

Mold Attacks a Beating Heart

Thomas Weig^a Michael Irlbeck^a Claus Neurohr^d Hauke Winter^b Rene Schramm^c
Thomas Knösel^e David Horst^e

Departments of ^aAnaesthesiology, ^bSurgery, ^cCardiac Surgery and ^dInternal Medicine V, Division of Pulmonary Diseases, and ^eInstitute of Pathology, Ludwig Maximilians University, Munich, Germany

A 64-year-old man with a history of pulmonary fibrosis and right-sided single lung transplantation was admitted for left-sided pulmonary aspergillosis. Left-sided pneumonectomy was performed. A bronchopleural fistula developed and persisted despite prolonged combined antimycotic therapy, left-sided thoracoplasty and reduction of immunosuppressant therapy. Blood ELISA detected *Aspergillus* galactomannan antigen in 2 out of 27 measurements at a cut-off value of 0.5 Optical Density Index (ODI) and 0 out of 27 measurements

at a cut-off value of 1.5. Cardiac functions were stable with absence of cardiac arrhythmia despite intermittent atrial fibrillation until the patient suddenly died from acute heart failure. The autopsy findings are shown in figure 1.

Prevalence rates of 4.5% of invasive aspergillosis after lung transplantation in non-cystic fibrosis patients have been reported. Mortality rates of invasive pulmonary aspergillosis in lung transplant recipients are as high as 81.9% [1].

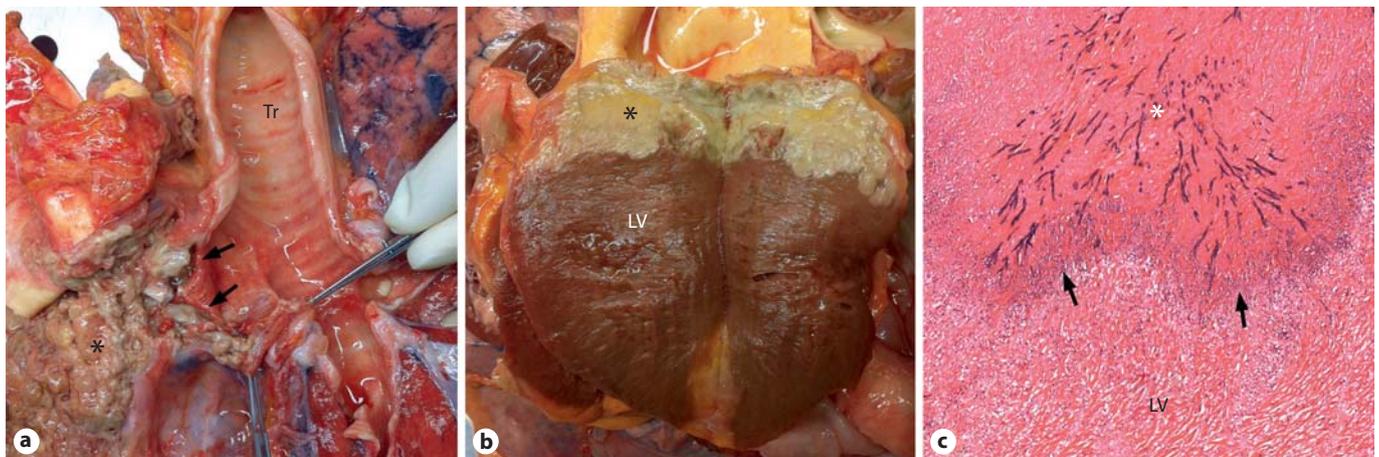


Fig. 1. Autopsy revealed significant insufficiency of the left primary bronchiolar stump (a, arrows), ending within necrotic debris of a pleuromediastinal aspergillosis (a, asterisk). The aspergillosis had invaded through the pericardium into the left heart ventricle (b, asterisk), which was confirmed by histology (c, asterisk). Only little inflammatory reaction surrounded the necrotic tissue (c, arrows). Tr = Trachea; LV = left anterior ventricle.

Aspergillus galactomannan antigen ELISA has been reported to offer a sensitivity of 78 and 64% with a specificity of 81 and 95% at cut-off values of 0.5 and 1.5 ODI, respectively [2]. Nevertheless, *Aspergillus* galactomannan antigen can remain negative even in cases of massive invasive aspergillosis despite its generally high sensitivity.

References

- 1 Singh N, Husain S: Aspergillus infections after lung transplantation: clinical differences in type of transplant and implications for management. *J Heart Lung Transplant* 2003; 22:258–266.
- 2 Leeflang MM, Debets-Ossenkopp YJ, Visser CE, et al: Galactomannan detection for invasive aspergillosis in immunocompromized patients. *Cochrane Database Syst Rev* 2008: CD007394.