of the ventral recess creates a pericardial cyst. Therefore, the only difference between the two entities is the communication between pericardium and the cyst cavity that is not present in diverticulum⁽⁴⁾.

Most patients are asymptomatic, therefore they are an incidental discovery^(1,2). Some can

address with chest pain, dyspnea, nonproductive chronic cough⁽⁵⁾. Usually pericardial cysts are diagnosed due to complications in adult life, or they are found during chest imaging⁽⁶⁾. Their dimension can vary from 2-3 cm to huge masses of 28 cm⁽⁷⁾. Thoracic X-ray reveals right heart enlargement. Other diagnostic resources include echocardiography, computed tomography and magnetic resonance imaging⁽³⁾. Neither of these methods can differentiate between diverticulum and pericardium cyst⁽⁵⁾. Common symptoms include chronic cough, chest pain, dyspnea and retrosternal pressure, although there is a large range of unusual clinical presentation

INTERNAL MEDICINE

Images in Medicine

such as low respiratory tract infections, pneumonia, arrhythmias, congestive heart failure, sudden cardiac death⁽⁵⁾.

Pericardial cyst naturally evolve without complication, but in right heart chambers compression can cause high venous pressure, hepatomegaly and ascites. They can also suffer rupture, bleeding and inflammations⁽⁵⁾.

Management range from observation (high risk surgery, stationary small dimensions), to percutaneous drainage and aspiration, and ultimately resection (for symptomatic enlarged cysts). For non-complicated cases, video assisted transthoracic surgery is a low risk option with multiples advantages⁽⁴⁾.

References

1. Alkharabsheh S, Ayache A, Halabi S, et al. Pericardial cysts: do they grow over time? JACC 2016; 67(13).
2. Patel S, Hajmedi P, Fischbein J. Common Symptoms with Rare Entity: A Giant Pericardial Cyst. Am J Med 2015; 128(10):47.
3. Najib M, Chaliki H, Raizada A, et al. Symptomatic pericardial cyst: a case series. Eur J Echocardiography 2011; 12(11):43.
4. Kar SK, Ganguly T. Current concepts of diagnosis and management of pericardial cysts. Indian Heart Journal 2017; 69(3):364-370.
5. Sokouti M, Halimi M, Golzari SEJ. Pericardial Cyst Presented as Chronic Cough: A Rare Case Report. Tanaffos 2012; 11(4):60-62.
6. Ranzini A C, Shakir H, Nadaraj S, et al. The ultrasound appearance of an unusual fetal pericardial cyst. JCU 2017; 46(2):149-151.
7. Makar M, Makar G, Yousef K. Large Pericardial Cyst Presenting as Acute Cough: A Rare Case Report. Cardiology 2018:1-3.