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Testicular vein syndrome: one of the first described case of robotic assisted treatment

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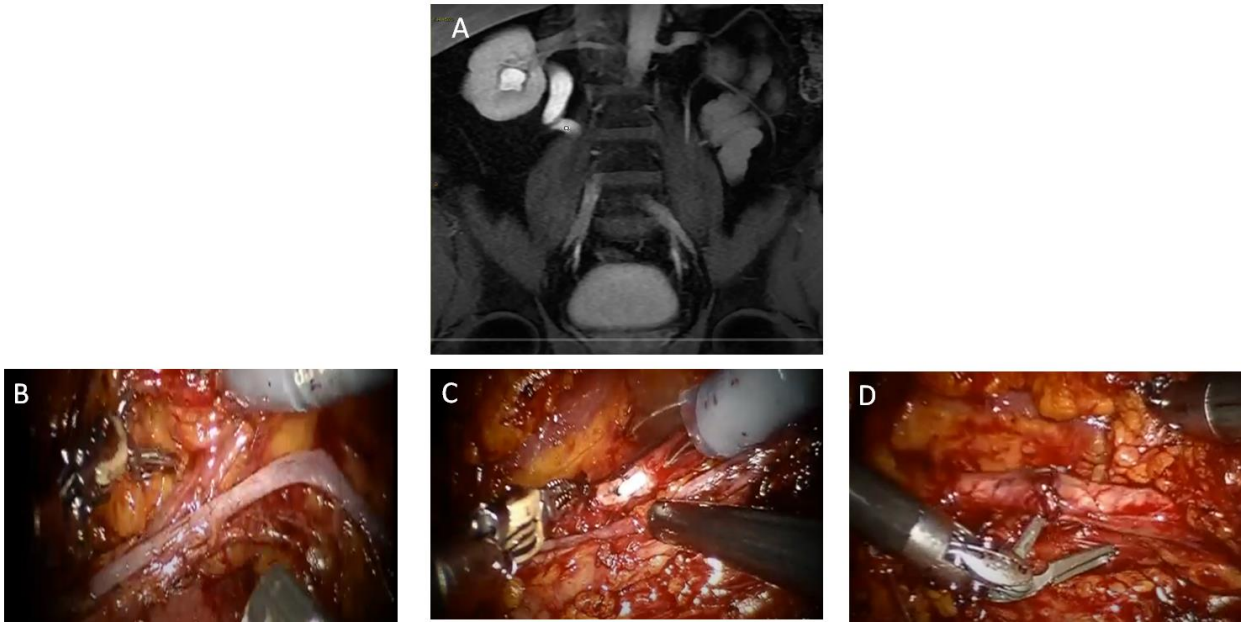

Figure 1. A. Abdominal contrast tomography scan, that demonstrated hydronephrosis and focal thickening of the right ureter. **B.** a) gonadal vein and b) artery that transited above the C- ureter. **C.** The stenotic segment of the ureter. **D.** Uretero-ureteral anastomosis.

The testicular vein syndrome (TVS) is a rare cause of ureteral obstruction, resulting in ureterohydronephrosis [1]. The cause of

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obstruction is an extrinsic compression of the ureter in the intersection of the ipsilateral gonadal vein [1]. The first case of TVS found in literature was reported in 1975 [2]. This is the 9th case described and the first one treated by robotic assisted surgery. The objective of this paper is to describe a rare pathology with video presentation of the surgery technique used, robot assisted surgery.

A 58-year-old male presented with a 5 years history of colicky lumbar pain, with progressive worsening in the last months and a single episode of gross hematuria. He had well controlled hypertension and no previous surgery. He never had history of urinary calculi.

First exam performed was an abdominal contrast tomography (CT) scan, that demonstrated hydronephrosis and focal thickening of the right ureter (Figure 1A). Posteriorly, magnetic resonance imaging (MRI) of the urinary tract was performed, with the founding of ureteral stricture of 2,0cm just posterior to the testicular vein intersection. This stricture was 5,5cm distal from ureteropelvic junction and was associated with moderate collecting system dilatation.

Due to the suspicion of TVS, ureteroscopy and pyelogram were performed, with the founding of a luminal stenosis of approximately 90%. A ureteral stent was placed. Opted for transperitoneal robotic assisted laparoscopic approach with identification of gonadal vein and artery that transited above the ureter (Figure 1B).

Vessel ligation was performed as well as resection of the stenotic segment of the ureter (Figure 1C). An uretero-ureteral anastomosis was performed with separated 5-0 Polydioxanone sutures (Figure 1D). The patient was discharged after 2 days of surgery, with no urinary catheter or drain.

TVS is a rare and challenging diagnosis. This case demonstrates that the robotic approach facilitates ureter anastomosis and permits faster recuperation.

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