

Renal Vein Stenting and Gonadal Vein Embolization for Recurrent Varicoceles and Nutcracker Syndrome

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The term “nutcracker syndrome (NCS)” describes compression of the left renal vein (LRV), between the aorta and the superior mesenteric artery (SMA), which impairs blood flow and is accompanied by renal vein distention. This report discusses a case of NCS treated with simultaneous LRV stent and gonadal vein embolization. Renal ultrasound or cross-sectional imaging is warranted in patients who present with recurrent varicoceles. A 62-year-old male presented with infertility and bilateral recurrent varicocele after left varicocelectomy 1 year ago. Upon physical examination, the patient has atrophied testicles. Semen analysis showed oligospermia. Computed tomography (CT) scan showed compression of the LRV between the SMA and aorta indicating NCS (►Fig. 1). Via right internal jugular vein access, LRV venography showed severe stenosis (►Fig. 2). Left gonadal vein was cannulated and embolization was done using multiple pushable coils and 3% sodium tetradecyl sulfate. Stenting of the LRV was done using 14 mm × 6 cm Venovo self-expandable bare stent (Bard Inc, United States). CT scan of the abdomen few weeks after the procedure showed patent LRV stent (►Fig. 3).

Conflict of Interest

None declared.

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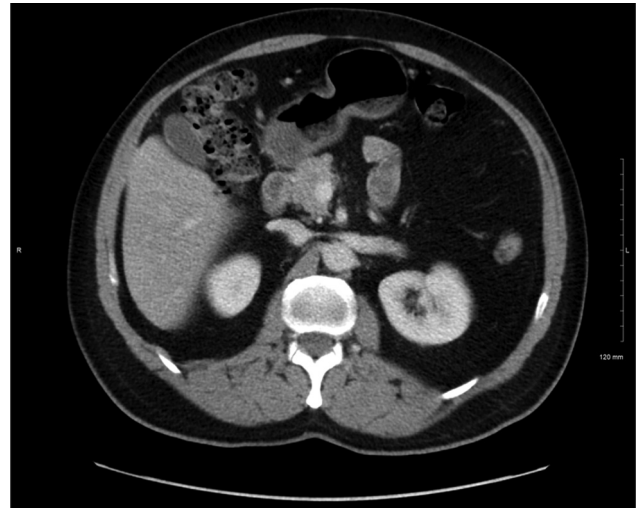


Fig. 1 Computed tomography (CT) scan shows compression of the left renal vein between the superior mesenteric artery (SMA) and the aorta.

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Fig. 2 Venogram showed around 4.7 cm stenotic segment involving the left renal vein.

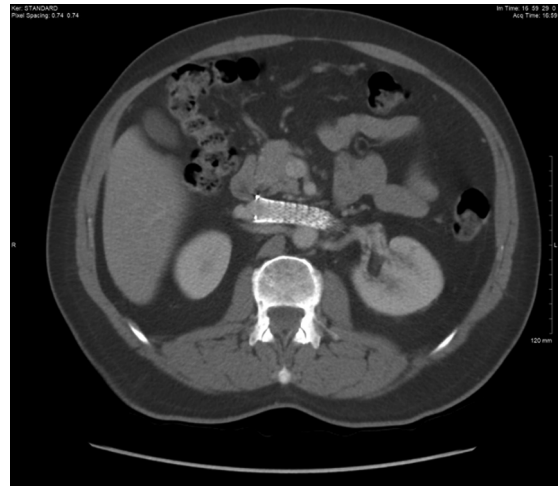


Fig. 3 Patent left renal vein (LRV) stent with no thrombosis.