

Page for the General Public

Anneke Damberg, MD

(on behalf of the Editorial Office)

The following pages summarize and review this issue's articles for an audience without a background in medicine or research.

Original Research Articles

McClure RS et al.: "Cause of Death Following Surgery for Acute Type A Dissection: Evidence from the Canadian Thoracic Aortic Collaborative"

In acute Type A aortic dissection, a tear occurs in the wall of the body's main artery, the aorta. Emergent surgery offers by far the best chances for survival. However, even after surgery mortality is high. The authors of the article determined causes of death in 123 patients who died following surgical repair of acute Type A dissection. They identified heart failure, stroke (bleeding or lack of perfusion of vessels in the brain) and bleeding as major causes of death. Aortic dissection can impair perfusion of organs such as the brain, kidneys, limbs or bowels before surgery, which is a major risk factor for complications and death after

surgery. New surgical techniques should address these major causes of death after surgery for in acute Type A dissection.

Foeke J.H. Nauta et al.: "Impact of Thoracic Endovascular Repair in Acute Type B Aortic Dissection: Preliminary Results"

In aortic dissection, a tear occurs within the wall of the aorta, the body's main vessel. In Type B dissection, this occurs in the part of the vessel in the chest that leads downwards to the abdomen. It is often treated with a stent graft, a prosthesis that is inserted into the vessel to stabilize it. However, dissection and dilation of the aorta in the segment which is not stabilized can be a potential complication. Foeke et al. conducted a study to see if this might be related to the stretching of the vessel wall as the heart pumps blood through it and its impairment by the insertion of a stiff stent graft. By analyzing images of the aorta in 4 patients, they could show that after insertion of the stent graft, the unstent-

ed part of the aorta was subject to more stretching than before. They concluded that this might be causative of ruptures and tears in this segment. However, the study group is extremely small and the evidence only indirect, therefore this study can only be regarded as a pilot to guide further research.

Case Reports

George Gradinariu et al.: "A Rare and Late Complication after Left Ventricular Assist 1 Device Explanation"

The authors present a case of a patient who developed severe impairment of her heart's function after giving birth. Her heart was temporarily supported with a mechanical assist device, which could later be successfully explanted. The assist device pumps blood through a graft prosthesis into the aorta, the body's main artery. A part of this graft was left in place after explantation and started leaking, causing the patient to cough blood. She underwent ur-



gent surgery and the leak-ing aorta was repaired with a patch. The patient recovered without further complications.

Pierre Demondion et al.: "Aorto-Cutaneous Fistula and False Aneurysm of the Ascending Aorta Five Years After Its Prosthetic Replacement for Stanford Type A Acute Aortic Dissection"

A rare complication of a repair or replacement of the aorta, the body's main artery, is a leakage from the suture line between aorta and prosthesis. The leakage leads to the creation of a blood-filled space called "pseudo-aneurysm" which can cave its way through the tissues e.g. even through the skin ("called aorto-cutaneous fistula"). This complication is life-threatening, and the surgical repair associated with high mortality. Surgery in these cases is challenging, especially because the false aneurysm can open up and bleed out when the chest is opened. To ensure continuous perfusion of the body and brain, the safest option is to connect the patient to the heart-lung machine via vessels in the axilla and/or neck before opening the chest. The authors describe a case of a 82-year-old patient who developed this complication, but recovered well from redo surgery.

Images in Aortic Disease

George Samanidis et al.: "Complete Shrinkage of the Obliterated False Lumen After Open and Endovascular Chronic Aortic Dissection Stanford Type A Repair"

The authors describe a case of the patient who had a Type A aortic dissection, a tear in the wall of the body's main vessel. Blood was flowing through a false channel within the wall of the aorta. Blood was flowing through a false channel within the wall of the aorta. He underwent surgery, in which a part of the vessel was replaced and another part of the vessel stabilized with a stent graft prosthesis, a graft that is inserted into the vessel without replacing it. Since only a part of the aorta is replaced, in many cases, the false channel remains open and perfused in the parts of the aorta that are not replaced. This can cause dilation and rupture during follow-up. In this patient, imaging 2 years after surgery showed that the entire false channel was closed and had shrunk.

What I Did

Sandeep Mahapatra et al.: "Management of Iatrogenic Injury to Infe-

rior Vena Cava and Right Common Iliac Artery for Drainage of Psoas Abscess"

Mahapatra et al. describe a case of a patient who had an infection in a muscle in his lower trunk. The infection was treated with a drainage, but during this procedure, two major vessels in the groin and abdomen were injured, causing life threatening bleeding. During surgery, the inferior vena cava, the main vessel that returns blood from the body back the heart, had to be closed off with a suture to stop the bleeding and save the patient's life. Closing the vena cava impairs the flow of blood back to the heart, but the body can potentially use other vessels instead. However, the impairment of venous blood flow can cause swelling e.g. of the lower limbs and thrombosis, but with appropriate management, the patient in the presented case recovered well.

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