

Síndrome do Quebra-Nozes Posterior Posterior Nutcracker Syndrome

Larissa Raminelli da Silva Martins¹ , Marcelo de Queiroz Pereira da Silva² , Márcio Luís Duarte¹ 

Palavras-chave: Hematúria; Síndrome do Quebra-Nozes; Tomografia Computorizada.

Keywords: Hematuria; Renal Nutcracker Syndrome; Tomography, X-Ray Computed.

A 35-year-old woman being monitored for malignant ovarian neoplasm with liver involvement and peritoneal carcinomatosis reported hematuria for five days. Urinalysis shows hematuria. Computed tomography (CT) scan diagnosed a retro-aortic left renal vein - compressed by the abdominal aorta against the vertebra, characterizing nutcracker syndrome

(Fig. 1). Due to the severity of the case, only palliative monitoring of the patient was indicated.

Posterior nutcracker syndrome occurs when the left renal vein courses posteriorly to the abdominal aorta, so it is compressed between it and the vertebra in the lumbar region. Posterior left renal vein has an incidence of less than 2%, and its progression to nutcracker syndrome has few documented cases.¹ It is believed that this type of anatomical variation is often neglected, resulting in underdiagnosis.²

In most documented cases, there is the presence of hematuria (most common signal), proteinuria, pain in the left lower abdominal quadrant or left flank, nausea, dyspnea, platypnea and varicocele.^{2,3} For diagnosis, CT scan, magnetic

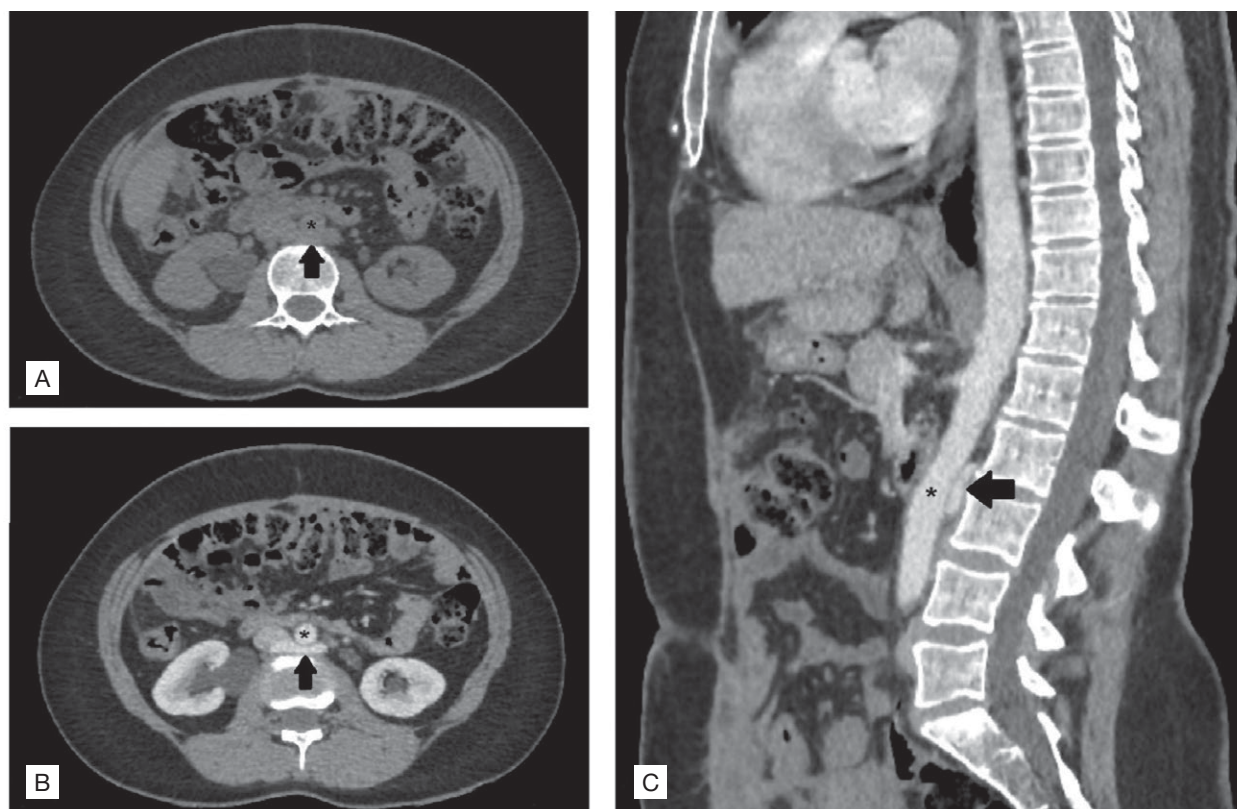


Figure 1: Non-contrast CT scan in the axial section in **A** showing retro-aortic left renal vein (black arrow) compressed by the abdominal aorta (black asterisk). CT scan with contrast in the arterial phase in the axial section in **B** and in the sagittal section in **C** demonstrating the retro-aortic left renal vein (black arrow) compressed by the abdominal aorta (black asterisk).

