Saccular aneursym of the infrarenal aorta inducing ureteral obstruction

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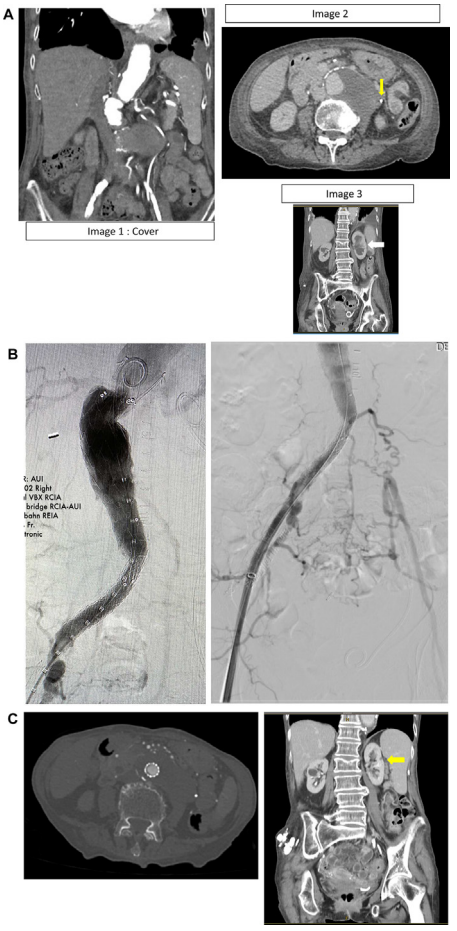
An 80-year-old woman with an extensive tobacco use history presented to the emergency department with notation of a significant recent increase in self-monitored blood pressure (190/90), malaise, and mild left flank pain. Past medical history was notable for significant renal insufficiency, chronic obstructive pulmonary disease, hypertension, and coronary artery disease. Physical examination was unremarkable for any significant abdominal tenderness. There was mild left costovertebral angle tenderness.

Laboratory examination was remarkable for urinary tract infection and acute renal failure with a creatinine level of 9.9 mg/dL and an estimated glomerular filtration rate of 4 mL/min. White blood cell count, erythrocyte sedimentation rate, and C-reactive protein were all normal. Computed tomography (CT) scan of the abdomen and pelvis without contrast was notable for a 7 cm saccular infrarenal abdominal aortic aneurysm inducing compression of the left ureter and hydronephrosis. A left ureteral stent was subsequently placed the next day by the urology team. She had persistent oliguria and was started on dialysis via tunneled catheter. It was felt by the nephrology team that dialysis requirement would be permanent due to intrinsic bilateral renal disease, and therefore CT angiogram of the abdomen and pelvis was obtained to plan endovascular aneurysm repair. Again noted was significant lateral displacement of the left ureter (*A*, image 1 [cover] and image 2 [yellow arrow]) and hydronephrosis (*A*, image 3 [white arrow]). There is also notation of a complete occlusion of the left common iliac artery, significant stenosis of the right common iliac artery, and a small caliber right external iliac artery with significant calcification. There was no clinical concern for infected aneurysm with a lack of stranding on CT scan, no leukocytosis, no fever, no bacteremia, and normal inflammatory markers.

She underwent endovascular repair of the aneurysm with an aorto-uni-iliac device. Covered stents were placed in both the right common and external iliac arteries (9 mm VBX and 8 mm Viabahn, respectively, W. L. Gore) to treat occlusive disease and facilitate aortic device placement. A Medtronic aorto-uni-iliac device was subsequently deployed from just beneath the left renal artery level into the right common iliac artery. Completion aortic angiogram revealed no evidence of type 1 or 3 endoleak (*B*). Retrograde completion iliac angiogram revealed right



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internal iliac artery preserved patency with good pelvic cross-filling of the sacral and left external iliac arteries (*B*). Postoperatively, she did well with no evidence of lower extremity ischemia and resolution of abdominal pain. Follow-up CT scan at 3 months showed no evidence of endoleak and resolution of hydronephrosis (*C*, yellow arrow). The ureteral stent was ultimately removed 5 months postoperatively as she continued to make small amounts of urine despite being dialysis dependent.

Ureteral obstruction from aneurysm pathology is rare and nearly exclusively associated with common iliac artery disease.[1-5] Reports of aneurysms not involving the iliac arteries inducing ureteral obstruction have involved inflammatory aneurysms.[1,4] There were no clinical or radiographic findings consistent with an inflammatory or infected aneurysm in this case. Literature review did not reveal any other reports of saccular infrarenal aortic aneurysm inducing ureteral obstruction. The patient provided consent for the publication of this article.

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