A Man with a Neck Mass, Pleural Effusion and Hypoechoic Masses in the Right Atrium and Ventricle

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CASE STUDY
A previously healthy 55-year old Caucasian male presented with a two month history of flu-like symptoms, dry cough, and progressive shortness of breath. He also presented with a one and a half month history of a slowly growing painless swelling on the left side of his neck. Examination revealed normal vital signs, an erythematous, firm but mobile mass on the left side of the neck, and signs of a right sided pleural effusion.

CT scanning of the neck displayed a fungating and ulcerating soft tissue mass situated at the dermal layer measuring 3.5 X 1.7 cm and located above the level of the hyoid at the lower end of the left parotid gland. CT of the chest revealed multiple low density lesions in the right atrium, right ventricle, and outflow tract at the level of the pulmonary valve. Multiple low density lesions were evident in the right lobe of the liver (Figure 1). Lymphadenopathy was noted inferior to the aortic bifurcation.

In addition, biopsy of the neck mass revealed a lymphoid infiltrate with atypical features. A majority of cells were positive for CD20, CD10, CD79a, and TdT, but negative for CD34, and BCL-2. Consistent with a high grade B-cell lymphoma with atypical Burkitt/Burkitt-like features.

DISCUSSION
Incidence of cardiac neoplasia is very low (1). Most cardiac neoplasms are metastatic, atrial myxoma being the most common primary cardiac tumor. Lymphomas constitute 9% of the total metastases. Cardiac involvement by disseminated non-Hodgkin’s lymphoma has been documented in approximately 20% of autopsy cases to the heart (2).

Burkitt-like lymphoma is a highly aggressive form of non-Hodgkin’s lymphoma and associated with poor short-term survival. Extracardial Burkitt Lymphoma involving the heart is rare and seldom recognized clinically. Diagnosis is usually made late because of the non-specific nature of the symptoms. Right-sided heart failure, dyspnea, superior vena cava obstruction, pericardial effusion with or without tamponade, and rhythm disturbances are the usual presenting features. The average age at presentation is sixty, with a slight male preponderance (3). Transesophageal echocardiography (TEE) is superior to transthoracic echocardiography (TTE) in assessment of cardiac lymphomas and typically shows a hypoechoic mass in the atria or ventricles that is often associated with pericardial effusion. Although multidetector computed tomography and magnetic resonance imaging will provide information about the staging of disease, biopsy of the mass is needed to make the diagnosis (4). Chemotherapy is the first line treatment, however complete remission is achieved in less than 80% of patients.

REFERENCES

Figure 1: CT image showing multiple low density lesions in the lung.