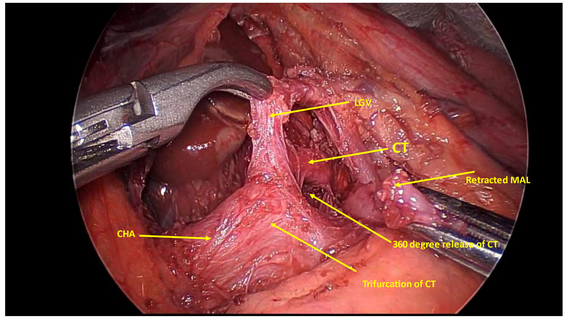
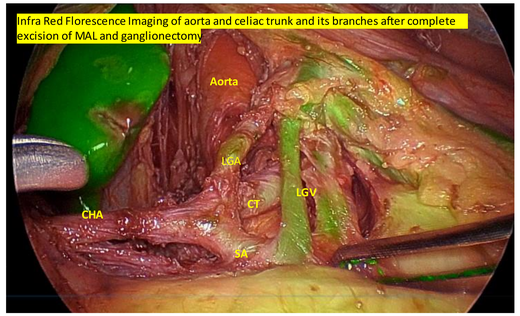
360-DEGREE RELEASE OF MEDIAN ARCUATE LIGAMENT IS A BETTER OPTION FOR TREATING MALS - 52 PATIENTS 3 YEARS FOLLOWUP

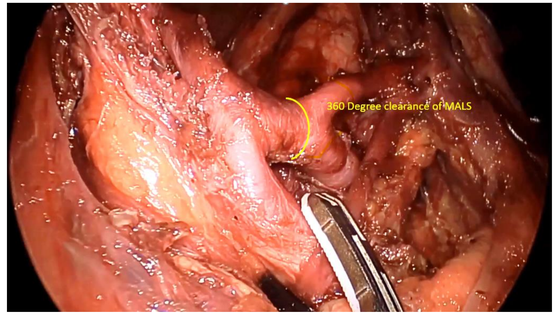
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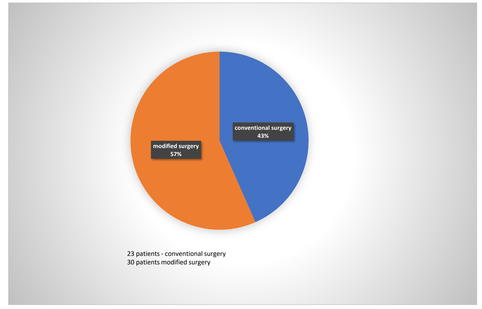
Introduction

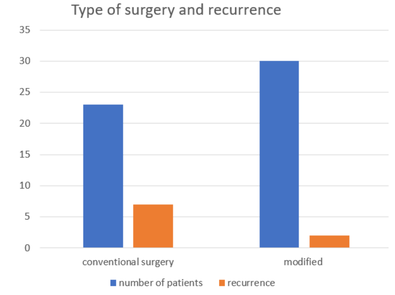
Median arcuate ligament syndrome (MALS) is not so common disorder resulting from extrinsic compression of the celiac trunk (CT) by the Median Arcuate Ligament (MAL), due to proximal origin of celiac trunk. Celiac group of ganglions and associated autonomic nerve fibres are also compressed leading to autonomic symptoms. Celiac trunk compression leads to stealing of blood from superior mesenteric artery area leading to symptomatology due to relative hypoperfusion in SMA area. Surgical management entails complete division of the median arcuate ligament. Surgical management was compared between simple cutting of Median arcuate ligament and simultaneous release of posterior adhesion and making the angle of origin of CT near normal. First 3 years 32 patients were operated by only cutting of ligament and neurolysis but 6 patients had partial relief. Hence, surgical strategy was changed for next 30 patients. Posterior adhesions between CT and Aorta were also released resulting in straightening of angle of origin of CT, making it a 360-degree release of CT These patients were followed up for next 3 years. only one patient had partial result, all other patients had good again relief of symptoms. All patients under went intraoperative laparoscopic doppler , and postoperative angiography. all patients were followed up by judging clinical parameters. It was concluded that 360-degree release of CT from MAL compression gave better results











Discussion

Linear surgical cutting of median arcuate ligament in symptomatic Median arcuate ligament syndrome is considered only treatment. The systematic review suggests a sustainable symptom relief of more than 70% after treatment for MALS in most adult and paediatric studies. Reason behind the unsatisfactory result in 30% patient was searched surgically. MAL is complex structure and compresses not only origin of CT but also compresses the branches of CT. Angle between the celiac trunk and aorta was between 90° and 150° with a mean value of 121.2°. Also, because of compression by MAL, the angle of emergence of CT is compressed to more than 50%. This compressed angle of emergence plays pivotal role in dynamics of blood flow. Newer surgical approach- 360-degree release of MAL and simultaneous release of trifurcation of CT gives better results up to 98% in our study over 5 years and 60 patients. moreover 360-degree release of MAL also takes care of celiac ganglions situated in the angle between CT and aorta. We present a video of the procedure here.

Conclusion

The authors conclude that 360-degree release of MAL in MALS is a better option of treating MALS.Excision of MAL is a better option than only cutting. Celiac trunk angle of emergence restoration is needed. Neurolysis improves the results.2.5 cm baring of aorta near the origin of celiac trunk is also helpful to prevent recurrence. Infra-red imaging intraoperatively increases safety of procedure This decreased the recurrence in long follow-up, as compared to conventional surgery.