

Image in cardiology

Left Ventricular Pseudoaneurysm Following Thoracic Aorta Replacement



Seudoaneurisma ventricular izquierdo tras sustitución de aorta torácica

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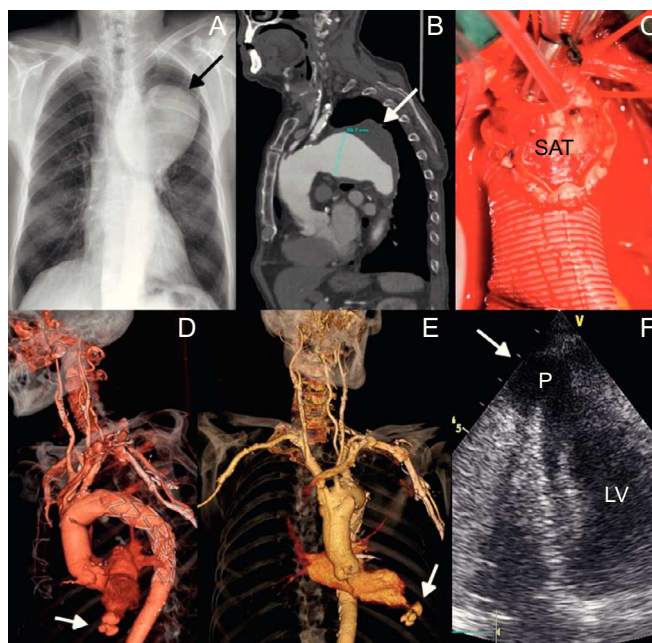


Figure.

Complex aortic aneurysms are often treated by surgical implantation of hybrid prostheses. The hypothermia usually employed in these procedures can increase stiffness of the cardiopulmonary bypass cannulas, and those that are in close prolonged contact with the endocardium can cause injury to the cardiac walls by rubbing and minor trauma. One example is the vent tube, placed in the apex of the left ventricle through the right superior pulmonary vein and used to maintain a bloodless field during surgery, after purging air from the chambers.

A 71-year-old man had hypertension and atypical chest pain in the left hemithorax. Chest radiography showed considerable mediastinal widening (Figure A, black arrow). Computed tomography demonstrated a huge aneurysm of the ascending aorta, aortic arch, and descending aorta (diameter, 106 mm) with a large mural thrombus (Figure B, white arrow). Treatment consisted in replacement of the ascending and descending aorta and aortic arch with an E-vita Open Plus hybrid stent-graft and reimplantation of the supra-aortic trunks (Figure C; SAT, supra-aortic trunks), using cardiopulmonary bypass, complete cardiocirculatory arrest, antegrade cerebral perfusion, and moderate hypothermia. Following a favorable postoperative period, postoperative computed tomography and transthoracic echocardiography revealed a left apical pseudoaneurysm communicating with the left ventricle apex through a narrow neck (Figures D–F, white arrows; LV, left ventricle; P, pseudoaneurysm). Surgery with monofilament suturing was performed to exclude the pseudoaneurysm.

In conclusion, the unusual complication affecting the left ventricular apex in the case presented was likely of iatrogenic cause, resulting from an increase in vent tube stiffness during hypothermia.

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