

2022

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Recommended Citation

Rijal S, Risher WH, Kharel A, Kaphle U. A Rare Presentation of Pericardial Tumor Presenting as Chronic Cough. *Advances in Clinical Medical Research and Healthcare Delivery*. 2022; 2(2). doi: 10.53785/2769-2779.1093.

ISSN: 2769-2779

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A Rare Presentation of Pericardial Tumor Presenting as Chronic Cough

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Abstract

Chronic cough can pose various diagnostic and therapeutic dilemmas to physicians. Airway narrowing secondary to endoluminal disease or extrinsic compression are known etiologies of chronic cough. We report an extremely rare case of chronic cough due to extrinsic airway compression by a large pericardial lipoma with subsequent resolution of symptoms after the resection of the mass. This case provides insight into the rare etiology of chronic cough that is addressable with surgical intervention.

Keywords

Pericardial Lipoma, Lipoma, Cough

Conflict of Interest Statement

The author declares that they have no conflict of interest.

Introduction

Primary tumors of the heart are rare, with rate of 0.4 % in necropsy series¹. Cardiac lipomas account for approximately 10% of primary heart tumors and make up only 3% of all benign tumors². Lipomas are encapsulated collections of adipose tissue which are usually discovered incidentally. Cardiac lipomas are mostly asymptomatic but can cause symptoms with rapid growth or compression effects on surrounding structures. Chronic cough can be a rare presenting symptom of a large cardiac lipoma causing extrinsic airway obstruction. Surgical resection should be considered in these rare circumstances.

Case Presentation

A 60-year-old woman with a past medical history of hypertension and hyperlipidemia presented with symptoms of chronic cough of one year duration. She stated that the cough is worse when lying down, especially on her right side. She had additional complaints of mild progressive shortness of breath. She denied symptoms of weight loss, hemoptysis, fever or chills. Physical examination was unremarkable. Patient was treated empirically with a course of proton pump inhibitors and empiric nasal sprays for possible post nasal drip, which did not improve her cough symptoms. Patient had extensive workup including pulmonary function test, chest radiograph and vocal cord evaluation by an otolaryngologist, all of which were unremarkable. A CT chest was obtained, which revealed a 9.7 x 6.7 x 6.8 cm pericardial fatty mass with compression of the right middle lobe of the lung. Echocardiogram showed normal heart chambers and function. Flexible bronchoscopy showed mild extrinsic compression of right middle lobe airways with findings of excessive dynamic collapse of distal airways.

Due to the large mass and persistent symptoms of cough, cardiothoracic surgery consultation was done for surgical resection of the mass. A large tan-yellow colored smooth mass with attachments to the medial aspect was found in the anterior mediastinum; this fatty tumor-like mass of 12 x 12 x 8 cm (Figure 1) was subsequently resected. Histopathology examination demonstrated fibro-adipose tissue without evidence of malignancy consistent with lipoma.

Figure 1. Gross specimen of resected fatty tumor-like mass (12 x 12 x 8 cm)



Discussion

The differential diagnosis of chronic cough is broad and finding the etiology can be challenging. In rare circumstances, chronic cough can be a presenting symptom of extrinsic compression on airways due to mass effect on airways from surrounding structures. In this case, the rare etiology of chronic cough from extrinsic airway compression by a pericardial lipoma was treated with surgical resection, resulting in complete resolution of symptoms.

Lipomas in the thoracic cavity are rare, which account for approximately 10% of all neoplasms of the heart.³ Pericardial lipoma is considered a very rare disease.⁴ Moreover, pericardial lipoma causing dyspnea and cough is an extremely rare finding. Patients with pericardial lipoma are usually asymptomatic and are incidentally identified during chest imaging, echocardiogram or MRI. Most of the lipomas grow insidiously and rarely cause any symptoms. Large cardiac lipomas can be symptomatic due to local mass effect. Depending on their size and location, the symptoms of cardiac lipoma can include arrhythmias, syncope or stroke-like symptoms or even sudden death.^{5,6} Symptoms can vary from chest pain, dyspnea, cough and palpitations depending on the local mass effect by intrathoracic lipoma.³

Imaging modalities are useful for the diagnosis of cardiac lipoma and for ruling out other differentials. Echocardiography is the initial screening tool. CT scan and MRI are accurate imaging modalities for diagnosis.^{5,7} Bronchoscopy is indicated to assess the degree of airway compression.

Management of pericardial lipoma depends on the location and presenting symptoms. No intervention is required for asymptomatic patients. Surgical resection can be considered for symptomatic patients, with about 95% curative rate.⁵ Due to chance of recurrence, complete resection is recommended.⁸

Conclusion

Cardiac lipoma is a rare entity. Chronic cough is an extremely rare presentation of large pericardial lipoma due to extrinsic airway compression. This case illustrates an unusual etiology of chronic cough treated with surgical intervention.

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