

Congenital complete absence of the inferior vena cava (IVC) is a rare vascular abnormality, estimated to affect 0.0005% of the population. We present a patient with diagnosed IVC agenesis requiring a planned caesarean birth (PCB).

Case report:

- 38-year-old primigravida, maternal request caesarean birth at 38+5 weeks
- Diagnosed with **complete infra-renal IVC agenesis** at 33 years old on MRI (figures 1 and 2), original presentation with **back pain**
- History of chronic secondary hypertension and needle phobia
- Widespread **collateral circulation** with dilatation of vertebral venous plexus, abdominal wall vessels, paravertebral and azygous veins
- Uneventful **general anaesthesia** for PCB
- Risk of **post-partum haemorrhage** given risk of abnormal abdominal wall and pelvic venous anatomy

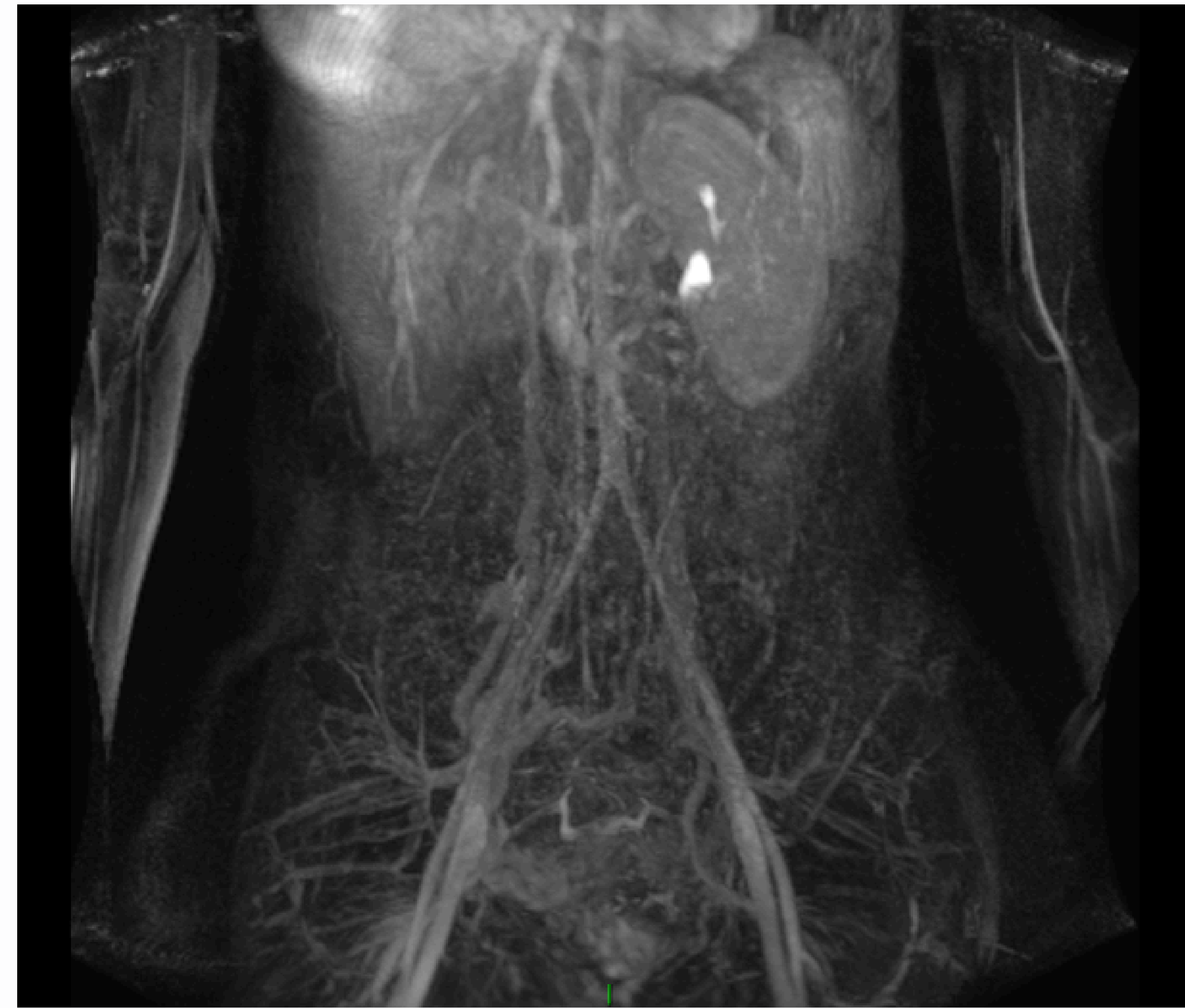


Figure 1: MRI venogram demonstrating absent IVC, single left kidney, dilatation of pelvic, lumbar and azygous veins.

