Aorto-pulmonary fistula due to graft infection after aneurysm-exclusion through Thoracic EndoVascular Aortic Repair (TEVAR)

Olivia Lauk1, Mario Lachat2, Ilhan Inci1, Didier Schneider1, Barbara Hasse3, Walter Weder1, Isabelle Opitz1

1 Division of Thoracic Surgery, 2 Division of Vascular Surgery, 3 Department of Infectious Diseases and Hospital Epidemiology, University Hospital Zurich, Zurich, Switzerland

Objective
The development of an aortopulmonary fistula has a low incidence and is usually diagnosed postmortem. Only a few cases are reported who were treated surgically. The present case describes the rare complication of an aortopulmonary fistula after endovascular aneurysm repair.

CASE PRESENTATION

A 69 year old patient with a history of a thoracic and abdominal aortic aneurysm treated by thoracic endovascular aortic repair (TEVAR) in 2010 and 2015 followed by a relining of the endovascular prosthesis, presented with hemoptysis and signs of an infection. The patient developed a septic shock and respiratory insufficiency necessitating intubation. A clinical suspicion of a fistula between the aortic aneurysm and the lung led to CT angiogram work-up which showed newly developed entrapped air in the aneurysm bag and a fistula to lung parenchyma (Figure 1). The patient was considered unfit for extensive open graft repair. In the primary operation a resection of the aortopulmonary fistula and a volume reduction of the infected aneurysm bag followed by a pericardial patch reconstruction were carried out (Figure 2 and 3). Additionally a VAC-therapy of the aneurysm sac was established. A second look and a renewal of the VAC sponge took place three days later. 7 days after the initial operation a partial resection of the destroyed lower left lung lobe under veno-venous extracorporeal life support (ECLS) was performed. The patient was discharged on POD 22. At the last follow-up visit 6 months after discharge from hospital, the patient is still alive.

CONCLUSION
Aortopulmonary fistula is a rare and often lethal complication which might occur also after TEVAR. In the present case the interdisciplinary management solved the complication and cured the patient.

References: