Migration of inferior vena cava stent into right ventricle: two- and three-dimensional echocardiographic imaging

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Report

A 65-year-old male presented with shortness of breath and weight loss. Chest radiograph revealed a left-sided pneumothorax. Following re-expansion, radiography and computerized tomography demonstrated extensive pleural and pericardial thickening with consequent severe stenosis of the inferior vena cava secondary to compression. Pleural biopsy revealed evidence of diffuse malignant mesothelioma.

Because of recalcitrant lower limb oedema and persistent hypotension, the insertion of a stent in the inferior cava was proposed as a palliative measure. Using right common femoral vein access, a self-expanding 14 × 60 mm stent was deployed in the vena cava under fluoroscopic guidance.

Twenty-four hours later, the patient developed recurrent dyspnoea and hypotension. Cardiac auscultation revealed a pansystolic murmur at the left sternal edge. Chest radiography showed no evidence of recurrent pneumothorax. Two- and three-dimensional echo revealed a free stent in the right ventricle (Figure 1; Supplementary data online, Movies 1 and 2) associated with severe tricuspid regurgitation. In view of co-morbidities and overall clinical status, the patient was deemed a poor candidate for surgical device retrieval, and a conservative management strategy was advocated. The patient passed away 4 weeks later.

Right ventricular migration of a systemic venous stent is a rare complication. We present a case of stent migration in a 65-year-old male who underwent palliative intervention for inferior vena cava compression secondary to malignant mesothelioma. Two- and three-dimensional echocardiographic images revealed evidence of a free-stent trapped in the tricuspid valvular apparatus causing severe tricuspid regurgitation.

Supplementary data

Supplementary data are available at European Journal of Echocardiography online.

Conflicts of interest: None declared.

References

Figure 1  Subcostal view by two-dimensional transthoracic echocardiography showing a stent lodged in the tricuspid valve apparatus. RA, right atrium; RV, right ventricle.