Peri-aortitis causing obstructive uropathy: a new indication for a urological follow up?

Discussion

This case highlights the caution that must be exercised in the surveillance of inflammatory aortic aneurysms, suggesting that inflammatory changes may extend beyond the immediate area of the aortic tissue. Indeed, the very minimal dilatation would suggest that this aneurysm was suited for surveillance only.

The patient sustained a permanent loss of renal function as a result of an obstruction requiring multiple interventions as a consequence of the effects on the ureter.

Jetty and Barber (2004) presented a similar case following aneurysm repair, with ureteric stenting being required in order to improve renal function. Piccoli et al (2010) described the management of retroperitoneal fibrosis using positron emission tomography scanning. In seven patients, six required ureteric stenting with half having a demonstrated abdominal aortic aneurysm.

There are several features to this case that are valid learning points: the non-specific generalized symptoms, the lack of direct ureteric involvement on the original imaging and the relatively non-dilated aorta suggestive of a more extensive tissue involvement beyond the aorta itself. Both of these latent features are suggestive of an insidious onset of obstruction that would be difficult to detect until late in the natural history.

The authors suggest not only that regular monitoring of renal function be undertaken, by estimated glomerular filtration rate or serum creatinine, but also that interval ultrasound is performed to detect development of hydronephrosis or dilatation of the pelvicalyceal system in such patients. BJHM

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Jetty P, Barber GG (2004) Aortitis and bilateral ureteral obstruction after endovascular repair of abdominal aortic aneurysm. *J Vasc Surg* **39**(6): 1344–7

Piccoli GB, Consiglio V, Arena V et al (2010) Positron emission tomography as a tool for the 'tailored' management of retroperitoneal fibrosis: a nephro-urological experience. *Nephrol Dial Transplant* **25**(8): 2603–10

LEARNING POINTS

- Inflammatory aneurysms may silently cause ureteric obstruction in the initial phase of the disease.
- Renal function should be followed up by using both biochemical and radiological markers of disease progression.
- Patients, such as in this report, may present with non-specific or generalized symptoms related to metabolic effects of uraemia.

Case Report

In September 2009, a 54-year-old woman was referred to the urology department with constant abdominal pain and backache of 6 months' duration. This was associated with flatulence, bloating, poor appetite and weight loss. Clinical examination was essentially normal. A subsequent gastroscopy showed mild gastritis while an abdominal computed tomography scan confirmed inflammatory changes around the aorta with mild diverticular disease the only other positive finding.

In April 2010, she presented acutely unwell. There were no urological symptoms of note but she was noted to be anuric during the first few hours of her admission. Her serum creatinine level was 1106 μmol/litre with a urea level of 37.4 mmol/litre. Bilateral grossly hydronephrotic kidneys were identified and staged percutaneous nephrostomies decompressed each kidney. This was followed by antegrade stenting. The patient was commenced on oral prednisolone of 40 mg per day. A computed tomography scan (*Figure 1*) showed periaortitis with some aortic wall calcification with mural thrombus. The mid abdominal aorta was ectatic but actually not aneurysmal, measuring only 2.5 cm.

In October 2010, at bilateral ureteric stent change, retrograde pyelograms again showed persistence of a significant narrowing of the upper ureters.

Subsequent renal function stabilized after stenting, but the deterioration in estimated glomerular filtration rate over time continued despite of resolution of the condition as judged by disappearance of the periaortic changes. From August 2009, the estimated glomerular filtration rate fell from over 90 ml/min/1.73m^2 to 3.1 ml/min/1.73m^2 in March 2010. Despite decompression with ureteric stents, the recovered estimated glomerular filtration rate in July 2011 was only 54 ml/min/1.73m^2.

Figure 1. Computed tomography scans from April 2010 showing (a) contrast enhanced and (b) non-contrast images of the kidneys and great vessels, at the level of the renal hilum. a. Cuff of peri-aortic inflammation (arrow). b was taken at the time of creatinine of over 1000 μmol/litre without contrast, showing the dilated right renal pelvis.