Late Aortic Rupture Due to Stent Margin Pseudoaneurysm Formation Complicating Endovascular Stent Graft Repair of a Thoracic Aortic Mycotic Aneurysm

S. Aziz,1 R. McWilliams,2 A. Rashid,1 J.R. Gosney,1 P.L. Harris1 and R.H. Stables1
1The Cardiothoracic Centre, and 2The Royal Liverpool University Hospital, Liverpool, UK

Acute rupture of a thoracic mycotic aneurysm is a surgical emergency that requires urgent treatment to prevent further bleeding. The results of surgical repair are limited by high mortality and paraplegia rates. Endovascular repair with stent graft deployment has been reported as an alternative to high-risk surgery. We present the case of a patient with a ruptured mycotic aneurysm of the thoracic aorta complicated by an aero-oesophageal fistula. Endovascular stent graft deployment was successful at controlling bleeding. Oesophagectomy was required for a persistent leak from the oesophagus. The patient remained stable for 13 months after the index procedure and died from aortic rupture. This was related to the development of a pseudoaneurysm at the origin of left common carotid artery.

Further studies are required to determine the relevance of the endovascular treatment in the management of traumatic rupture of the aorta in young patients.

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Audit of Positive Microbiological Cultures in Patients Undergoing Arterial Reconstruction

R. Persavali, A. Salthna, D.J. Adam, A.W. Bradbury, S. Gossain and A.B. Wilmink
University Department of Vascular Surgery and Department of Microbiology, Birmingham Heartlands Hospital, Birmingham, UK

Objective: To describe the micro-organisms cultured in vascular patients and report the changing spectrum of pathogens over recent years.

Methods: Retrospective analysis of post-operative microbiology culture results from wound swabs, blood cultures, theatre specimens and central venous catheter tips for all patients undergoing vascular procedures between 1998 and 2003.

Results. 460 patients underwent a major vascular procedure; suprainguinal bypass (n = 34), infrainguinal bypass (n = 158), carotid endarterectomy (n = 97) and abdominal aortic aneurysm repair (n = 171). Positive microbiology results were identified in 86 patients (18%). Patients admitted as emergency had a significantly higher (\( \chi^2 = 20.2, p < 0.0001 \)) proportion of positive cultures (29% vs. 13%). The proportion of positive cultures was significantly different between procedures; suprainguinal bypass 29%, infrainguinal bypass 27%, abdominal aortic aneurysm repair 19%, carotid endarterectomy 0% (\( \chi^2 = 33.9, p < 0.0001 \)). The most commonly isolated organisms were Methicillin-sensitive Staphylococcus aureus (26%), MRSA (19%), and Staphylococcus epidermidis (10%) accounting for infection in 78% of patients. The prevalence of positive cultures declined over the study period from 18% in 1998 (18%) to 9% in 2003 (7%). There was no significant relationship between positive culture status and in-hospital mortality.

Conclusion. Staphylococci were most common after vascular procedures and MRSA was cultured in a significant proportion. Antimicrobial chemoprophylaxis should aim to cover these organisms.

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