

## Focus on Laparoscopic Surgery

### EDITORIAL BOARD

CMD

**Dr. Vikram Siddareddy - MS**

DIRECTOR

**Dr. Veena Siddareddy - MS**

EXECUTIVE DIRECTOR

**Dr. Shantakumar Muruda - MD**

DIRECTOR

**Dr. Rajeev Bashetty - MS, Mch**

EDITOR

**Dr. Ajitha Pillai - MD**

### Message from the Chairman & Managing Director



**Dr. Vikram Siddareddy**  
Chairman & Managing Director

In order to better serve the needs of the community United Hospitals Group plans to expand their facilities. This expansion is aimed at improving access to high-quality, affordable healthcare for all. The hospitals will be adding new medical and surgical services, as well as increasing the capacity of their emergency departments. In addition to the hospital expansions, the healthcare provider will also be opening numerous collection centers across India. These centers will offer convenient access to a wide range of medical services, including lab testing and diagnostic imaging. The hospital expansion and collection center initiatives are part of a larger effort to improve the public's health and make health care more accessible to everyone.

### ISSUE HIGHLIGHTS

#### Median Arcuate Ligament Syndrome

- **Dr. Ramraj V N**  
MBBS, DNB (Gen Surgery)  
FACS (USA), FMBS (RGUHS),  
FMIS (RGUHS), FALS-HPB,  
FACRSI, FIAGES, FIBC, EFIAGES

- **Dr. Gaurav Singh**  
MBBS, MS (General Surgery),  
MCh (Surgical Gastroenterology)

#### Laparoscopic Excision of Large Retro Peritoneal Cyst or Para Duodenal Cyst

- **Dr. Niranjana P**  
MBBS, DNB (Gen Surgery)



### Message from the Executive Director



**Dr. Shantakumar Muruda**  
Executive Director

United Hospital in Jayanagar is focusing on the advantages of Laparoscopic Surgery in their latest newsletter. Laparoscopic surgery, also known as Minimally Invasive Surgery, is a type of surgical procedure that uses small incisions and specialized instruments to perform the operation. This method offers several benefits over traditional open surgery, like reduced pain and scarring, Faster recovery. Minimal chance of infection and Improved patient outcomes.

By focusing on Laparoscopic Surgery, United Hospital in Jayanagar is demonstrating its commitment to providing patients with the highest-quality, most advanced medical care. The hospital's focus on this innovative surgical technique will help to improve the health and well-being of the people in the community.

# Median Arcuate Ligament Syndrome



## Dr. Ramraj V N

*MBBS, DNB (Gen Surgery), FACS (USA),  
FMBS (RGUHS), FMIS (RGUHS), FALS-HPB,  
FACRSI, FIAGES, FIBC, EFIAGES*  
**Consultant Surgical Gastroenterology,  
Advanced Laparoscopy,  
Bariatric & Metabolic Surgery**

Dr. Ramraj V N, is trained in complex gastrointestinal surgeries including malignancies. He is a trained Bariatric and Metabolic surgeon certified by Rajiv Gandhi University of Health Sciences. He has co-authored chapters in different text books. He has presented papers in various National conferences and has several publications to his credit.



## Dr. Gaurav Singh

*MBBS, MS (General Surgery),  
MCh (Surgical Gastroenterology)*  
**Consultant Surgical  
Gastroenterology**

Dr. Gaurav Singh is a well trained and qualified Surgical Gastroenterologist who holds immense specialization in complex gastrointestinal problems and advanced laparoscopic (keyhole) interventions for the finest management of Gastrointestinal disorders and malignancies. He has gained tremendous experience of 11yrs in the field over the years He also specializes in Bariatric Surgery, which is the most preferred and popular treatment for the management of Morbid Obesity.

## Introduction

Median arcuate ligament syndrome (MALS), also known as Celiac artery syndrome or Dunbar syndrome is a rare clinical entity having an incidence of 2 per 1,00,000 population.

