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Cardiac Metastasis Masquerading as Acute Coronary Syndrome

Akut Koroner Sendrom ile Karışan Kardiyak Metastaz

CASE IMAGE
OLGU GÖRÜNTÜSÜ

Secondary metastatic tumors mostly originated from lung and breast cancers and are more common than primary cardiac tumors. Here, we present a cardiac metastatic tumor presenting as acute coronary syndrome (ACS). A 68-year-old man with a history of lung metastasis of gastric adenocarcinoma was admitted with chest pain and referred with pre-diagnosis of ST-segment elevated myocardial infarction (STEMI) (Figure 1). Transthoracic echocardiography (TTE) revealed global pericardial effusion measuring 40 mm in the largest diameter, and also the cavity of the right ventricle (RV) was obliterated by a suspicious mass (Figure 2A-C). Invasive coronary angiography revealed normal coronary arteries, pericardiocentesis was performed immediately, and 560 cm^3 of hemorrhagic pericardial fluid was drained successfully. Cardiac magnetic resonance imaging revealed pericardial effusion, surrounding the heart with no collapse, and a metastatic mass, spreading through the cavity of the RV, obliterating the apex (Figure 3A-C). Tumor-associated 10-mm long thrombus was detected in the cavity of RV. Histological, biochemical, and cytological evaluations of pericardial fluid were compatible with gastric adenocarcinoma. Some cardiac metastasis can mimic STEMI or other ACS presentation. Cardiac tumors should be considered in differential diagnosis in ACS patients. When a patient with a known history of malignancy presents with palpitation, chest pain, or other cardiac symptoms, ECG and TTE should be the first diagnostic tools.

Informed consent was obtained from the patient for the publication of the case image and the accompanying images.

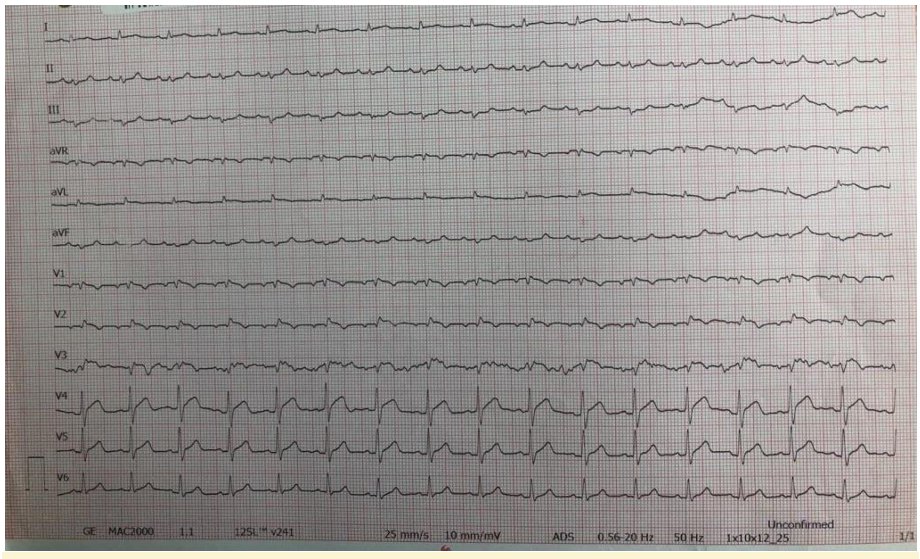

Figure 1. ECG shows atrial fibrillation (AF) rhythm, low voltage on extremity derivation and 2 mm ST segment elevation on the V1-V3 derivation.

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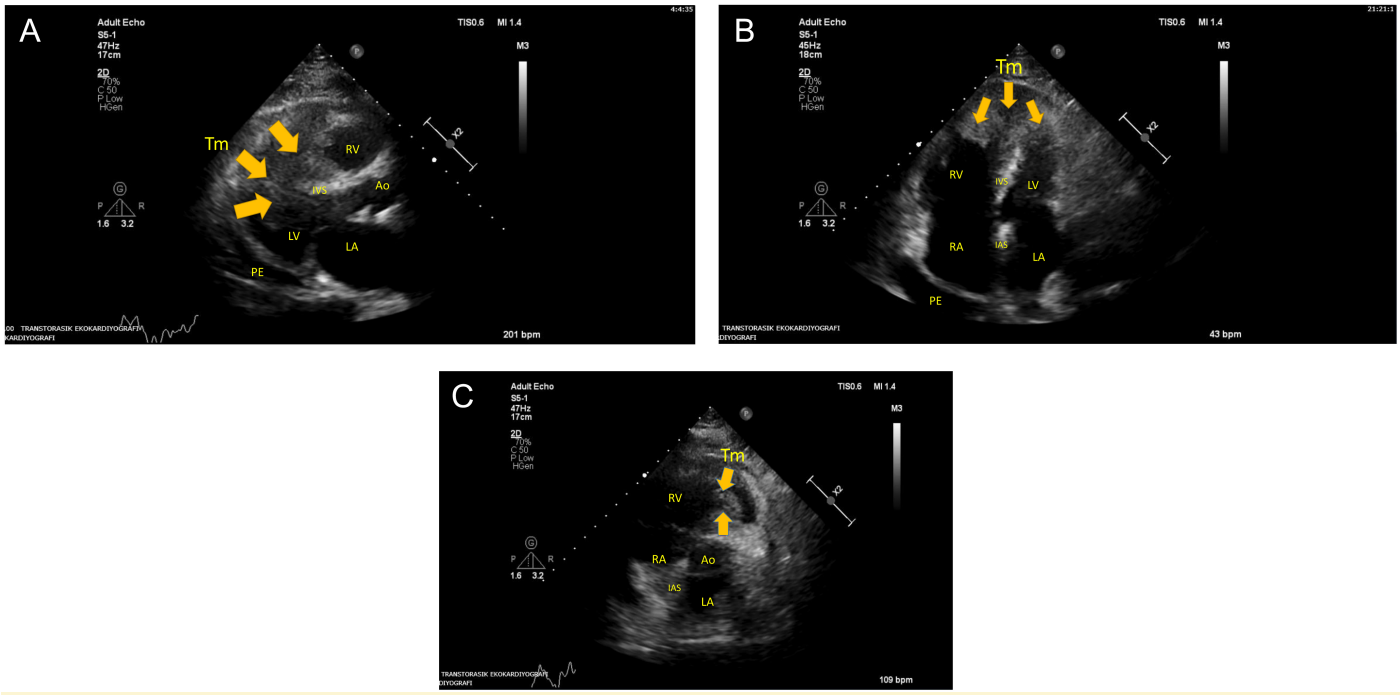

