



Billroth  
Hospitals

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INSTITUTE OF  
GASTROENTEROLOGY

# BILLROTH INSTITUTE OF GASTROENTEROLOGY

December 2024 - Billroth Hospitals







**Dr. V. Jeganathan**  
Founder, Billroth Hospitals



**Billroth**  
Hospitals

*"It has been said that a gentle word, a warm hand, a willing ear and small acts of kindness, often taken for granted, can change a life. We believe that to be true. Because we have seen first-hand the power of caring with compassion."*

*~ Dr. V. Jeganathan - Founder*

## MAN WITH VISION...

### The Seed was Sown

An extraordinary physician of our times, **Dr. V. Jeganathan** watched thoughtfully as the first bricks for his dream hospital were laid. His vision for creating a world-class healing environment that would attract the best medical minds was taking shape. He dreamt of creating an institution that would serve as a beacon of hope to patients from across the world, offering them the highest standards of excellence in medical care, delivered with compassion. And so began a journey that started with a 70-bed hospital for Gastroenterology. Now Billroth Hospitals, offers an entire spectrum of Medical Care.



**SINCE 1990, THERE WERE NO  
COMPROMISES AND NO LOOKING  
BACK AT BILLROTH HOSPITALS.**

# Where Care Comes First



# CASE REPORT - 1

## CAPSULE ENDOSCOPY



Capsule Endoscopy, also known as wireless capsule endoscopy or video capsule endoscopy, is a gastrointestinal study that uses a pill camera to take images of the intestinal lumen. It is safe, painless, has no risk for infection and does not require sedation. The capsule is ingested and transmits images at 2 to 6 frames per second over the course of 8 to 12 hours until the battery expires. It generates 512 by 512-pixel, high-resolution images that allow detailed inspection of the gastrointestinal mucosa. Capsule endoscopy is a diagnostic procedure and has no therapeutic benefits. It can only localize lesions in the esophagus, stomach, small bowel, and colon. It is used most often for recurrent and obscure gastrointestinal bleeding after traditional endoscopic procedures have failed to identify a bleeding source.

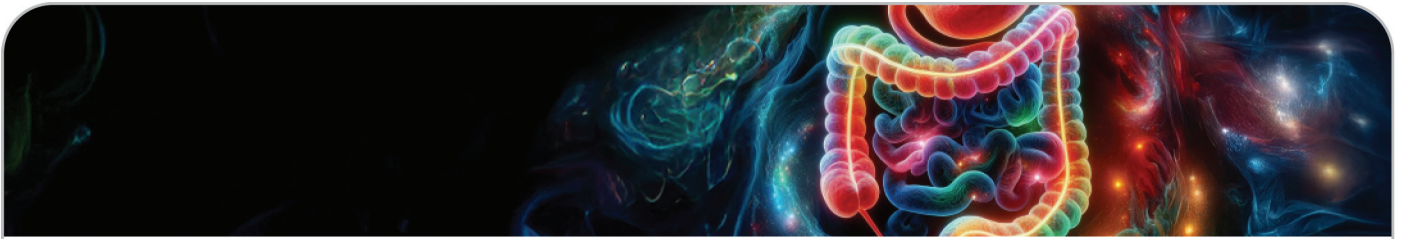
Since the early years of conventional endoscopic procedures, the small bowel has been considered technically difficult to examine due to its length and location. The concept of a capsule indicated for small bowel analysis was developed by two groups. In 1996, a gastroenterologist named Dr. Paul Swain demonstrated the first live transmissions of a capsule analysis using a pig's stomach. In 1997, he decided to collaborate with Dr. Gavriel Iddan, a mechanical engineer. In 2000, they published successful animal trials, and in 2001, they published human studies on the use of capsule endoscopy in clinical trials.

The PillCam capsules are divided into three categories, small bowel (SB), esophagus (ESO), and colon (COLON), which have video cameras designed for imaging the gastrointestinal tract. Each of them is equipped with a battery, LEDs (light-emitting diodes), and a transmitter with an antenna. All these components are enwrapped in a biocompatible plastic casing, and the capsule size is about 26.4 mm length and 11.4 mm diameter.

The most common indication of capsule endoscopy is for obscure gastrointestinal bleed. It is used for screening of the small bowel after upper and lower endoscopic procedures failed to find a bleeding source. It is also indicated for diagnosis of Crohn's

