

### **Robotic Approach for Median Arcuate Ligament Relief: A Case Report and Literature Review**

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#### **Abstract**

*Introduction:* There are very few reported cases of robotic surgery for median arcuate ligament syndrome. This clinical condition develops when the root of the celiac trunk is compressed by the median arcuate ligament of the diaphragm. The symptoms that typically accompany this syndrome are: discomfort and pain in the upper abdominal region, particularly after eating, and weight loss. During the diagnostic process, it is important to rule out other potential causes and demonstrate compression using any imaging technique available. Transecting the median arcuate ligament is the primary focus of the surgical treatment. We report a case of robotic MAL release, focusing on the particular aspects of the surgical technique. A literature review was also performed on the topic of robotic approach for MALS.

*Clinical case:* A 25-year-old woman presented with sudden onset severe upper abdominal pain after physical activity and eating. She was then diagnosed with median arcuate ligament syndrome by imagistic means with computer tomography, doppler ultrasound, and angiographic computed tomography. After conservative management and careful planning, we performed robotic division of median arcuate ligament. The patient was discharged from the hospital without any complaint on the second day after surgery. Subsequent imaging studies revealed no residual celiac axis stenosis.

*Conclusion:* The robotic approach is a safe and feasible treatment modality for median arcuate ligament syndrome.

**Key words:** Dunbar syndrome, celiac trunk stenosis, robotic surgery, median arcuate ligament