

## Rare Variation of the Left Renal Vein: Complete Circumaortic Left Renal Vein

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### Image Description

The circum-aortic left renal vein (CLR V) is a rare anatomical variation of the left renal vein (LRV), with a prevalence of 1-16% of the population.

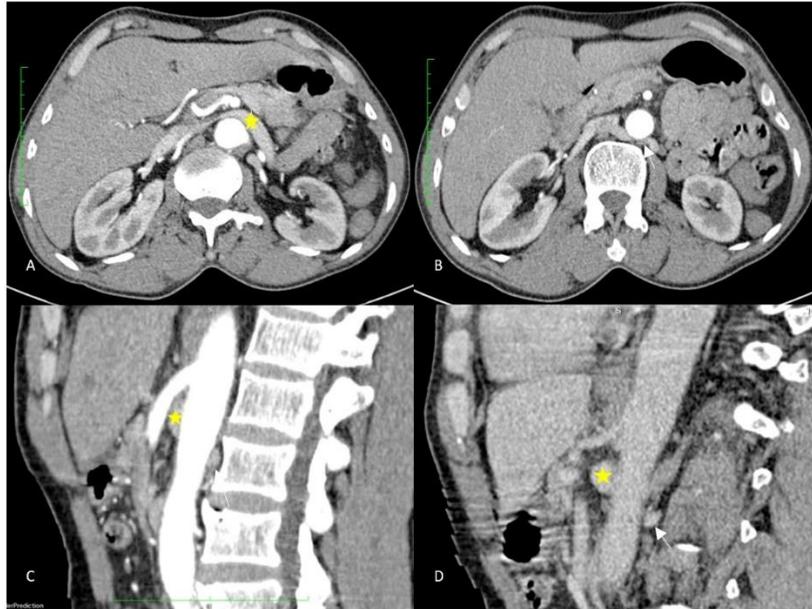
It is caused by a change of embryological development of the left renal vein resulting in the creation of an accessory retro-aortic renal vein in addition to the pre aortic one.

3 types of circum-aortic left renal vein have been described:

- One with partial distal bifidity: the retro aortic branch receives the root from the hemi-azygos vein.
- One with partial proximal bifidity: the origin of the veins is separated and the two branches are joined together in front of the aorta.
- And the complete CLR V in which the two venous branches: superior polar vein and inferior polar vein leave the renal hilum to join the inferior vena cava with the superior vein leading a pre aortic way and the inferior one leading a retro aortic way.

The CLR V is asymptomatic in most patients but it can also lead to varicocele, hematuria, pelvic pain and a pelvic congestion syndrome because of compression of the retro-aortic branch [1-3].

Abdominal enhanced CT scan at portal phase will show the presence of two left renal vein branches forming a ring around the aorta before joining the inferior vena cava, and could also show a compression of the retro-aortic branch or pelvic varices. (FIG. 1).



**FIG. 1. Abdominal enhanced CT at arterial (A,B,C) and portal (D) phases with sagittal reconstructions (C and D) showing a complete circumaortic left renal vein with a superior polar pre-aortic vein (yellow star) and an inferior polar retro-aortic vein (white arrow) forming a ring around the aorta and joining the inferior vena cava.**

#### REFERENCES

1. Sorin Hostiuc, Rusu MC, Negoii I, et al. Anatomical variants of renal veins: A meta-analysis of prevalence. *Sci Rep.* 2019;9:10802.
2. Rawther T, Rebolledo BRJ, Das KK, et al. Circumaortic left renal vein: a rare but important anatomical variation to consider prior to a radical nephrectomy. *ANZ J Surg.* 2020;90(9):1781-2.
3. Alonso V, Sánchez-Abuín A, Velasco JJ, et al. Pelvic Congestion Syndrome Secondary to a Circumaortic Left Renal Vein. *J Pediatr.* 2020;220:261-2.