Lymphoma in the heart

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A 64-year-old woman presented with a mass on her left neck. Positron emission tomography (PET) was taken to identify the possibility of lymphoma. Abnormal fluorodeoxyglucose uptake (SUVmax 9.5) was seen in the right atrium (Panels A–C) as well as in the left cervical (Panel A, arrow) and mediastinal lymph nodes (Panel C, arrow). Echocardiography revealed a 5.0 × 2.7 cm, dense and medium echogenic mass in the right atrium (Panel D, arrows), adhering to the anterior tricuspid leaflet (Panel E, arrows) and infiltrating the atrial wall with small pericardial effusion. Neither PET nor echocardiography showed that the right ventricle was involved.

Based on the PET result, biopsy of cervical lymph node was performed. Histology demonstrated a diffuse large B-cell lymphoma (DLBCL). Thus, the patient was given a cycle of chemotherapy with rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone. Repeated echocardiography revealed a significant reduction of the mass (1.1 × 0.9 cm, Panel F, arrows). Although biopsy on the intracardiac mass was not taken, the treatment effect strongly suggested it was lymphoma.

Cardiac lymphoma is a very rare disorder. Various imaging modalities, including echocardiography and PET, may be used for diagnosis. On echocardiography, it most commonly manifests as a circumscribed nodular mass infiltrating the myocardium, often with an associated pericardial effusion. PET shows extensive fluorodeoxyglucose uptake in the heart, with or without extracardiac lesions.

Eighty per cent of cardiac lymphoma was DLBCL, just like our patient. According to reviews, prompt anthracycline-based chemotherapy could lead to 61% of complete remission. Early diagnosis is important.

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