This condition is more frequently seen among thin or asthenic females between the second and fifth decade of life.

MALS which results from extrinsic compression of the celiac artery by fibrous bands of median arcuate ligament and peri-aortic ganglionic or nervous tissue is typically characterised by a triad of symptoms including chronic abdominal pain, bowel function disorder and unintentional weight loss. Pain, though not very severe is known to increase after food, resulting in sitophobia or fear of food. It can affect the psychological behaviour of the individual with disturbances in their routine lifestyle.

Being an uncommon condition, MALS is a diagnosis made by exclusion, where diseases with similar symptoms are ruled out through thorough evaluation.

CT angiogram or MR angiogram along and an abdominal doppler ultrasound scan giving velocities of blood flow through the celiac vessels are crucial in diagnosing MALS.

Surgery is the main modality of treatment. This can be performed either through Laparoscopy or Open technique. Though, Endovascular therapy is an available option, its use is restricted in certain special conditions where symptoms persist even after a surgical release.

Surgery involves releasing both the tight median arcuate ligament and adjacent nerve plexus at the origin of Celiac trunk from abdominal aorta.

Laparoscopy, with its advantages of smaller cuts, less pain, shorter duration of stay in hospital, faster recovery and early resumption of activities is the preferred approach.

## Case Report

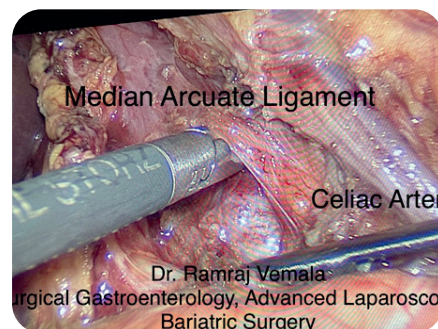
We share our case of a 28 year male patient who presented with recurrent or chronic abdominal pain of two year duration, specially post-prandial (after food), along with significant weight loss of 15 kilograms in two years, sitophobia and indigestion.

He was evaluated extensively, beginning with the routine abdominal ultrasound scan and upper GI endoscopy which were normal.

CT scan abdomen and pelvis done raised a suspicion of MALS and hence a CT angiogram was done to confirm the diagnosis. Angiogram showed narrowing of the celiac artery, with post-stenotic dilatation. Abdominal Doppler also showed a narrowing of celiac vessel with change in velocities on inspiration and expiration, typically seen in MALS.

Once the diagnosis was reached, detailed discussions were held with patient and his family on the available treatment options.

We performed a Laparoscopic Median Arcuate Ligament Release with division of celiac plexus under general anaesthesia.



## At Surgery

- One 10 mm cut was made for the camera and four x 5 mm smaller cuts for instruments.
- Liver was retracted
- Lesser omentum divided to enter the lesser sac.
- Left gastric artery isolated, looped and followed till the trifurcation of the celiac trunk. Splenic and common hepatic vessels identified.
- Celiac trunk origin and aorta identified
- Median arcuate ligament identified, lifted and divided using ultrasonic shears.
- Overlying celiac plexus divided.
- Intra-operative Doppler was performed to confirm improvement in velocity after the release.
- Wounds were closed with absorbable sutures.

Patient was extubated on table and shifted to ward after surgery. Patient was mobilised the same day evening. He was started on liquids the next day and discharged the following day on semisolid and soft food.

