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BACKGROUND

Cardiac tumors can be incidental findings in multimodalities images and their presence imposes a complete description of the mass and the patient's previous treatment. At the National Institute of Cancer, located in Rio de Janeiro, Brazil, a renal cancer patient was initially diagnosed with a presumptive diagnosis of septal leaflet papillary fibroelastoma (PFE) of the tricuspid valve, but the histopathologic exam revealed a metastatic renal cancer.

CASE REPORT

At the National Institute of Cancer, a 67-year old patient being treated with tyrosine kinase inhibitors (TKIs) for metastatic renal cancer was submitted to a routine transthoracic echocardiogram. The exam revealed a mobile 1.3cm x 1.5cm (0.5" x 0.6") irregular mass with homogeneous content attached to the atrial side of the valve by a small irregularly shaped pedicle. The mass prolapsed into the right atrium in systole. These characteristic lesions initially favored the diagnosis of papillary fibroelastoma (PFE) and were supposed by a transesophageal echocardiography (TEE). Once endocarditis was excluded, anticoagulation with low molecular weight heparin was prescribed. The sequential echo didn't show changes; however, six months later, the patient presented chest pains. Following a new echo that showed morphologic changes of the tumor, he was submitted to its resection and the biopsy revealed a renal cell carcinoma.

DISCUSSION

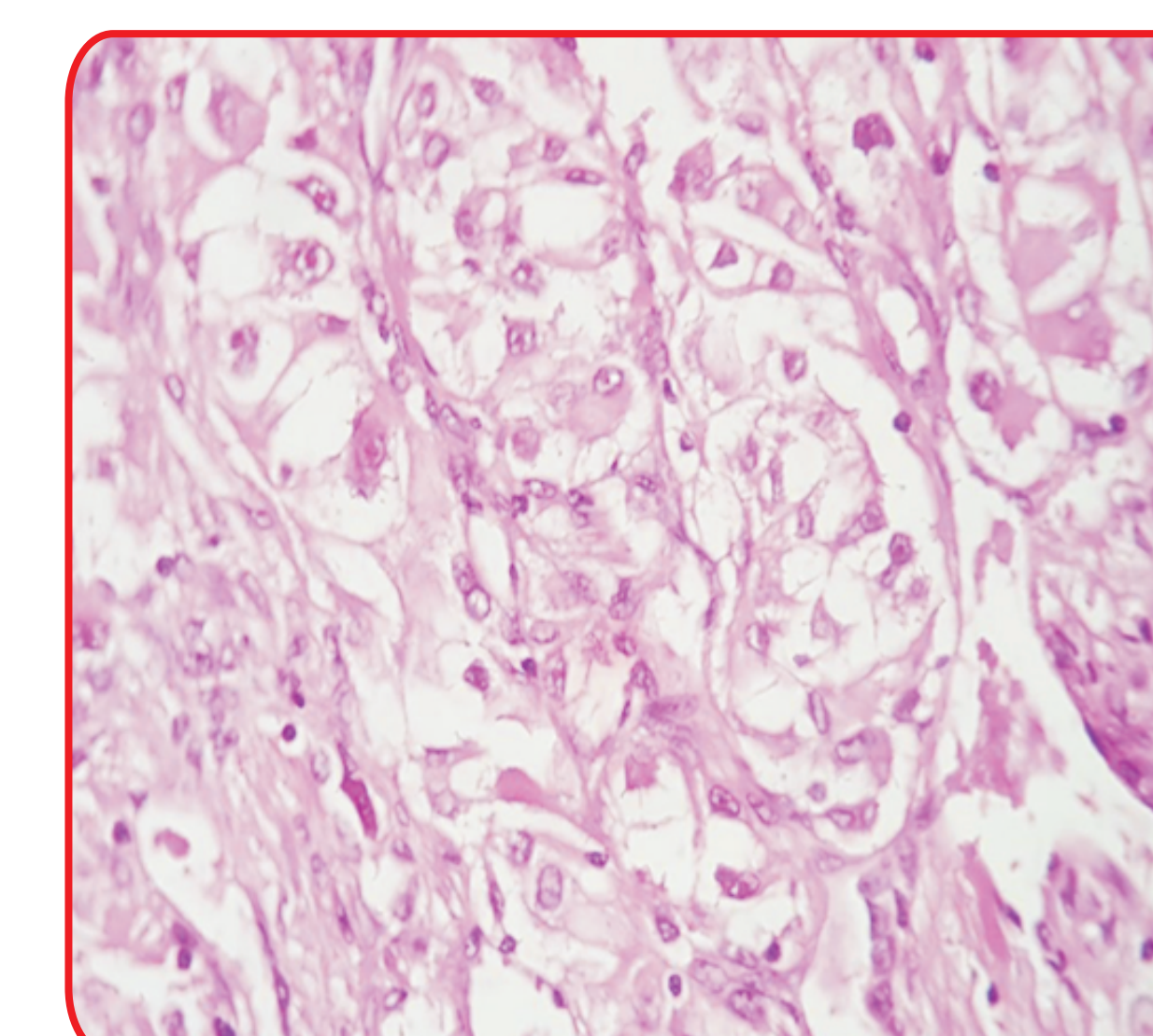
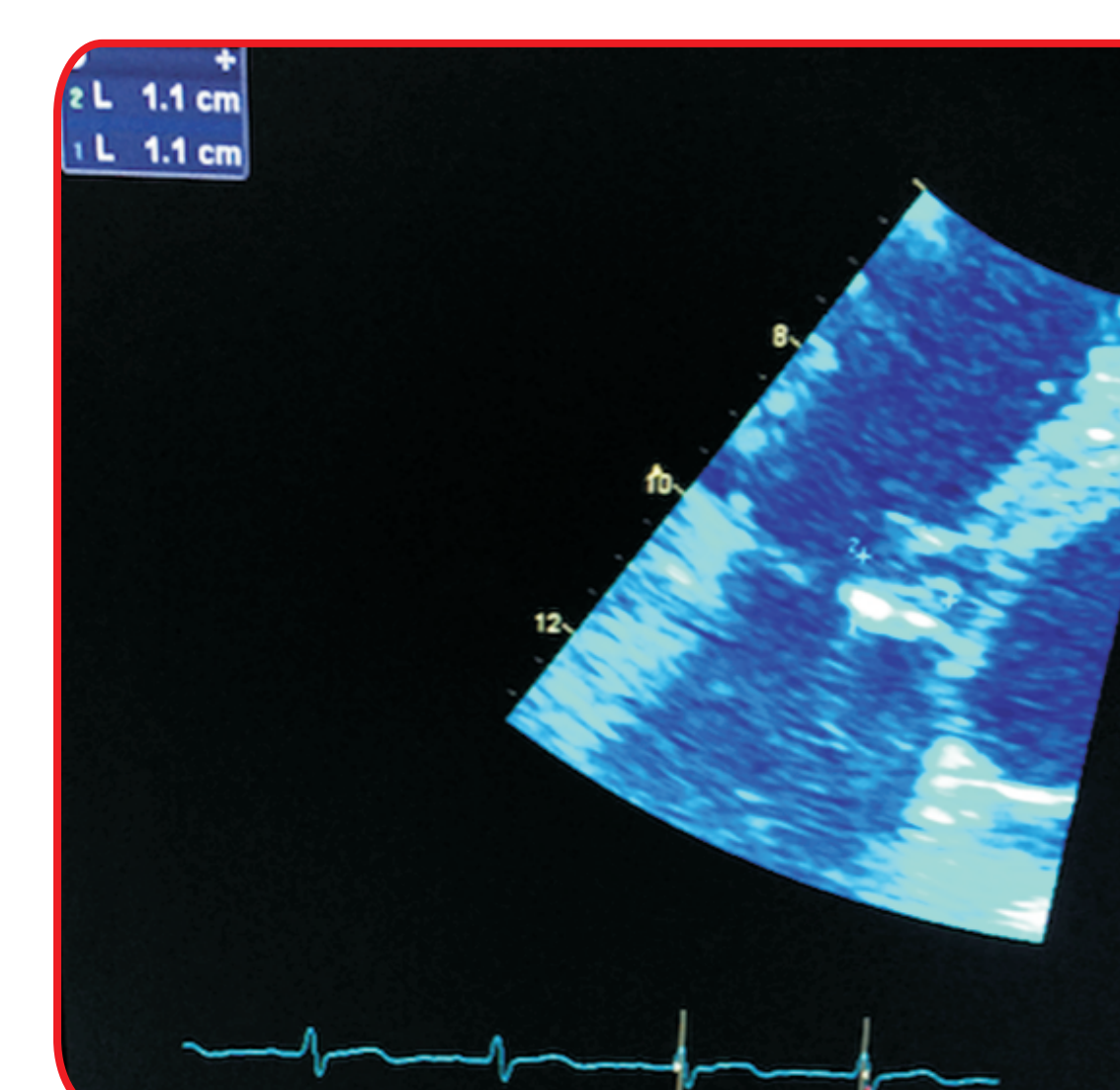
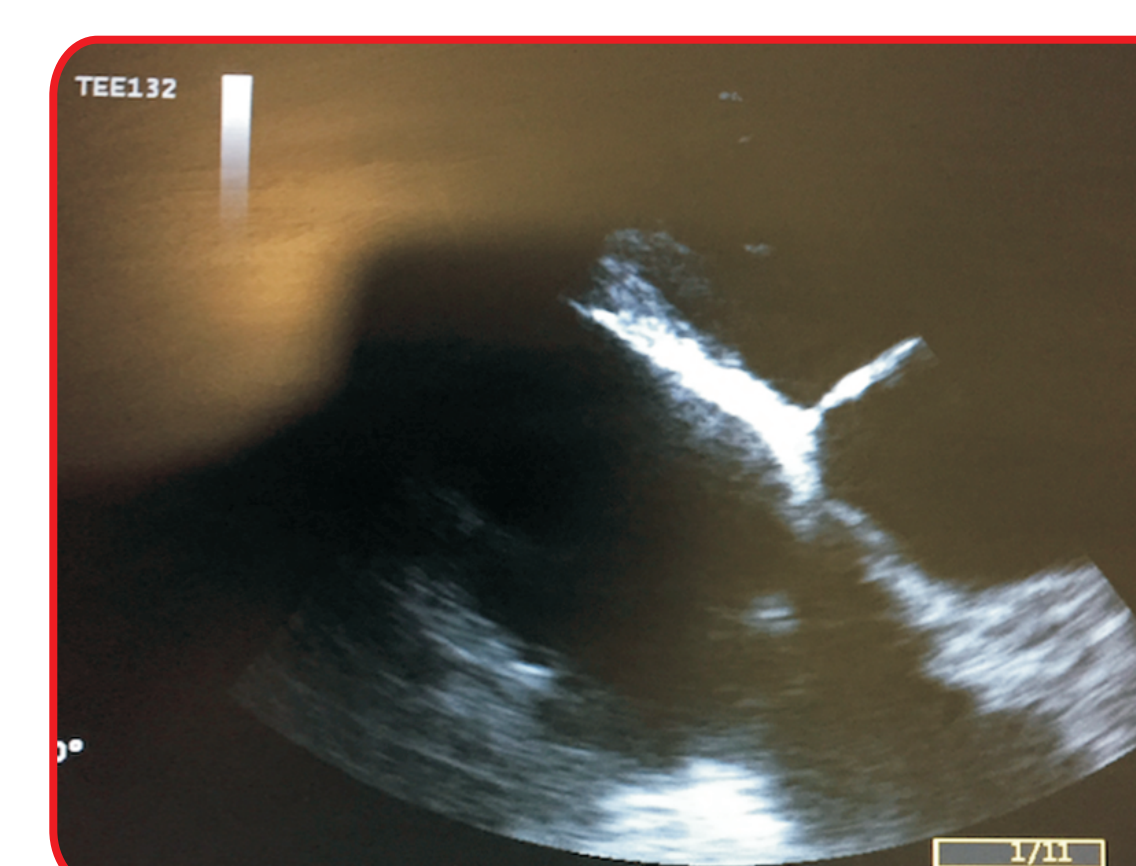
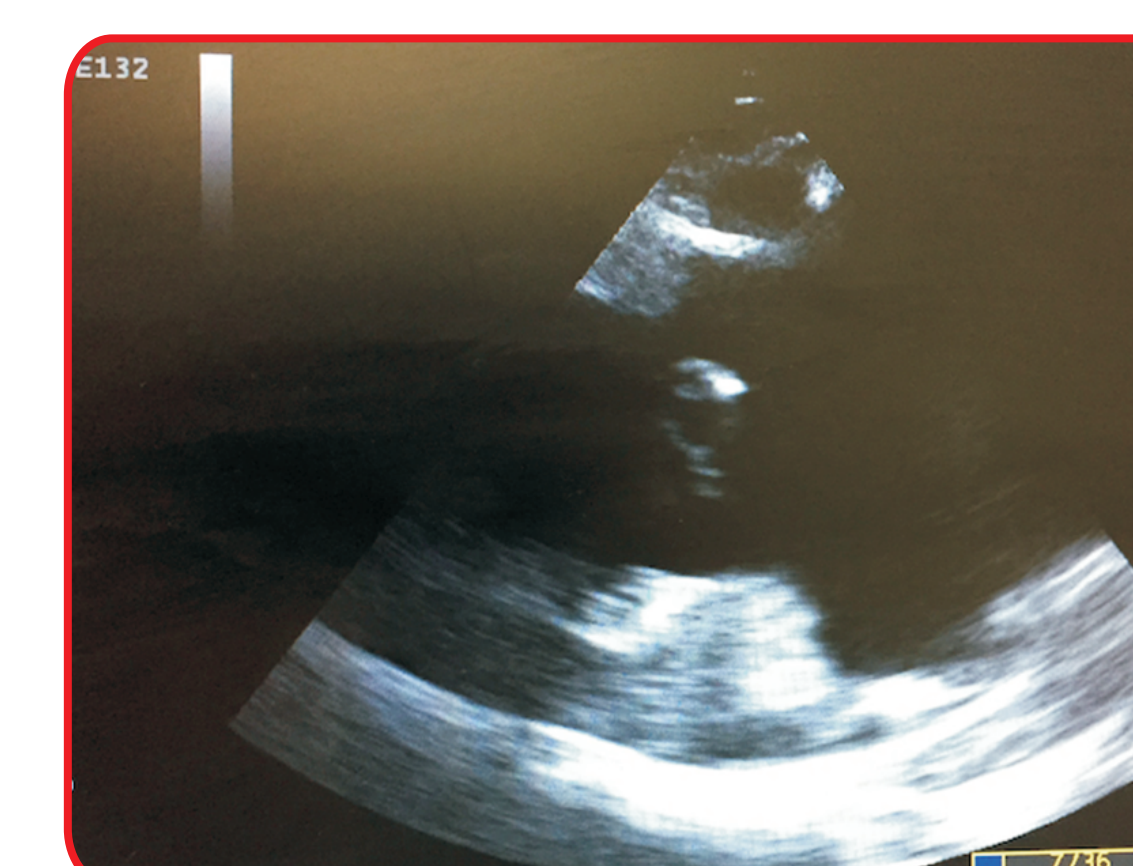
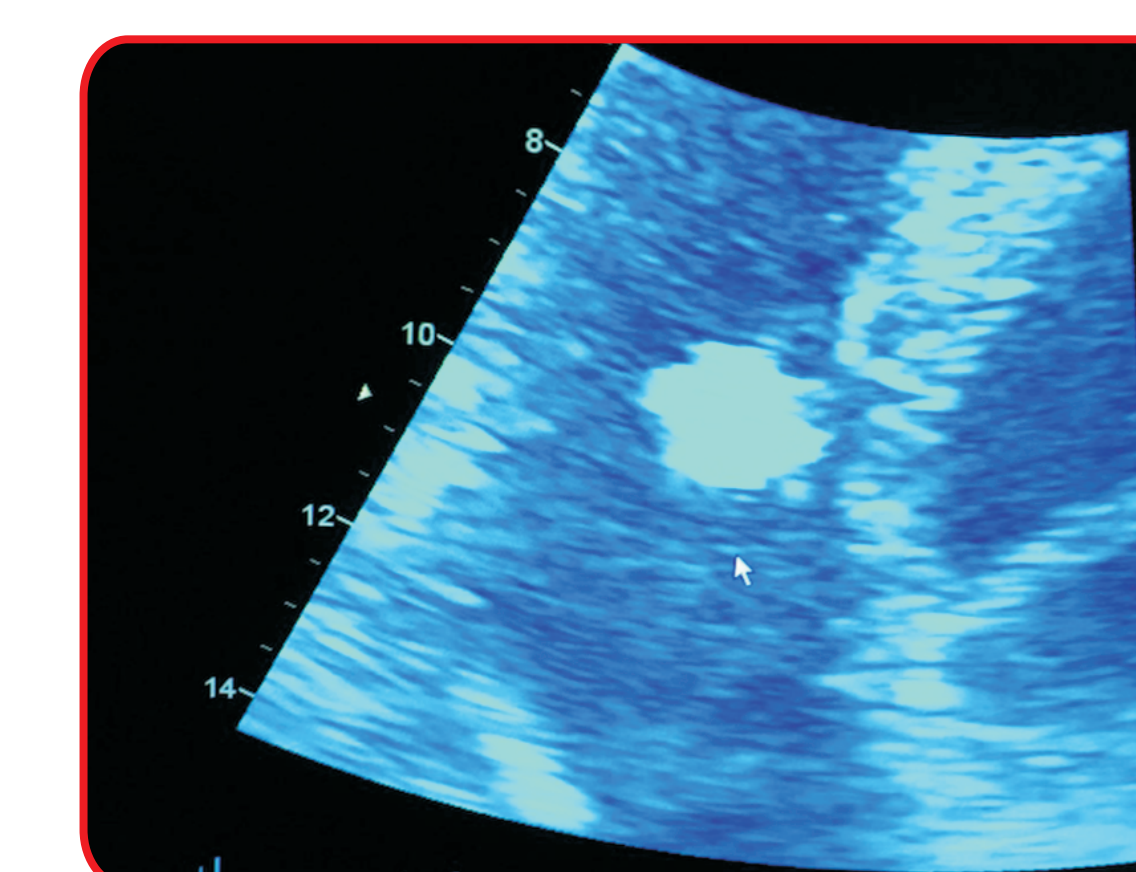
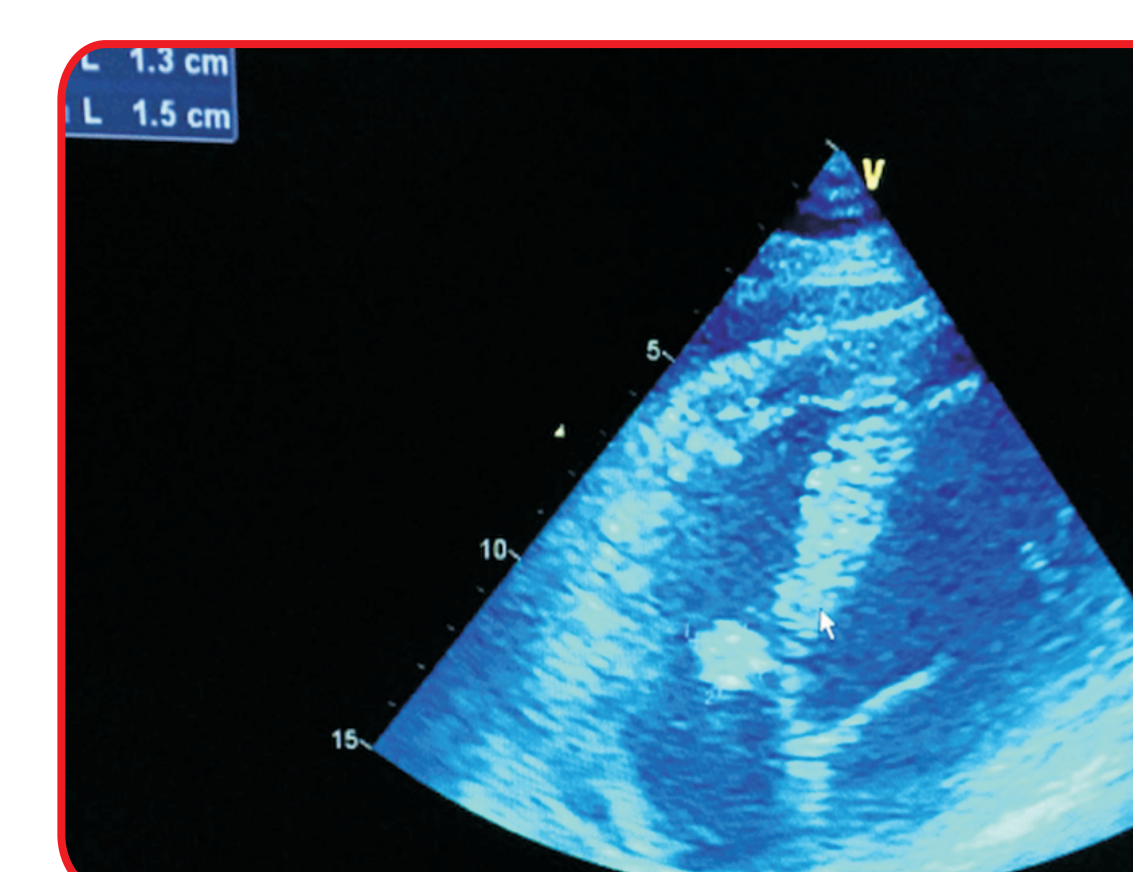
PFE accounts for 10% of all primary cardiac tumors. The majority of fibroelastomas arises from the valvular endothelium and is left sided in origin. Of these, right sided valvular PFEs are rare