

# Chronic Abdominal Pain Mystery: Median Arcuate Ligament Syndrome



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## Introduction

- Median arcuate ligament syndrome (MALS), also known as celiac artery compression syndrome, is a rare anatomic disorder (2:100,000) that is more prevalent in women (4:1 ratio) with thin body habitus.
- Average age of presentation is 30 to 50 years old. It is characterized by weight loss, postprandial abdominal pain, nausea, and vomiting.
- We present a case of MALS in a 68-year-old male with nonspecific GI symptoms.

## Objectives

- To bring awareness to a rare condition called median arcuate ligament syndrome as a differential for abdominal pain
- Discuss the symptoms, diagnosis, and treatment of median arcuate ligament syndrome which currently has no real standard for diagnosis and management

## Case Report

- 68-year-old male with history of alcohol use and ex-lap presents with postprandial dull abdominal pain left to the umbilicus and radiates to the back.
- Accompanied by early satiety, and 10-20 lbs of unintentional weight loss over one-year. He had normal bowel movements with no melena or hematochezia.
- He took opioids, pantoprazole, and over the counter pain medications with some relief.
- He was evaluated with esophagogastroduodenoscopy, colonoscopy, abdominal ultrasound and a computed tomography (CT) of the abdomen and pelvis with contrast. These investigations did not yield any significant findings.
- CTA abdominal aorta with runoff was ordered due to concern of chronic mesenteric ischemia. It showed focal stenosis of the origin of the celiac axis with minimal post stenotic dilation.
- Patient was referred to vascular surgery who performed laparoscopic robot assisted median arcuate ligament release. Surgery was converted to open supra-umbilical laparotomy due to difficult visualization of the celiac artery origin.
- A thick band compressing the anterior surface of the celiac artery was freed. Post-surgery, patient had relief of his abdominal pain and has been recovering well.



Before



After

## Conclusions

- Median arcuate ligament syndrome is a diagnosis of exclusion. It usually presents with nonspecific symptoms, and many patients can be asymptomatic and be found incidentally.
- It is believed that MALS causes inflammation and compression of the celiac plexus causing the symptoms.
- MALS is difficult to diagnose, especially in the absence of a standardized algorithm to aid in diagnosis and treatment.
- Our case was unique as our patient did not match with the typical demographics of patients with MALS. He was a male, in his 60's, with average weight.
- Clinicians should keep a high suspicion of MALS with patients who have postprandial abdominal pain and weight loss with negative initial workup.
- Diagnosis could be made by ultrasound, CT imaging, or CTA and MRA. Definitive management involves surgery with 85% of patients experiencing postop pain relief in one study.