IMAGES IN CARDIOLOGY

Fig. 1.

Fig. 2.

Fig. 3.

Magnetic Resonance Angiography for Crawford Type II Dissecting Thoracoabdominal Aortic Aneurysm

The high resolution, sensitivity and specificity of magnetic resonance imaging for aortic disease is well recognized and supported by the literature. We present a clinical case in which this technique was essential for focussing the decision on the type of surgery to perform.

A 67-year-old man, ex-smoker, with essential hypertension of several years' duration poorly controlled by medication, underwent chest x-ray study, which showed mediastinal thickening with no associated cardiovascular symptoms.

Magnetic resonance angiography of the aorta with dynamic injection of paramagnetic contrast material was performed. A large, Crawford type II dissecting aortic aneurysm was visualized, starting below the origin of the left subclavian artery and involving the entire descending thoracic aorta and abdominal aorta to the left iliac artery (Figure 1). The aneurysm appeared to be dilated, showed an intramural thrombus (arrow) and had a maximum diameter of 31 mm. Pronounced dilation of the false lumen was apparent, and a thrombus of the false lumen could be seen immediately after the origin of the left subclavian (arrow) and in the thoracic-abdominal curve (Figure 2).

The aneurysm measured 97 mm at its maximum diameter, and there was a small true lumen of 15 mm (Figure 3). The origins of the celiac artery, superior mesenteric artery and renal arteries, which depended on the true lumen, were visualized and showed a normal diameter. Surgery was undertaken to replace the thoracic and abdominal aorta with a 28-mm, 80-cm long Dacron tube graft that ran from the descending thoracic aorta, after the origin of the left subclavian artery, to the infrarenal aorta.

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