presentations of a non-metastatic tumor, increasing the risk of embolization. The first echocardiogram images showed a homogeneous mass attached to the septal leaflet of the tricuspid valve without regurgitation. Infectious endocarditis was excluded due to negative sample blood culture; no tricuspid valve regurgitation, absence of symptoms or fever. There weren't catheters on the right heart. The diagnosis of PFE was then supposed by transesophageal echocardiography (TEE) that still excluded atrial and septal defects and confirmed the suspicion of a mass attached to the valve. Six months later, after a chest pain episode and a new echo showing morphologic changes, the mass was excised and metastatic lesion to the valve confirmed.

This case reveals the importance of multimodalities images and biopsy study. Echocardiography is typically the primary modality used for diagnosis or evaluation of a suspected cardiac mass because of its availability, noninvasiveness, absence of contrast material or radiation exposure, and the ability to make dynamic assessment of cardiac masses. PFE was the primary suspicion because of its typical morphology and absence of valve tricuspid regurgitation. However, the emergence of atypical thoracic pain, changes in structure of the mass, presence of pericardial effusion, and high metastatic potential of renal cell cancer with previous vena cava thrombectomy, led the patient to an anatomic study of the mass.

The possibility of cardiac metastasis should be considered in any patient with a malignancy and new cardiac symptoms, particularly with distant metastases or thoracic involvement

REFERENCES

1- Donisan T., Balanescu DV., Lopez-Mattei JC.et al. In Search of a Less Invasive Approach to Cardiac Tumor Diagnosis



Malignant neoplasm consisting of cells with cytoplasm clear irregular nuclei with eosinophilic macronucleoli compatible with renal cell carcinoma.