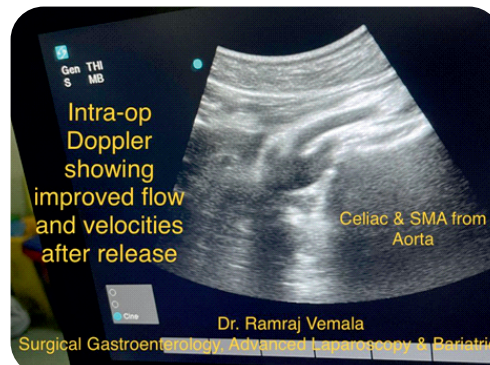
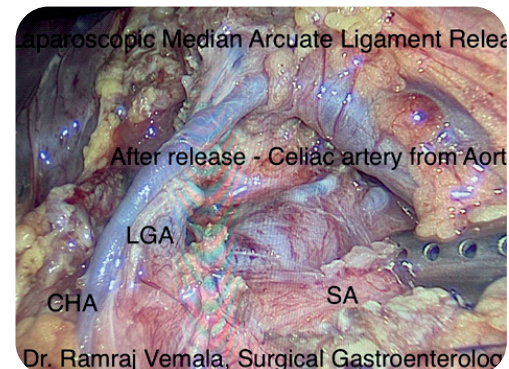
At follow-up, patient has recovered well, he is free of all his symptoms, appetite improved, is feeling hungry and tolerating soft diet.



## Discussion

Considering the critical area and location involved in surgery, i.e., very close to the main blood vessels, diaphragm and liver, Laparoscopic MALS release is a complex and advanced procedure.

Being a not so frequently performed operation, it requires a sound anatomical knowledge of the surgical field, special laparoscopic equipment and good surgical expertise.



## Laparoscopic Excision of Large Retro Peritoneal Cyst/ Para Duodenal Cyst



**Dr. Niranjan P**  
*MBBS, DNB (Gen Surgery)*  
**Consultant General,  
Laparoscopic & Bariatric Surgeon**

Dr. Niranjan P is a Consultant in the Department of General, Minimal Access, and Bariatric surgery at United Hospitals. He holds immense specialization in General, Advanced Laparoscopic procedures, Gastrointestinal surgeries, weight loss surgery, and Oncosurgery. Having worked with many prestigious hospitals, he is striving seamlessly to contribute to the field with his expertise.

## Introduction

- Retroperitoneal cysts (RPCs) are uncommon.
- One third of patients with retroperitoneal cysts are asymptomatic & the cyst is found incidentally.
- Cyst can grow to a considerable size before becoming symptomatic.
- Range from common benign lesions to rare aggressive malignant neoplasms.
- Cystic lesions are highly challenging regarding the clinical presentation, the diagnostic and the choice of therapeutic approaches

## History

57 years old women k/c/o Diabetes mellitus/ Hypertension/ Hypothyroidism presented with early satiety & decreased appetite since 2 months.

## Per Abdomen

Vague mass palpable in right lumbar region & right hypochondrium, smooth surface, firm consistency and not moving with respiration

## Ultrasound Abdomen & Pelvis

- Large abdominopelvic cystic lesion measuring 13 cms in transverse diameter extending from right lumbar to right pelvic region. No septations noted? Origin.
- CT Abdomen plain done elsewhere was s/o? Pancreatic Pseudocyst

## MRI ABDOMEN/ MRCP: Probably enteric duplication cyst

Large cyst measuring 9.5 (AP) x 7.5 (TRANS) x 13.5 (CC) is seen in right retroperitoneal plane abutting the duodenum at D2-D3 segment junction. Cyst shows smooth wall without obvious septation. Cyst shows smooth outline without any involvement of adjacent retroperitoneal structures. Right kidney lower pole is abutted by the lesion without obvious involvement.

**Liver:** Enlarged in size and shows mild fatty changes. No focal mass lesion is seen. No evidence of intra hepatic biliary radicular dilatation. T1 and T2 Wt images show normal flow void within hepatic veins, intra hepatic portion of inferior vena cava, portal vein and intra hepatic portal venous radicals. Porta hepatis is normal.

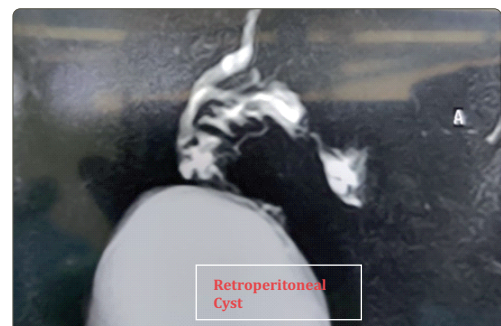
**Spleen:** Normal in size, shape, outlines and signal intensity. Splenic hilum and Splenic vein are normal.