¹ Universidade de Ribeirão Preto – Campus Guarujá, Brasil

² WEBIMAGEM Telerradiologia, São Paulo, Brasil.

<https://doi.org/10.60591/crspmi.187>

resonance imaging (MRI), angiography and digital venography, and ultrasound can be used.^{3,4}

Among the treatments used, transposition of the vessel is described in the literature, replacing it in front of the abdominal aorta through a lateral anastomosis with the inferior vena cava.⁵ ■

Declaração de Contribuição

LRSM - Conceituação, curadoria de dados, análise formal, investigação, metodologia, validação, visualização, redação de rascunho, e redação e revisão final.

MQPS - Conceituação, curadoria de dados, análise formal, investigação, metodologia, administração do projeto, validação, visualização, redação de rascunho, e redação e revisão final.

MLD - Curadoria de dados, análise formal, investigação, aquisição de financiamento, metodologia, validação, visualização, redação de rascunho, e redação e revisão final.

Todos os autores aprovaram a versão final a ser publicada.

Contributorship Statement

LRSM - Conceptualisation, data curation, formal analysis, investigation, methodology, validation, visualisation, draft writing, and final writing and review.

MQPS - Conceptualisation, data curation, formal analysis, investigation, methodology, project management, validation, visualisation, draft writing, and final writing and review.

MLD - Data curation, formal analysis, research, acquisition of funding, methodology, validation, visualisation, draft writing, and final writing and review.

All authors approved the final draft.

Responsabilidades Éticas

Conflitos de Interesse: Os autores declaram a inexistência de conflitos de interesse na realização do presente trabalho.

Fontes de Financiamento: Não existiram fontes externas de financiamento para a realização deste artigo.

Confidencialidade dos Dados: Os autores declaram ter seguido os protocolos da sua instituição acerca da publicação dos dados de doentes.

Consentimento: Consentimento do doente para publicação obtido.

Proveniência e Revisão por Pares: Não comissionado; revisão externa por pares.

Ethical Disclosures

Conflicts of interest: The authors have no conflicts of interest to declare.

Financing Support: This work has not received any contribution, grant or scholarship

Confidentiality of Data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

Patient Consent: Consent for publication was obtained.

Provenance and Peer Review: Not commissioned; externally peer reviewed.

© Autor (es) (ou seu (s) empregador (es)) e SPMI Case Reports 2024. Reutilização permitida de acordo com CC BY-NC 4.0. Nenhuma reutilização comercial.

© Author(s) (or their employer(s)) and SPMI Case Reports 2024. Re-use permitted under CC BY-NC 4.0. No commercial re-use.

Correspondence / Correspondência:

Mácio Luís Duarte - marcioluisduarte@gmail.com

Universidade de Ribeirão Preto – Campus Guarujá, Brasil

Recebido / Received: 2023/11/29

Aceite / Accepted: 2023/12/27

Publicado online / Published online: 2024/07/05

REFERENCES

1. Lima MTA; Tavares EM, Folador L, Knabben, Correa RHB. Nutcracker syndrome: a case report. *Clin Biomed Res.* 2022;42:410-1. doi: 10.22491/1357-9730.123070
2. Karaman B, Koplay M, Ozturk E, Basekim CC, Ogul H, Mutlu H, et al. Retroaortic left renal vein: multidetector computed tomography angiography findings and its clinical importance. *Acta Radiol.* 2007;48:355-60. doi: 10.1080/02841850701244755
3. Chen Y, Xing J, Liu F. Left renal vein transposition is effective for posterior nutcracker syndrome. *Int J Clin Exp Med.* 2014;7:5925-7.
4. Sillo TO, Jones KE, Willetts IE. Haematuria and the retro-aortic left renal vein. *BMJ Case Rep.* 2012;2012:bcr0220125836. doi: 10.1136/bcr.2012.5836.
5. St Hilaire C, Paisley M, Greene J, Casey KM. Left renal vein transposition for posterior Nutcracker syndrome. *J Vasc Surg Cases Innov Tech.* 2021;7:243-6. doi: 10.1016/j.jvscit.2021.02.016.