

MEDIAN ARCUATE LIGAMENT SYNDROME: TWO-YEAR EXPERIENCE WITH SIX SURGICAL CASES

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Background

Median Arcuate Ligament Syndrome (MALS) is caused by extrinsic compression of the celiac artery and surrounding neural plexus by the median arcuate ligament. Symptoms often mimic functional gastrointestinal disorders, leading to significant diagnostic delays. Modern imaging and minimally invasive surgery have improved recognition and management.

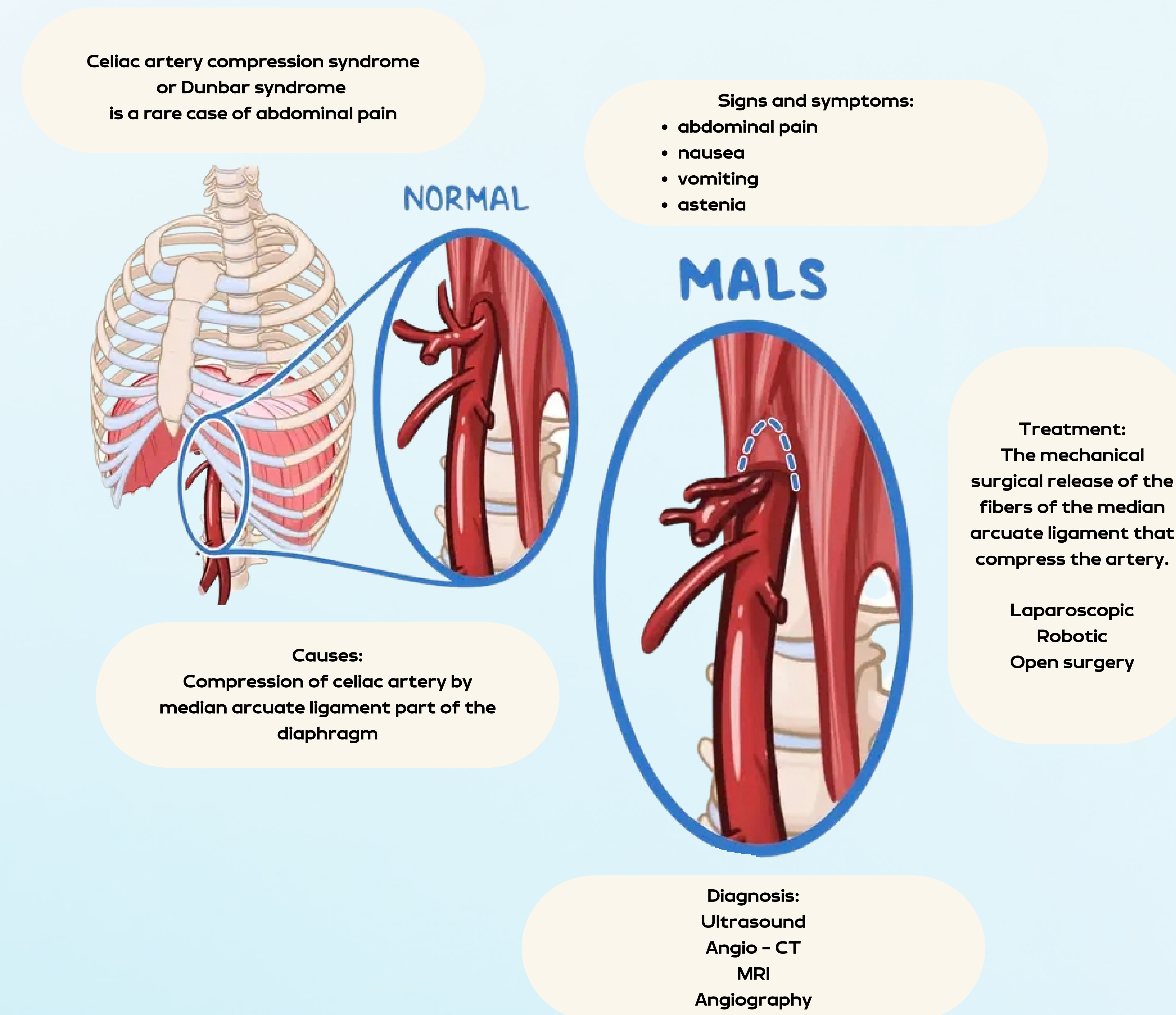
We analyzed 6 patients with MALS treated between June 2024 - August 2025.

Diagnosis was confirmed using CT angiography and Doppler ultrasound demonstrating celiac artery indentation and elevated peak systolic velocities.

Conclusions

MALS remains a diagnostic challenge due to nonspecific symptoms. Early recognition and multidisciplinary evaluation are critical. Minimally invasive median arcuate ligament release, particularly robotic or laparoscopic approaches, appears safe and effective. Delayed diagnosis often leads to unnecessary prior operations, increasing surgical complexity and recurrence risk.

Key references: Jimenez JC et al. Ann Vasc Surg. 2012.; Reilly LM et al. J Vasc Surg. 1985.; Mak GZ et al. J Pediatr Surg. 2013.; Sultan S et al. Ann Vasc Surg. 2020.



Results

Patients were 42–57 years old (4F/2M) with symptoms lasting 6 months -7 years.

Procedures performed:

- Open: 1
- Converted: 1
- Laparoscopic: 1
- Robotic: 3

Mean operative time: 135 min

Mean LOS: 4 days

Outcomes at 6 months:

- Complete symptom resolution: 67%
- Partial improvement: 84%
- Recurrence: 1 case

One patient required secondary endovascular stenting.