

Primary cardiac lymphoma with sick sinus syndrome as initial presentation; a case report

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Background: Primary cardiac lymphoma (PCL) is very rare. According to an autopsy study, malignant lymphoma invasion of the heart is reported in 8.7% to 27%, in particular, only 0.5% cases of extranodal lymphomas appears to PCL. The heart can be affected by several metastatic tumors due to its anatomical feature, but primary malignancy is even rarer. Herein, we report a 52-year-old, immunocompetent man who presented dyspnea due to sick sinus syndrome.

Case presentation: In July 2020, a 52 year-old man had experienced dyspnea on exertion for two weeks and he has a heart rate of 38 bpm. The initial ECG revealed junctional escape rhythm. Chest X-ray and CT showed external cardiac mass in the RA, pulmonary aortic space, LA and extended to RUL field. He underwent bronchoscopy with TBLB on the mass. The pathology reported large lymphocytes with high mitotic activity with positivity for CD20, while CD3 showed negative data. Pathologic finding confirmed DLBCL. We performed staging with PET CT and bone marrow biopsy, with negative findings except for the RA tumor. The patient was treated with 6 cycles of combination chemotherapy (R-CHOP). P wave was seen during 3rd cycle treatment and rhythm was normalized from 4th cycle. After 4 cycles, native AV conduction was recovered with disappearance of cardiac mass.

Discussion: The clinical manifestations of PCL showed various patterns ranging from asymptomatic to cardiac arrest depending on the location, tumor size, and time duration. Fatal signs such as heart failure, pericardial effusion, and arrhythmia could be present, but most cases might show non-specific symptoms such as dyspnea, facial swelling, and GI symptoms. In some cases, even if a large mass invades the heart, no symptoms or signs can be present. With the development of modern tumor image technique and generalization of echocardiogram, the sensitivity of identifying PCL is increased. Since it is an extremely rare disease, no definite guidelines exist for PCL, but early systemic treatment is now recommended for improved efficacy of chemotherapy. So if there were abnormal findings on ECG, we should check possible secondary disease through imaging study.

