Successful Surgery for An Acute Type A Aortic Dissection Following Repair of A Descending Thoracic Aortic Aneurysm

Acute type A aortic dissection in the presence of a previously repaired atherosclerotic descending thoracic aortic aneurysm is rarely reported. We experienced a patient who underwent an ascending aortic replacement with reconstruction of the aortic arch 16 months after repair of a descending thoracic aortic aneurysm. We succeeded in the redo operation with comprehensive techniques involving selective cerebral perfusion, deep hypothermia, early antegrade systemic circulation for cerebral protection, and femoro-femoral bypass with occlusion of the descending aorta for lower systemic perfusion as well as renal perfusion. The patient recovered and is doing well one year after the redo operation. (JJTCVS 1998; 46: 253-256)

Index words: type A aortic dissection, descending thoracic aortic aneurysm, redo, complication of aortic aneurysm

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In recent years, technical refinements and advances in the diagnosis and perioperative management of patients undergoing thoracic aortic surgery have led to a reduction in operative morbidity and mortality. Late complications, however, such as recurrent aneurysms, pseudoaneurysm formation, new or persistent dissections, progressive dilation, infected grafts, and prosthetic endocarditis, all require reoperation.

We experienced a rare case of an acute Stanford type A aortic dissection in the presence of a previously repaired descending thoracic aortic aneurysm.

Case

A 62-year-old man was transferred to our institute from another hospital for surgical repair of an acute Stanford type A aortic dissection with aortic insufficiency. The patient had a history of systemic hypertension, but his blood pressure was well controlled using a calcium antagonist. He had no history or characteristics of Marfan’s syndrome. His medical history included an operation to repair a ruptured descending thoracic aortic aneurysm 16 months prior to this admission. At that time, the patient was diagnosed with a ruptured true descending thoracic aneurysm. He underwent emergency surgery to replace the descending thoracic aortic aneurysm with a straight 24-mm Hemashield vascular graft (Meadox Medicals, Oakland, NJ, USA) and to reconstruct the left subclavian artery with an 8-mm Hemashield vascular graft. Proximal anastomosis was performed at the ascending aorta via a continuous suture with 5-0 polypropylene, clamping the ascending aorta laterally with a side-clamp forceps.
**Fig. 1.** Magnetic resonance image showing an aortic dissection with enlargement of the ascending aorta. An intimal flap is seen originating from the sinus of Valsalva and extending to the brachiocephalic artery.

**Fig. 2.** Schematic diagram of the operative procedure.
B: The ascending aorta was repaired with two strips of Teflon felt.
C: A four-branched graft was sutured to the distal end of the ascending aorta and to the proximal end of the previously replaced graft in the descending aorta. The systemic circulation was re instituted through a side branch of the graft.

**Fig. 3.** A postoperative aortogram shows no evidence of stenosis and good flow in the aorta through all three reconstructed branches.