**Pancreas:** Normal in size, shape and signal intensity. No focal mass lesion is seen. Peri-pancreatic fat planes are normal.

**The adrenals** are normal in size and signal intensity. No mass lesion seen.

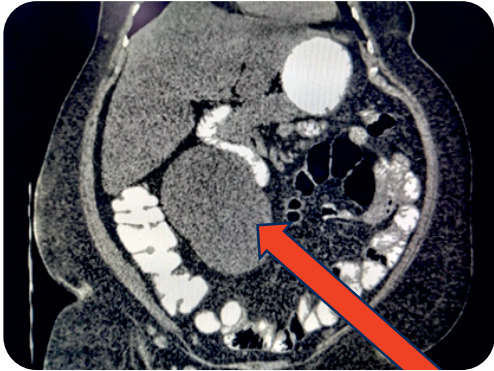
**Kidneys:** Normal in size, shape, outlines and signal intensity. No focal mass lesion/hydronephrosis.

## Mild dilated pancreatic duct up to ampulla

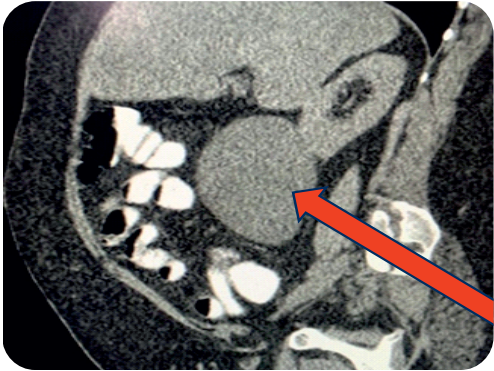
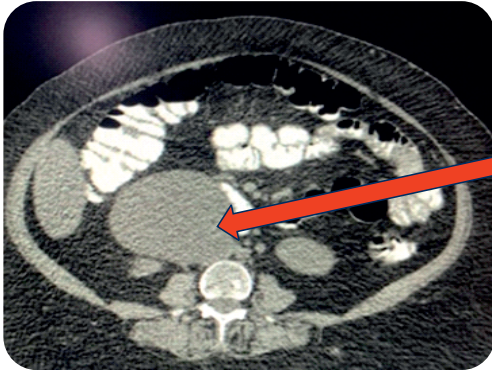




**CT Abdomen With Enteroclysis**  
 Done to look for communication with gut



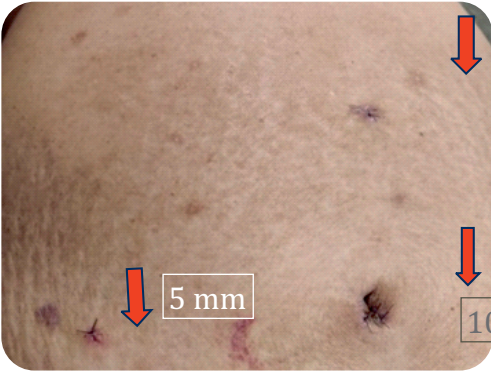
Well defined cystic lesion, 12.8x10.3x8.2 cms, abutting D2, D3



Abutting Lower pole of right kidney

Probably Gut duplication cyst  
 No communication with Gut

**Surgery:**  
 Underwent Diagnostic laparoscopy + Laparoscopic excision of right retroperitoneal cyst + Peritoneal toileting on 27/04/2022

