Repair of Juxtarenal Inflammatory Aneurysm with En-Bloc Division and Re-anastomosis of Left Renal Vein

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Introduction

Inflammatory aneurysms account for between 5 and 10% of abdominal aortic aneurysms, and frequently involve the periaortic structures (duodenum 97–100%, inferior vena cava 63–70%, left renal vein 48–51% or ureter 20–44%). Juxtarenal aneurysms occur in less than 5% of aortic aneurysms. We report a case of a patient who had a large juxtarenal inflammatory aneurysm whose proximal sac incorporated the left renal vein, requiring en-bloc division and subsequent re-anastomosis.

Case Report

A 72-year-old man was referred with an asymptomatic, 9 cm juxtarenal aneurysm, discovered incidentally by his family doctor. Past medical history included ischaemic heart disease, a mild brainstem CVA eight years previously, hypertension and hypercholesterolaemia. An urgent CT scan (Fig. 1) suggested an inflammatory component, and the left renal vein was seen to bear an intimate relationship to the aorta with no intervening fat plane.

At operation, the aneurysm had the typical “sugar icing” appearance of an inflammatory vessel. The duodenum and IVC were adherent and were not disturbed during the dissection. The left renal vein was incorporated into the proximal aneurysm sac. During initial attempts at mobilisation, it became clear the the vein wall would be breached in an uncontrolled fashion. A suprarenal aortic clamp was applied and the sac opened to below the level of the left renal vein. Hexagonal Derra clamps were placed over the edge of the proximal sac wall and left renal vein, which were divided en-bloc.

Inspection of the renal artery orifices from inside revealed a stenosed right renal artery origin while the left appeared normal. A 20 × 10 mm Hemashield Gold...
The sac was closed proximally behind the vein, approximating its two ends and enabling a tension-free end-to-end anastomosis with a 5/0 polypropylene suture. The remainder of the procedure was uneventful. The postoperative recovery was without complication and the patient was discharged on the 9th postoperative day.

Discussion

Left renal vein involvement in inflammatory aneurysms is not uncommon. The technique of minimal dissection of adjacent structures is recognised to minimise the risk of operative complications. However the anatomy of juxtarenal aneurysms can necessitate the division of the left renal vein in order to facilitate repair.1,4 This is the first report of en-bloc control, division and subsequent repair of the left renal vein in this fashion. The intra-operative discovery of a stenosed right renal artery in this case, suggested the possibility of compromised renal function by oversewing the left renal vein.

References