Clinical presentation

• A 70-years-old male patient.
• Ex-smoker.
• No past medical history.
• A surgical history of unilateral nephrectomy on top of Renal cell carcinoma since 7 years, but the patient didn’t receive any chemotherapy or radiotherapy postoperatively.
Clinical presentation

• One month before presentation, the patient started to complain of easy fatigability and weight loss.
• He sought medical advice with an internist who referred him to a hematologist after discovering a pancytopenia in his blood picture afterwards he was diagnosed as acute myeloid leukemia.
• A routine prechemotherapy echocardiography was ordered.

Cardiac MRI

T2 with fat suppression
Cardiac MRI

Late GAD

Diagnosis

• So, the patient was diagnosed to have a very rare form of extra-medullary myeloid leukemia or what is called myeloid sarcoma (MS) or cardiac chloroma.

• Due to patient frailty, the team decided to proceed for palliative chemotherapy and follow up by echocardiography and CMR.

• Unfortunately, during chemotherapy sessions the patient developed massive Intra-cranial hemorrhage (ICH) and died shortly after.
Take home message

• MS or chloroma is a rare extramedullary tumor that may complicate AML. It can occur concurrently with, prior to, or even after the onset of marrow disease.

• These tumors are formed of immature myeloid cells that most commonly affect bone, skin, orbit, spine, lymph nodes and gastrointestinal tract.

• Although microscopic leukemic cell infiltrates are commonly present in the heart, intracardiac tumor masses are rare and have been found in < 1% of patients with AML in larger autopsy series.

Take home message

• The median age of diagnosis is 35 years (7–72 years) with a marked male predisposition and right atrial predominance.

• The gold standard for diagnosis is based on histopathological analysis of endomyocardial biopsies.

• Prompt treatment with standard AML protocols should be initiated.

• Role of radiotherapy is still unclear and better reserved to special cases such as urgent symptomatic relief, palliation or residual mass despite chemotherapy.

• Presence of MS is usually associated with poor prognosis.
Take home message

• TTE has been and remains the main tool for diagnosis and follow up of all cardiac masses.
• Recent advances in cardiac imaging including MSCT, CMR and PET scan can help in further characterization of cardiac masses as well as detection of any complications.

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Thank you