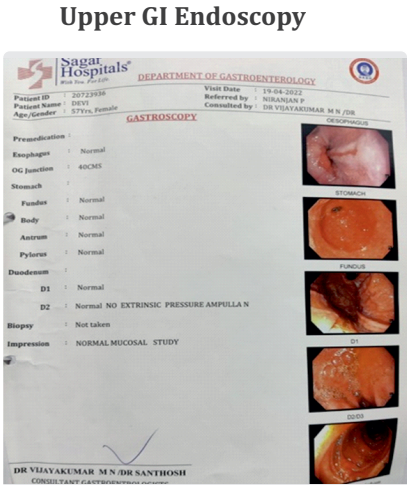


5 mm

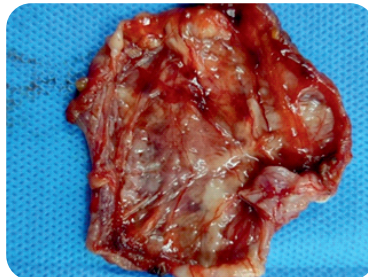
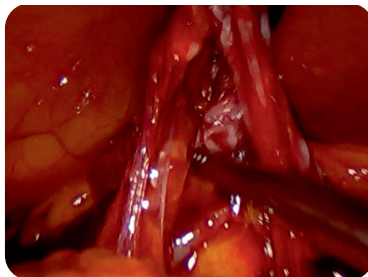
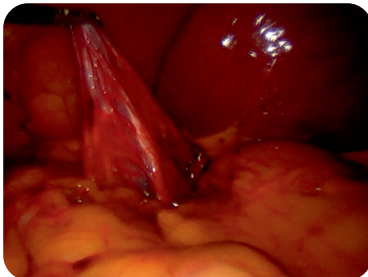
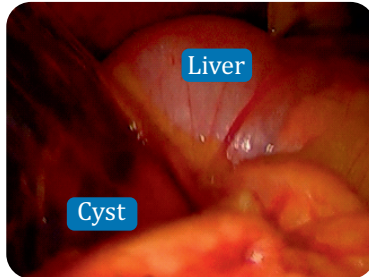
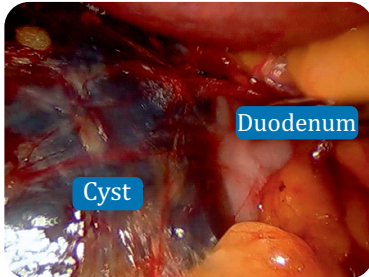
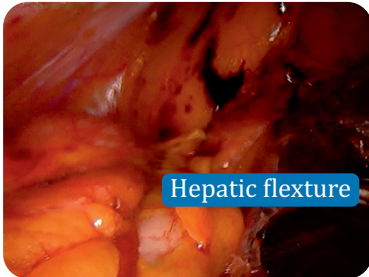
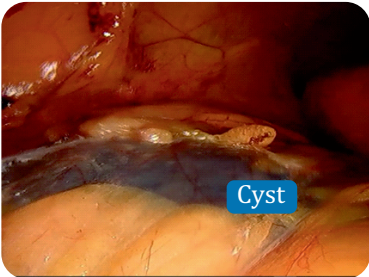
3 port Laparoscopy

5 mm

10 mm

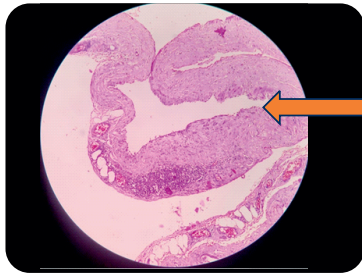


**Findings:**  
 A large, well defined, cystic lesion measuring 13x10x8 cms in right side of retroperitoneum adherent to third part of duodenum, Gerota’s fascia & overlapping hepatic flexure & transverse colon loops.

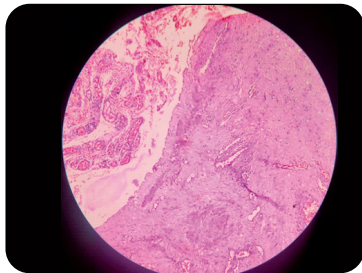




## Histopathology



Fibro collagenous cyst wall lined by flattened



Features consistent with Benign cystic lesion



## Follow Up

Patient recovered well.  
Post operative period uneventful

## Differential Diagnosis

- Cystic lesions of the retroperitoneal space classified as
- Non-neoplastic - Pancreatic pseudocysts, non-pancreatic pseudocysts, lymphoceles, urinoma and hematoma.
- Benign - Cystic lymphangioma, Cystic teratoma, Mucinous cystadenoma, Pseudomyxomaretroperitone, Cystic mesothelioma.

