

## A Solid Mass in the Right Atrium almost Completely Obstructing the Superior Vena Cava

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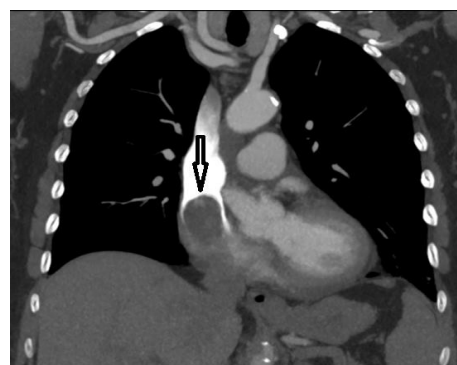
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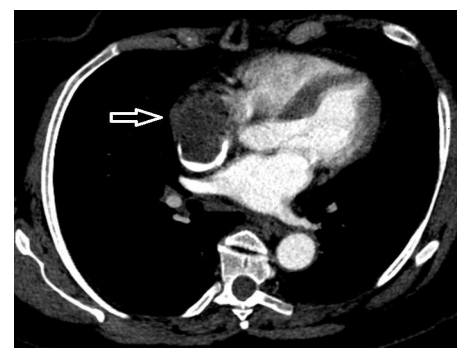
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An 83 year old woman was seen at the emergency department with complaints of palpitations and exertional dyspnea since several months. Her medical history and physical examination were unremarkable. Laboratory results showed chronic kidney disease and a N-terminal pro b-type natriuretic peptide level of 55 pmol/L (normal value <18 pmol/L). The Electrocardiogram (ECG) did not show any abnormalities and the chest radiograph demonstrated cardiomegaly without signs of heart failure. A Transthoracic Echocardiography (TTE) 24 months earlier showed no abnormalities. A Computed Tomography (CT) scan was performed in order to exclude pulmonary embolism. The CT scan disclosed the presence of a 5 x 5 x 3.5 cm solid mass (arrows Figure 1 and 2), localized in the Right Atrium (RA) and Superior Vena Cava (SVC).

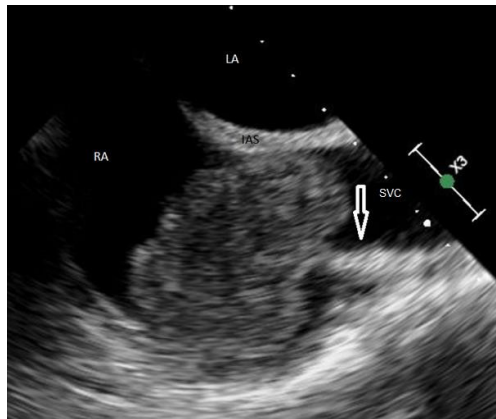
Subsequent transthoracic and Transesophageal Echocardiography (TEE) confirmed the presence of this mass attached with a pedicle to the wall of the SVC (arrow Figure 3), and thereby severely obstructing blood flow from the SVC to the right atrium (Figure 4). Pre-operative coronary angiography was performed in order to exclude concomitant coronary artery disease and this visualized the impressive vascularisation of the tumour (white arrow Figure 5) by a large right atrial branch (black arrow Figure 5) supplied by the Right Coronary Artery (RCA). On operation, the tumour was resected completely (Figure 6). Pathologic examination confirmed the diagnosis of a myxoma with an adjacent part of the atrial wall (black arrow Figure 7). Two months after surgical intervention, the patient reported to be asymptomatic.



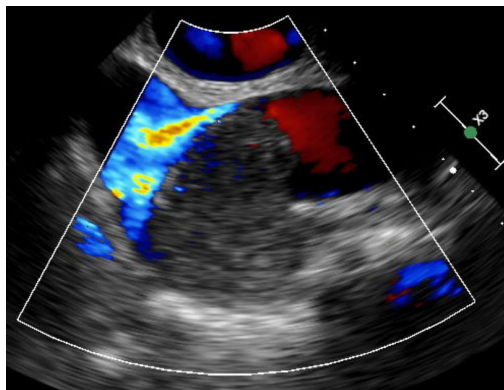
**Figure 1:** Coronal plane of chest Computed Tomography (CT) scan with venous contrast, showing the tumour (black arrow) in the right atrium obstructing the Superior Vena Cava (SVC).



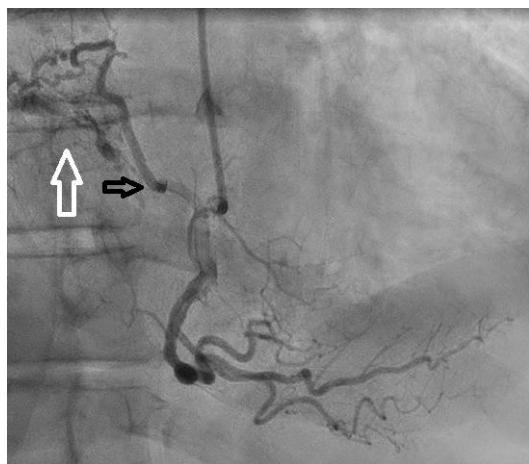
**Figure 2:** Transverse plane of chest Computed Tomography (CT) scan with venous contrast, showing the tumour (white-arrow).



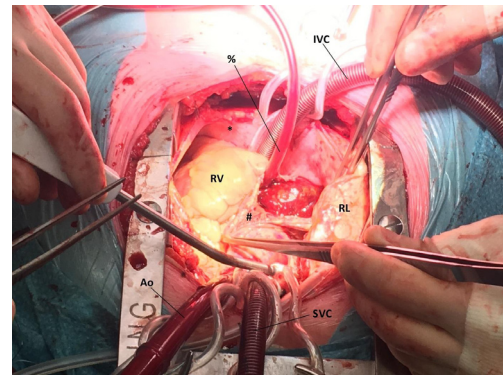
**Figure 3:** Bicaval 2D Transesophageal Echocardiography (TEE) view during systole, showing the tumour with a pedicle attached to the SVC wall (white arrow) at a 107 degrees angle (LA: Left Atrium; RA: Right Atrium; IAS: Interatrial Septum; SVC: Superior Vena Cava).



**Figure 4:** Bicaval Transesophageal Echocardiography (TEE) view with color Doppler during systole at a 92 degrees angle.



**Figure 5:** Coronary angiography showing the vascularization of the tumour (white arrow) by a large right atrial branch (black arrow) supplied by the Right Coronary Artery (RCA).



**Figure 6:** Intra operative view of the myxoma (RV: Right Ventricle; #: Right Atrial Appendage; \*: Diaphragm; %: Suction Cannula In Coronary Sinus; IVC: Inferior Vena Cava Venous Cannula; SVC: Superior Vena Cava Venous Cannula; Ao: Aortic Cannula; RL: Right Lung).



**Figure 7:** Macroscopic aspect of the myxoma and adjacent part of the atrial wall (black arrow) after resection.

## Conclusion

We presented a patient with a large and rapidly growing myxoma attached to the SVC, which is to our knowledge an extreme rare location.

## Conflict of Interest

All authors declare not to have any conflict of interest.