Mediastinitis and pseudoaneurysm of brachiocephalic artery long after the resection of invasive thymoma and postoperative irradiation

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Mediastinitis is a complication after median sternotomy. We report a rare case of mediastinitis and mycotic pseudoaneurysm of the brachiocephalic artery that occurred long after the resection of invasive thymoma and postoperative irradiation and was treated with extensive procedures.

Clinical Summary
A 68-year-old woman was seen with skin ulceration and suppuration from the wound in the anterior chest wall. She had undergone resection of invasive thymoma through median sternotomy 65 months previously. This operative treatment included combined resection of pericardium, right lung, and superior vena cava, along with interposition of an artificial polytetrafluoroethylene graft between the brachiocephalic vein and the right atrium. The patient received adjuvant radiation therapy of 50 Gy to the mediastinum for pathologically diagnosed Masaoka stage III thymoma. Computed tomography of the chest showed a dilated branch of the aortic arch compressing the sternum posteriorly, an occluded artificial graft between the brachiocephalic vein and the right atrium, and low-density areas in the mediastinum (Figure 1). A culture of the suppuration grew Pseudomonas aeruginosa. Arteriography showed a sacral aneurysm of the brachiocephalic artery (Figure 2).

The patient underwent excision of the aneurysm through median resternotomy and extended right collar incision for the diagnosis of mediastinitis and mycotic aneurysm of brachiocephalic artery. The implanted polytetrafluoroethylene graft was found to be filled with pus and was removed. After the sternum had been released from the aneurysm, the wall of which was found to be extremely thin, the aneurysm ruptured suddenly. Cardiopulmonary bypass was quickly instituted through the previously exposed cannulations of the femoral artery and vein, with the ruptured aneurysm compressed by the surgeon’s finger. Selective cerebral perfusion was established with additional cannulations of the right axillary artery and the right atrium. The aneurysm of the brachiocephalic artery was excised under conditions of circulatory arrest with profound hypothermia. A Dacron polyester fabric graft was anastomosed with the tailored aortic arch at the origin of the brachiocephalic artery proximally. The distal anastomosis was at the bifurcation of common carotid artery and subclavian artery, with cardiopulmonary bypass restarted without axillary artery perfusion. Circulatory arrest time was 22 minutes, and the duration of cardiopulmonary bypass was 224 minutes. After the patient was weaned from cardiopulmonary bypass, necrotic sternum was resected and the infected mediastinum was irrigated with povidone iodine. Pedicled
Pulmonary segmental venous infarction after living-donor lobar lung transplantation

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Complete obstruction of one or more of the major pulmonary veins after lung transplantation is a devastating complication. It results in hemorrhagic infarction of the affected lung within 4 to 6 hours, leading to irreversible lung damage. Reported treatments have included resection of the affected lobe and retransplantation.¹,²

We present a case of pulmonary venous infarction after transplantation that was treated conservatively.

Clinical Summary
A 16-year-old girl with a history of cystic fibrosis, multiple pulmonary infections, insulin-dependent diabetes, malnutrition, and anemia underwent a bilateral living-donor lobar lung transplantation for the treatment of end-stage lung disease secondary to cystic fibrosis. Before the operation, she had a forced expiratory volume of 20% predicted and was severely limited by her poor respiratory function. She had to use a wheelchair and required continuous supplementary oxygen. The surgery was performed with cardiopulmonary bypass support and proceeded uneventfully. The donor right and left lower lobes were implanted into the recipient right and left hemithoraces, respectively. Her chest radiograph after the operation was unremarkable, apart from mild bilateral diffuse infiltrates. On postoperative day 1, her chest radiograph revealed a confluent opacity involving the apical segment of the right lower lobe...