



Editorial

A rare cause of hydronephrosis: entrapment effect of giant iliac artery aneurysm

We present a rare case of unilateral ureteral obstruction caused by compression between the internal iliac artery aneurysm and common iliac artery. Obstructive nephropathy resulting from ureteral entrapment by vascular structures has not been published so far.

A 66-year-old male patient was admitted to our hospital with severe abdominal and right flank pain. Physical examination revealed abdominal tenderness and high blood pressure of 160/80 mmHg. Laboratory evaluation showed creatinine of 1.6 mg/dl, consistent with renal failure (normal values ≤ 1.3 mg/dl) and C-reactive protein of 2.94 mg/dl (normal values ≤ 0.5 mg/dl). The patient had a history of coronary artery disease, hypertension, and operation for ruptured aortic aneurysm 7 years ago. Computed tomography (CT) evaluation was performed. CT revealed bilaterally internal iliac artery aneurysm. Right-sided aneurysm is 9.5 cm in size and partially thrombosis with a mural thrombus of 15 mm in thickness, while left-sided aneurysm measuring 3 cm in diameter (Fig. 1). In addition, there was right-sided Grade 3 hydronephrosis with marked ureteral tortuosity (Fig. 2). Dilated ureter was obstructed and entrapped between the giant aneurysm and right common iliac artery (Fig. 3). Emergency nephrostomy was performed. Thereafter, giant aneurysm was treated by endovascular stenting.

Ureteric obstruction is most common urological emergencies. The physician should be alert for all possibilities of ureteral obstruction.

Arterial aneurysms in the abdominal cavity may cause urinary tract obstruction. Aortic aneurysms and rarely large-sized iliac artery aneurysms were reported in the etiology of ureteral obstruction [1,2]. Iliac artery aneurysms are common, but large size of aneurysm



Fig. 2. Contrast-enhanced CT examination with coronal multiplanar reconstruction image demonstrated Grade 3 hydronephrosis, tortuous ureter (white arrow), and aneurysm with thrombosis of the wall (black arrow).

formation is relatively rare [3]. The clinical spectrum can be present in various patterns as asymptomatic hydronephrosis, anuric acute renal failure, arteriovesical fistula and fatal or nonfatal aneurysm rupture. The majority of these cases are inflammatory aortic aneurysms associated

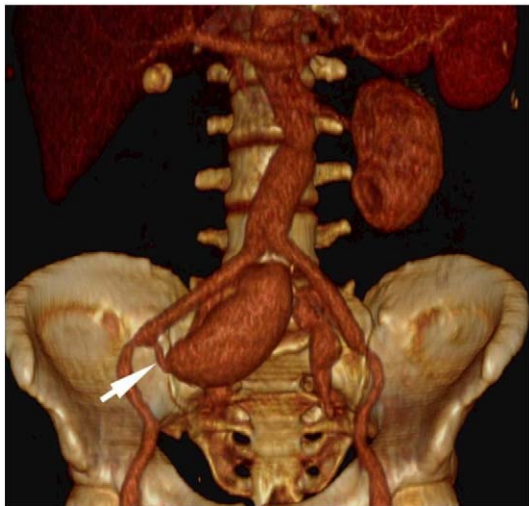


Fig. 1. Volume rendering coronal CT image shows giant aneurysm arising from internal iliac artery (arrow). Note that there is no function of the right kidney.



Fig. 3. Contrast-enhanced axial CT image shows dilated right ureter compressed between the aneurysm and right common iliac artery (arrow).

with perianeurysmal fibrosis that ultimately result in structural compromise of the urinary tract [1,3]. Iliac artery aneurysm is similarly associated with an inflammatory condition and fibrosis. However, we report a case of obstructive nephropathy caused by ureteral entrapment between the aneurysm itself and common iliac artery without associated fibrosis. To the best of our knowledge, this situation has not been reported in the literature previously.

References

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