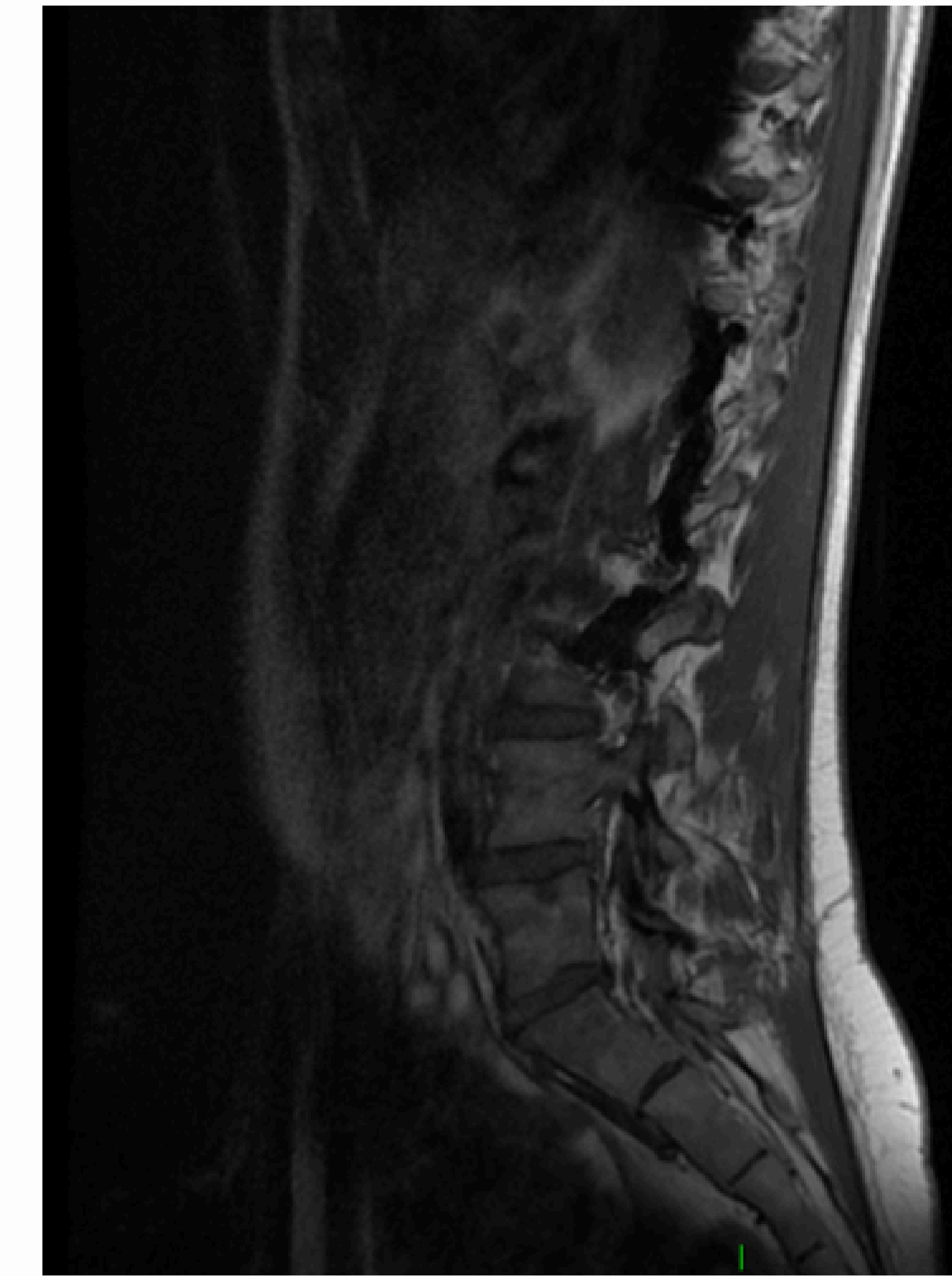


Figure 2: MRI lumbar spine demonstrating calibre of epidural venous plexus vessels.

Discussion:

- No described cases of IVC agenesis in a pregnant patient in literature
- Twice as common in males
- Often presents as lower limb swelling, unprovoked deep vein thrombosis or chronic back pain
- Association with congenital abnormalities of urogenital tract
- Pregnancy compounds risks of venous thromboembolism due to venous stasis caused by gravid uterus in dependent circulation and hyper-coagulability

Learning points:

- High index of suspicion for vascular anomalies in patients with **unprovoked DVT**
- Importance of **multi-disciplinary planning** for delivery in complex patients
- Optimisation of **preload** and **venous return** in anaesthetic strategy
- Careful consideration of **thromboprophylaxis** throughout pregnancy and post-partum

References:

- 1 Martinez Garcia D et al. Congenital abnormalities of inferior vena cava. *European Journal of Internal Medicine* 2024; 119: 154-6. <https://doi.org/10.1016/j.ejim.2023.10.034>
- 2 Saab K et al. Systematic review of inferior vena cava atresia. *Journal of Vascular Surgery, Venous and Lymphatic Disorders* 2023; 11(6): 1253-64. <https://doi.org/10.1016/j.jvsv.2023.07.002>