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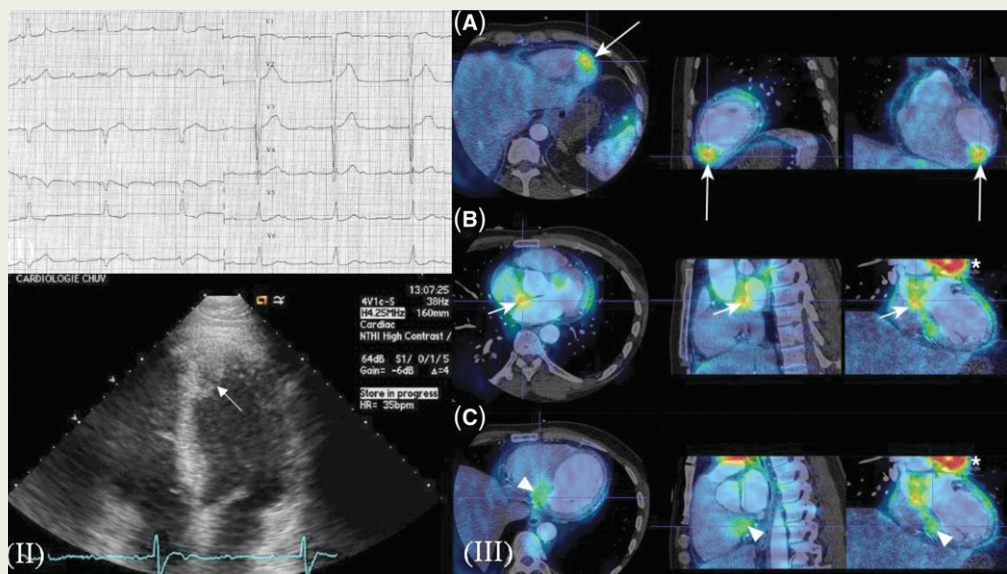
Haemoptysis and complete atrioventricular block

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A 45-year-old man presented to the emergency department complaining of cough with haemoptysis and progressive exertional dyspnea. There was no history of cardiovascular diseases. Electrocardiogram revealed atrioventricular dissociation with ventricular escape rhythm as indicated by the wide QRS complex (160 ms) (Panel I). Computed tomography of the chest demonstrated multiple low-density left pulmonary masses and a large left hilar mass (5.5 cm × 2.5 cm) encasing the left pulmonary artery (Panel



III, asterisk). On transthoracic echocardiography a large mass (2.8 cm × 1.6 cm) was noted in the apical area of the ventricular septum that extended towards the left ventricle (Panel II, arrow). Histopathology of the hilar mass revealed squamous cell carcinoma. A combined PET–CT examination with fluorine-18-fluorodeoxyglucose (F-18-FDG) revealed disseminated metastatic disease. The apical ventricular septal mass showed an intense focus of F-18-FDG uptake confirming the metastatic process (Panel IIIA, long arrow). However, hypermetabolic foci were also noted in the interauricular area (Panel IIIB, short arrow) and in the basal area of the anterior interventricular septum (Panel IIIC, arrowhead).

Whereas cardiac involvement by the tumour disease was suggested by echocardiography, the high sensitivity of the PET–CT allowed the detection of a metastasis whose location accounted for the complete atrioventricular block by invasion of the conduction system. The frequency of cardiac metastases is generally underestimated but has been evaluated to be around 10–15% of autopsy cases in patients with malignant tumour disease. Despite their frequency, metastatic heart tumours only rarely gain clinical attention because signs of cardiac involvement are either absent or overlooked since the clinical picture is chiefly dominated by generalized tumour spread. In this case, clinical findings of cardiac metastases occurred concurrently with those leading to the diagnosis of the primary cancer.