Learning from experience – Challenging cases and complications in aortic surgery: Room Cervin **(08:30–10:00)**

Challenging case of acute aortic dissection

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Management of acute type A aortic dissection remains a formidable challenge for cardiac surgeon Supracommissural ascending aorta replacement with resection of the primary intimal tear represents the standard treatment and the extension of aortic repair distally remains a matter of controversy. Arch replacement is sometimes required for resection of primary or additional tears, for securing the distal anastomosis by resection of fragile aortic tissue and for reconstruction of the head vessels. The "frozen elephant trunk technique", that combines endovascular treatment with conventional surgery, can be extremely helpful in these cases

We describe an interesting case of a 60-year-old man with acute type A aortic dissection and massive left hemothorax due to contained rupture of the descending thoracic aorta distal to the left subclavian artery (Figure 1). The patient underwent emergent surgical repair. Cardiopulmonary bypass was instituted through right axillary artery and right atrium and myocardial protection was achieved with cold crystalloid cardioplegia. The arch reconstruction was performed under circulatory arrest, bilateral antegrade selective cerebral perfusion and moderate hypothermia (25°C). The aorta presented a complete rupture of the false lumen distally to the left subclavian artery. We decided to perform the repair with the E-vita open prosthesis in order to fix the rupture and to stabilize the descending aorta. The aortic arch and the supra-coronary portion of the ascending aorta were replaced with a branched-graft. Postoperative period was uneventful and the patient was discharged on the sixteenth postoperative day. Pre-discharge angio CT-scan showed a good result of the aortic reconstruction with a complete thrombosis of the false lumen at the stent level (Figure 2). The false lumen was partially thrombosed in the distal descending aorta and patent in the abdominal tract. A complete healing of the thoracic aorta with a persistent patent false lumen in the abdominal aorta was demonstrated after nine months by CT-scan (Figure 3). Concluding, the frozen elephant trunk technique allowed us to treat successfully this very complex case that would be difficultly managed with a standard approach. Moreover, hybrid stent graft promoted false lumen thrombosis around the stent graft and below.

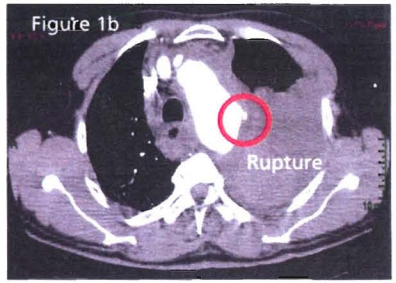

Figure 2 Preoperative

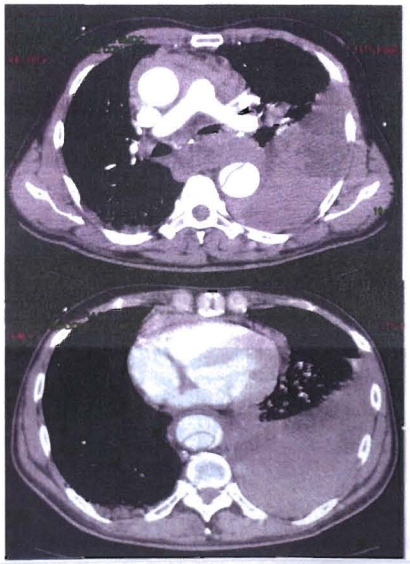

Figure 2 Nine months after surgery