Endovascular stent grafting of the downstream aorta after complete arch replacement using the frozen elephant trunk technique for acute type A aortic dissection

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Received 5 March 2012; received in revised form 24 April 2012; accepted 2 May 2012

Keywords: Frozen elephant trunk • Endovascular aortic repair • Acute type A aortic dissection

An 81-year-old woman was admitted with sudden chest pain. An acute type A aortic dissection involved the descending aorta with an arteriosclerotic aneurysmal change (Fig. 1). Endovascular aortic repair of the downstream aorta was performed at 3 weeks after complete arch replacement using the frozen elephant trunk technique (Fig. 2).

Figure 1: Computed tomography demonstrated an acute type A aortic dissection with the primary entry located on the ascending aorta (black arrow) and a massive effusion in the pericardium (*). The aortic dissection involved the descending aorta, which was dilated to 6.1 cm with an arteriosclerotic aneurysmal change (white arrow), the so-called Cambia classification group III.

Figure 2: Thoracic endovascular aortic repair for a coexisting descending aneurysm was performed after complete arch replacement using the frozen elephant trunk technique (A). Computed tomography angiography at 3 months after surgery showed shrinkage of the descending aorta and a decrease in the aneurysm size to 5.6 cm (B).