## Discussion

Malignant neoplastic cysts - Neurilemmoma, paraganglioma (only rarely cystic) & perianal mucinous carcinoma.

Lymphangiomas are rare cystic tumors of the lymphatic system. They frequently affect the neck (75%) and the axilla (20%).

Remainder (approximately 5%) of the lymphangiomas are intra-abdominal arising from the mesentery, retroperitoneum or greater omentum. Retroperitoneal lymphangiomas account for nearly 1% of all lymphangiomas, and are uncommon incidental findings usually at surgery. Primary retroperitoneal cysts are rare and constitute a diagnostic challenge due to overlapping imaging findings.

Despite preoperative imaging characteristics, intraoperative assessment is the best assessment mode. Complete cystectomy is the gold standard in managing patients with retroperitoneal cysts.

Removal of these laparoscopically is highly challenging and needs advanced Laparoscopic skills. Since laparoscopy was done, patient had very minimal pain and faster recovery and early discharge from the hospital.

## References

Bhavsar T, Saeed-Vafa D, Harbison S, Inniss S. Retroperitoneal cystic lymphangioma in an adult: A case report and review of the literature. World J Gastrointest Pathophysiol 2010; 1(5): 171-176

Ahmed Alzarraa et al, Idiopathic benign retroperitoneal cyst: a case report, Journal of Medical Case Reports 2008, 2:43  
doi:10.1186/1752-1947-2-43

Morotti A, et al, Detection and management of retroperitoneal cystic lesions: A case report and review of the literature. Oncol Lett. 2017, Aug-14.

# Celebrations

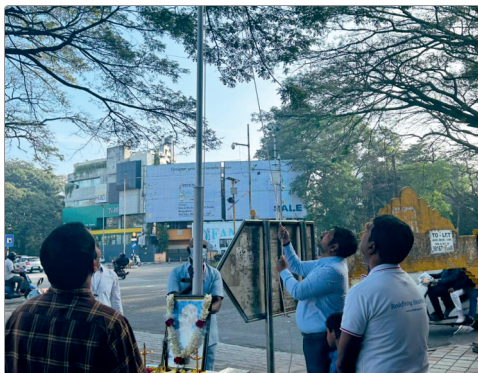
United Hospital in Jayanagar is a bustling healthcare community .A glimpse into our January events:

To kick off the new year, United Hospital in Jayanagar hosted a fun celebration for its staff and patients, to start the year off on a positive note. Our chief guest Mr. Krishnakant IPS DCP Deputy Commissioner of Police (South), Bengaluru City gave us some inspirational advice.



## United Hospital Jayanagar, New Year Celebrations

On January 26th, we marked Republic Day, by hoisting the national flag and renewing our pledge to serve our great nation



## United Hospital Jayanagar, Republic Day Celebrations

# Outreach Programmes

United Hospital, Jayanagar participated in ILYF hosted Global Business Summit, which brought together business owners and leaders worldwide to network and discuss opportunities for collaboration. This event helped in strengthening the hospital's relationships with many interested visitors to our stall.



## United Hospital Jayanagar, participated in ILYF Conclave hosted Global Business Summit





## Our Centres

### Bangalore

- United Hospital, Jayanagar
- United Specialty Clinic, JP Nagar
- Matoshree Kidney Stone Center, HSR Layout

### Gulbarga

- United Hospital
- UH Annex
- United Diagnostics

**For Appointments, Call:**  
**080 4566 6666**

**For Emergencies, Call:**  
**80 4566 6616**

**For Home Care, Call:**  
**7996050666**

**Scan To  
know More**