Figure 2. Cardiac tumor and tumor-related cardiac thrombus formation infiltrating the right ventricular interventricular septum and apex of the heart on transthoracic echocardiography. * the red arrow indicates the thrombus. (A) Parasternal long axis view. (B) Apical four-chamber view. (C) Parasternal short axis view.

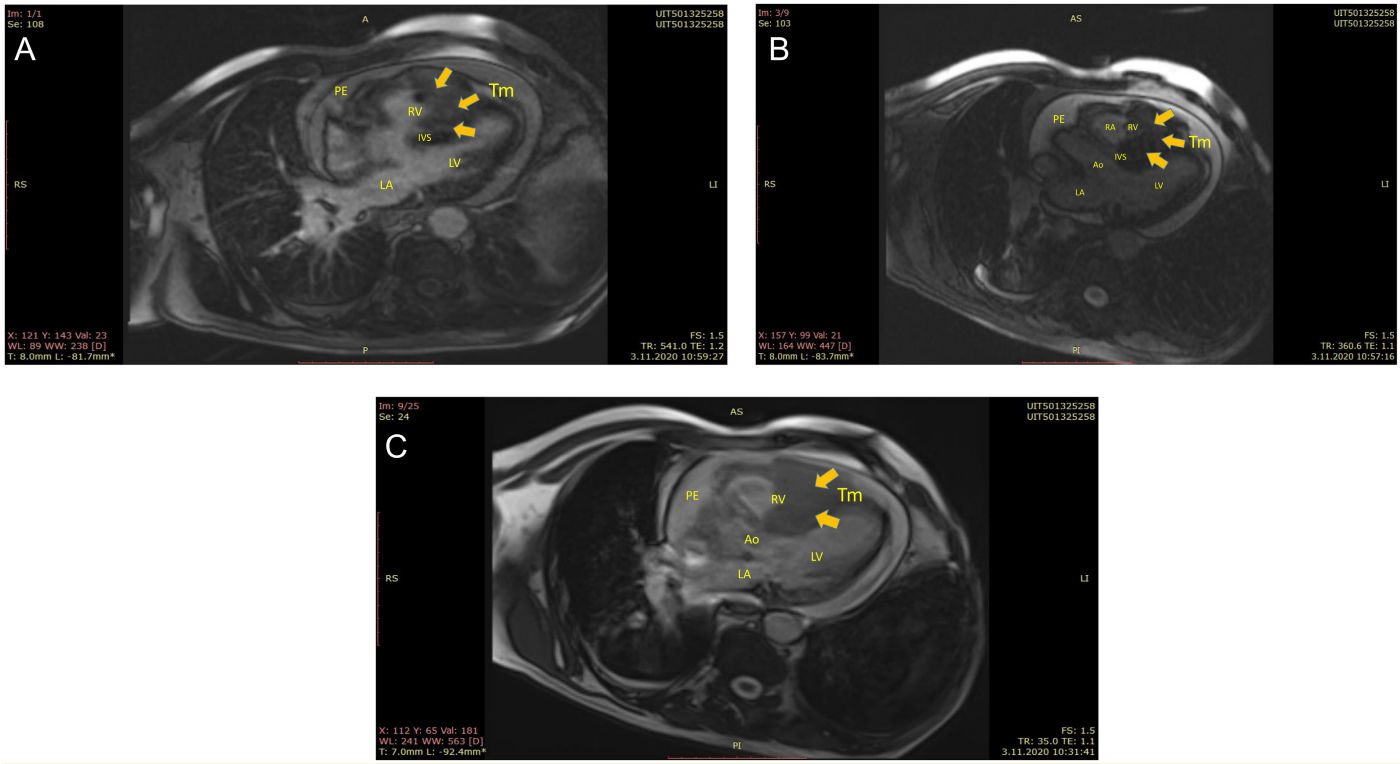

Figure 3. Concentric hypertrophy, metastatic mass extending from the left ventricular (LV) septum to the right ventricular (RV) cavity and markedly obliterating the RV cavity, metastatic mass with thrombus on cardiac magnetic resonance imaging. (A) Tumor infiltrating RV apex. (B) Extending into RV cavity. (C) Obliterating RV cavity.