

Median arcuate ligament syndrome in athletes

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Abstract

Background Exercise-related transient abdominal pain (ETAP) is a common entity in young athletes. Most occurrences are due to a “cramp” or “stitch,” but an uncommon, and often overlooked, etiology of ETAP is median arcuate ligament syndrome (MALS). The initial presentation of MALS typically includes postprandial nausea, bloating, abdominal pain, and diarrhea, but in athletes, the initial presentation may be ETAP.

Methods We present a case series of three athletes who presented with exercise-related transient abdominal pain and were ultimately diagnosed and treated for MALS. Unlike other patients with median arcuate ligament syndrome, these athletes presented with exercise-induced pain, rather than the common postprandial symptoms. These symptoms persisted despite conservative measures. Work-up of patients with suspected MALS include a computed tomography or magnetic resonance angiography showing compression of the celiac artery with post-stenotic dilation, or a celiac artery ultrasound demonstrating increased velocities (>200 cm/s²) with deep exhalation.

Results All patients underwent a laparoscopic median arcuate ligament release. Postoperatively, there were no complications, and all were discharged home on postoperative day #2. All patients have subsequently returned to athletics with resolution of their symptoms.

Conclusion ETAP is common in athletes and often resolves with preventative or conservative strategies. When ETAP persists despite these methods, alternative causes, including MALS, should be considered. A combination of a thorough history and physical exam, as well as radiographic data, is essential to make the appropriate diagnosis and treatment strategy.

Keywords Celiac artery compression syndrome · Median arcuate ligament syndrome · Exercise-related transient abdominal pain · Athletes

Compliance with ethical standards

Disclosures Jeffrey N. Harr, Ivy N. Haskins, and Fred Brody have no conflicts of interest or financial ties to disclose.

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