

Ruptured Aortic Aneurysm Causing Right Hydronephrosis

Alper Eken¹, Mustafa Kemal Batur², Meltem Acil³

¹Acibadem University, Vocational School of Health Services, Adana, Türkiye

²Acibadem University, Cardiology, Istanbul, Türkiye

³Acibadem University, Anesthesiology, Istanbul, Türkiye



Figure 1. The coronal CT image shows a fusiform abdominal aortic aneurysm and right ureteral dilatation (white arrow)

Original Image

A 61-year-old man was admitted with right flank pain for 3 weeks. Physical examination revealed mild costovertebral angle tenderness in the right flank. Laboratory tests, including serum creatinine level, inflammatory markers (erythrocyte sedimentation rate, C-reactive protein), and urine analysis, were normal. Ultrasonography revealed significant right hydronephrosis with an abdominal aortic aneurysm.



Figure 2. Retrograde pyelogram shows right ureteral kinking due to external compression and right ureterohydronephrosis

Computed tomography (CT) scan demonstrated a 12x7-cm ruptured fusiform abdominal aortic aneurysm (AAA) continuing from the aortic bifurcation to infrarenally and causing right hydronephrosis (Figure 1). After informed consent was obtained, the aortic aneurysm was treated endovascularly (endovascular aneurysm repair (EVAR)) with a “Y” stent. Double J catheter insertion for right hydronephrosis due to ureteral obstruction was performed (Figure 2, 3). A follow-up CT in the first month showed an aggravated aortic hematoma with completely resolved right hydronephrosis (Figure 4).

A subgroup of aortic aneurysms is inflammatory type AAAs, representing about 10%. Genitourinary symptoms are more common

Correspondence to: Alper Eken; Acibadem University, Vocational School of Health Services, Adana, Turkey
Phone: +90 322 455 43 46 e-mail: alpereken@yahoo.com

Received: 27.03.2014 **Accepted:** 01.05.2014

©Copyright 2014 by Emergency Physicians Association of Turkey - Available online at www.akademikaciltip.com
DOI: 10.5152/jaem.2014.228





Figure 3. Postoperative abdominal plain radiograph showing right DJ catheter with right ureterohydronephrosis

than the atherosclerotic type (1-2). Inflammatory aneurysms are characterized by inflammatory and fibrotic changes in the periaortic and retroperitoneal areas that can involve the ureter, causing ureteral obstruction in up to 20% of cases. Computed tomography findings, including a periaortic mass of inflammatory tissue surrounding a thickened aortic wall, are characteristic. If steroid therapy fails in re-



Figure 4. Postoperative coronal CT image: intra-aortic Y stent and right DJ catheter (white arrow)

lieving the ureteric obstruction, the best treatment option is open or laparoscopic ureterolysis, as for retroperitoneal fibrosis (3).

References

1. Nagahama H, Nakamura K, Matsuyama M, Endou J, Nishimura M, Ishii H, et al. Inflammatory abdominal aortic aneurysm: report of seven cases. *Ann Vasc Dis* 2013; 6: 756-8. [\[CrossRef\]](#)
2. Lindblad B, Almgren B, Bergqvist D, Eriksson I, Forsberg O, Glimaker H, et al. Abdominal aortic aneurysm with perianeurysmal fibrosis: Experience from 11 Swedish vascular centers. *J Vasc Surg* 1991; 13: 231-9. [\[CrossRef\]](#)
3. Sanchez R, Arroyo A, Gesto R, Fernandez-Reyes MJ, Mon C, Alvarez-Ude F. Obstructive ARF caused by an inflammatory abdominal aortic aneurysm. *Am J Kidney Dis* 2003; 41: E9. [\[CrossRef\]](#)