Incidental Finding of Retroaortic Renal Vein ‘Posterior Nutcracker Phenomenon’ Associated with Thrombosis

Achado Incidental de Veia Renal Retroaórtica “Fenômeno de Quebra-Nozes Posterior” Associada à Trombose

Milton Sérgio Bohatch Júnior¹, Amanda Fernandes Vidal da Silva², Carlos Diego Ribeiro Centellas¹, Maurício Serra Ribeiro², Edwaldo Edner Joviliano²

¹Department of Vascular and Endovascular Surgery, Hospital das Clínicas of the Faculty of Medicine, University of São Paulo, Ribeirão Preto, SP, Brazil. ²Department of Vascular and Endovascular Surgery, Hospital de Base, Rio Preto, SP, Brazil.

A 56-year-old woman was admitted to the emergency room with acute obstructive abdomen. She denied comorbidities or previous surgeries. Abdominal computed tomography showed cecal volvulus and an incidental finding of chronic recanalized left renal vein thrombosis with a retroaortic trajectory (posterior “nutcracker” phenomenon). She underwent exploratory laparotomy with a right colectomy and transverse ileum anastomosis. After a gradually progressed diet, she was discharged from hospital ten days after surgery. In outpatient follow-up, she denied symptoms of abdominal or flank pain, and laboratory tests showed no signs of proteinuria or hematuria. Conservative treatment and periodic follow-up were chosen considering the incidental finding of nutcracker phenomenon.

A retroaortic left renal vein is a rare anatomical variation that is asymptomatic in most cases and called posterior nutcracker phenomenon. In symptomatic cases, the term posterior nutcracker syndrome is used.^{1,2} Its exact prevalence is unknown, but it is more commonly diagnosed in female patients between the third and fourth decades of life.¹ This compressive disorder

can result in venous hypertension with renal vein dilation and ureteral and renal pelvis varicose veins and present as macroscopic and microscopic hematuria, flank pain, and proteinuria.^{2,3} Conservative treatment is used for asymptomatic or oligosymptomatic patients as described in here.²

Authors’ contributions

Research creation and design: Bohatch Júnior MS, Silva AFV; Data acquisition: Bohatch Júnior MS, Centellas CDR; Data analysis and interpretation: Bohatch Júnior MS, Silva AFV, Centellas CDR, Joviliano EE; Manuscript writing: Bohatch Júnior MS, Silva AFV; Critical revision of the manuscript for important intellectual content: Bohatch Júnior MS, Ribeiro MS, Joviliano EE.

Conflict of interest

The authors have declared that they have no conflict of interest.

Figure 1 – Contrast-enhanced abdominal tomography image. (A) Axial section revealing a dilated left renal vein (arrowhead) with a retroaortic trajectory, causing clamping (arrow). (B) Coronal section also revealing a dilated left renal vein (arrowhead).

Keywords

Incidental Findings; Renal Nutcracker Syndrome; Thrombosis.

Mailing Address: Milton Sergio Bohatch Junior •

milton.jr87@hotmail.com

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