A 61-year-old man presented with acute onset of severe ripping pain in the back and chest. He was referred to our institution with a non-contrast CT scan that showed a Type B aortic dissection. Maximum doses of six anti-hypertensive agents were required to bring his systolic blood pressure below 140 mmHg. A CT angiogram was obtained to further evaluate the dissection. The 3-dimensional reconstruction from this study revealed a Type B aortic dissection (Cover) with extension into the left renal artery (Panel A). The volume-rendered image (Panel B) shows the dissection flap encroaching on the true lumen of the left renal artery. This is an example of dynamic arterial obstruction, in which the false lumen intermittently occludes flow across the true lumen. The primary entry tear was excluded using a 41 mm by 10 cm thoracic endoprosthesis (TAG, WL Gore & Assoc., Flagstaff, AZ, USA). An abdominal aortogram performed just minutes after the endograft was deployed demonstrated restored luminal patency of the left renal artery (Panel C). Two days later, the patient was dismissed from hospital on atenolol and low-dose lisinopril; his blood pressure was well controlled.

DISCUSSION

Traditionally, medical therapy has represented mainstay treatment for Type B aortic dissection. In uncomplicated dissection, the 30-day mortality is approximately 5-7%; the mortality rate rises sharply in the presence of limb ischemia or visceral compromise. In patients with renal or mesenteric ischemia, progression of dissection, uncontrolled hypertension, or unrelenting pain, perfusion can be reestablished with either surgical or endovascular techniques. Endovascular repair methods include fenestration of the dissection flap, endografting, and branch vessel stent placement.1-3 In fenestration, flow is maintained through the false channel, which may leave patients at increased risk for late aneurysm formation and rupture. In contrast, stent grafting seals the dissection and produces immediate remodeling of the distal aortic tree. Larger series will be required to determine if stent grafting reduces the risk of late aneurysm formation and rupture.

The authors wish to thank Steven Maida, RT, RCT, for assistance in processing CT images.

REFERENCES


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