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Case Report

Ureteroiliac Artery Fistula in a Young Woman with Short Bowel Syndrome for Radiation Enteritis

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Ureteral-iliac artery fistula is a rare and potentially life-threatening complication, typically occurring after radiation therapy in already surgically treated cancer patients. This case report describes the diagnostic challenges and the successful management, with the positioning of an intra-arterial prosthesis, of a fistula between the internal iliac artery and the left ureter presenting as massive hematuria in a young woman with history of total colectomy and pelvic radiotherapy for rectal cancer and subsequent wide ileal resections and bilateral ureteral stent positioning for radiation enteritis. Ureteroiliac artery fistulas require a prompt diagnosis and intervention, to avoid life threatening clinical events.

1. Case Report

In October 2008, a 29-year-old woman was admitted as emergency to the Department of Urology with massive hematuria and left hip colic pain.

In 2004 she underwent a total colectomy followed by adjuvant systemic chemotherapy and radiotherapy for rectal carcinoma arising on colon familial adenomatous poliposis. Between 2005 and 2007 she developed several intestinal occlusions secondary to radiation enteritis requiring four laparotomies followed by resections of aderential bridles and wide ileal segments. Finally a cutaneous ileostomy was confectioned and daily Parenteral Nutrition prescribed. In 2006 intestinal continuity was restored. In February 2008, a Computed Tomography (CT) scan showed a bilateral hydroureteronephrosis due to a nonhomogeneous mass completely filling the pelvic region and bilateral ureteral stents were placed in order to preserve renal function. In April 2008, an exploratory laparotomy was performed which identified an abscessual collection due to the dehiscence of ileoanal anastomosis: the collection was drained and a new cutaneous ileostomy confectioned. In July and in September 2008, the right and left ureteral stents were, respectively, replaced due to infection.

On admission, a three-way catheter with a bladder washing was placed. A CT scan with contrast medium (CM-CT) showed bladder tamponade (Figure 1) and blood clots in both renal pelvis: the site of bleeding could not be identified. A cystoscopy was performed, bladder clots were evacuated, and bladder bleeding was excluded. A subsequent abdominal CM-CT scan showed left ureteral stent dislocation in the renal parenchyma with a small superior renal pole infarction. A selective left renal arteriography did not reveale primary renal bleeding. During the attempt of the left ureteral stent removal, the patient had a massive ureteral haemorrhage and collapsed. She was promptly revived with plasma expanders and blood transfusions. A ureteral catheter was positioned with a continuous bladder washing. During the ensuing week, she had intermittent but self-limiting bleeding from the left ureteral catheter. A second arteriography was unremarkable; a left superior renal pole selective artery embolization was performed but it failed