A 45-year old patient died after a difficult cardiac transplantation for isolated plasmocytoma, mainly from stenosis of both pulmonary arteries (Fig. 1). Preoperative magnetic resonance imaging (MRI) showed a voluminous and invasive tumour of the right ventricle free wall with extensions into the right atrium, the aortic root and pulmonary arteries (Fig. 2).

Figure 1: (A) Cross section of the aortic root (1) showed a malignant tumour encasing the heart with focal invasion to the right ventricle (2). The tumour displayed extensive haemorrhagic necrosis. (B) Cross section of the right ventricle showed extension of tumour to the tricuspid valve. (C) After cardiac transplantation, extracorporeal life support (ECLS) was mandatory to obtain haemodynamic stability and chest computed tomography scans showed iatrogenic stenosis of both pulmonary arteries.

Figure 2: (A) MRI revealed a tumourous extension to the right atrium. (B) Tumour compressing aortic root and the pulmonary artery trunk.