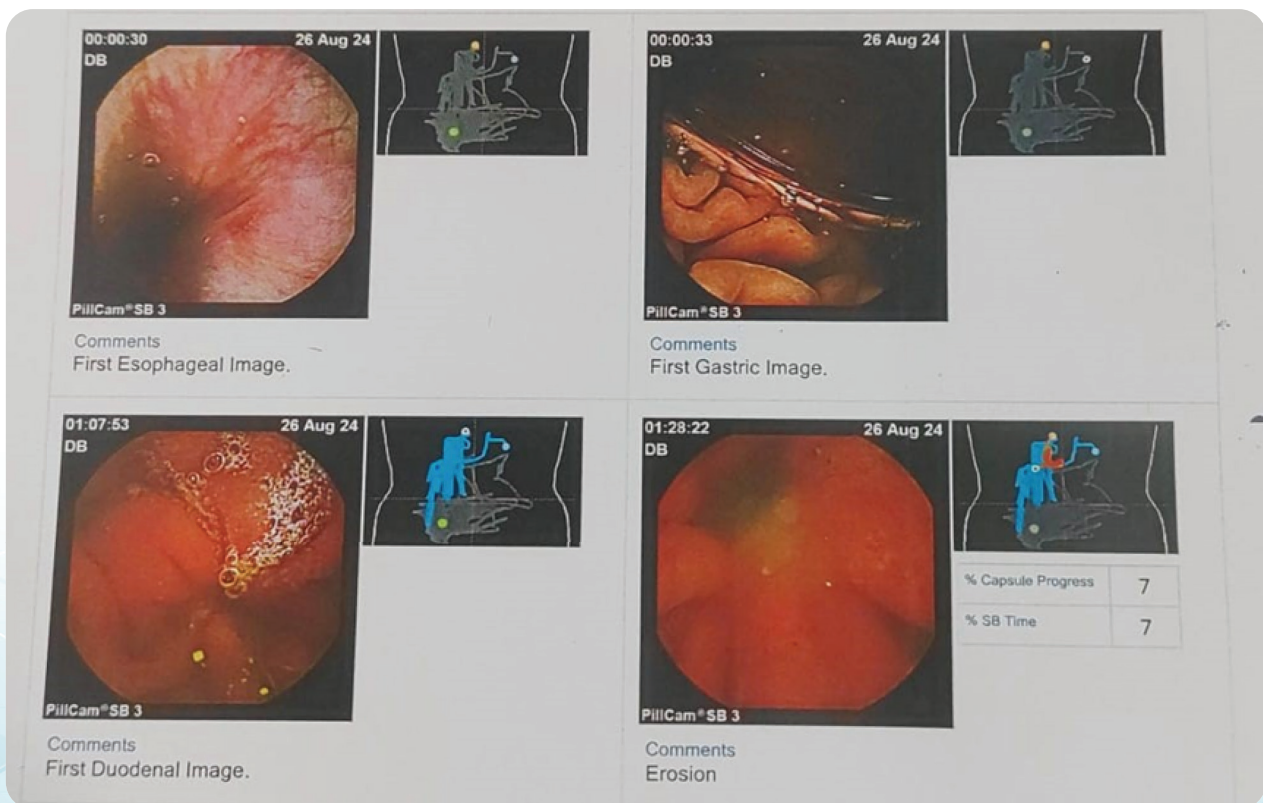
disease and evaluation of Crohn's disease activity, diagnosis of celiac disease, and evaluation of refractory celiac disease, polyposis syndrome surveillance, small intestine tumors such as neuroendocrine tumors, or carcinoid tumors. CE may be used in selected patients with chronic iron-deficiency anemia. Related to small bowel analysis, the indications are: obscure gastrointestinal (GI) bleeding, occult bleeding (positive FOBT), evaluation of iron deficiency anemia, Crohn's disease, indeterminate colitis, assessment of mucosal healing, abdominal pain, graft-versus-host disease, surveillance of polyposis syndromes, celiac disease, suspected small bowel tumors, follow-up of small bowel tumors, evaluation of abnormal small bowel imaging, and evaluation of drug-induced injury.



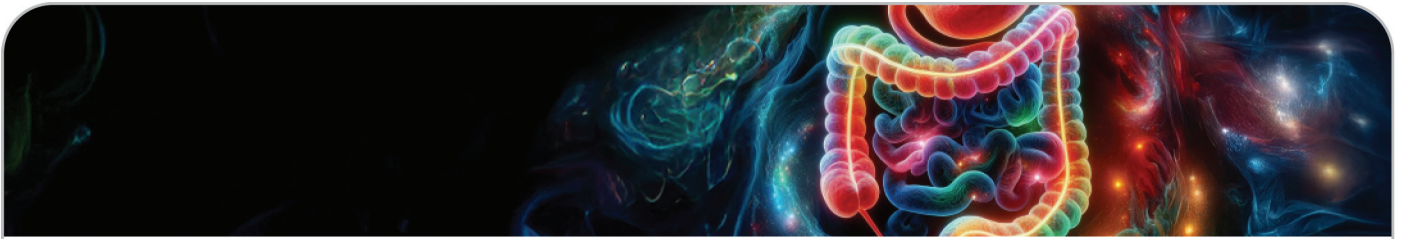


Preparation for a capsule endoscopy is similar to that of colonoscopy preparation and can be performed in an outpatient setting. Prior to video capsule ingestion, the patient is outfitted with a sensor belt which gathers the capsule's transmitted images. Once a magnet is removed from the capsule, it becomes activated, and the patient can ingest the capsule while in an upright position. Patients are advised not to participate in any activities that may cause sensor belt detachment. The patient can resume a clear liquid diet 2 hours after capsule ingestion. After the external receiver captures the transmitted images, they are then downloaded onto a computer. A gastroenterologist then evaluates and documents the findings of the capsule endoscopy in a report.

There are several contraindications to capsule endoscopy. Since the procedure requires patient participation, individuals with dementia are usually poor candidates. Swallowing disorders may cause difficulty in ingesting the capsule. The risk of capsule retention is greatest in patients with known or suspected strictures, fistulas, and obstructions. Capsule endoscopy is contraindicated in these patients due to the risk of worsening obstructions or causing obstructions. If capsule endoscopy is necessary for a patient at risk for retention, an Agile Patency Capsule can be ingested.

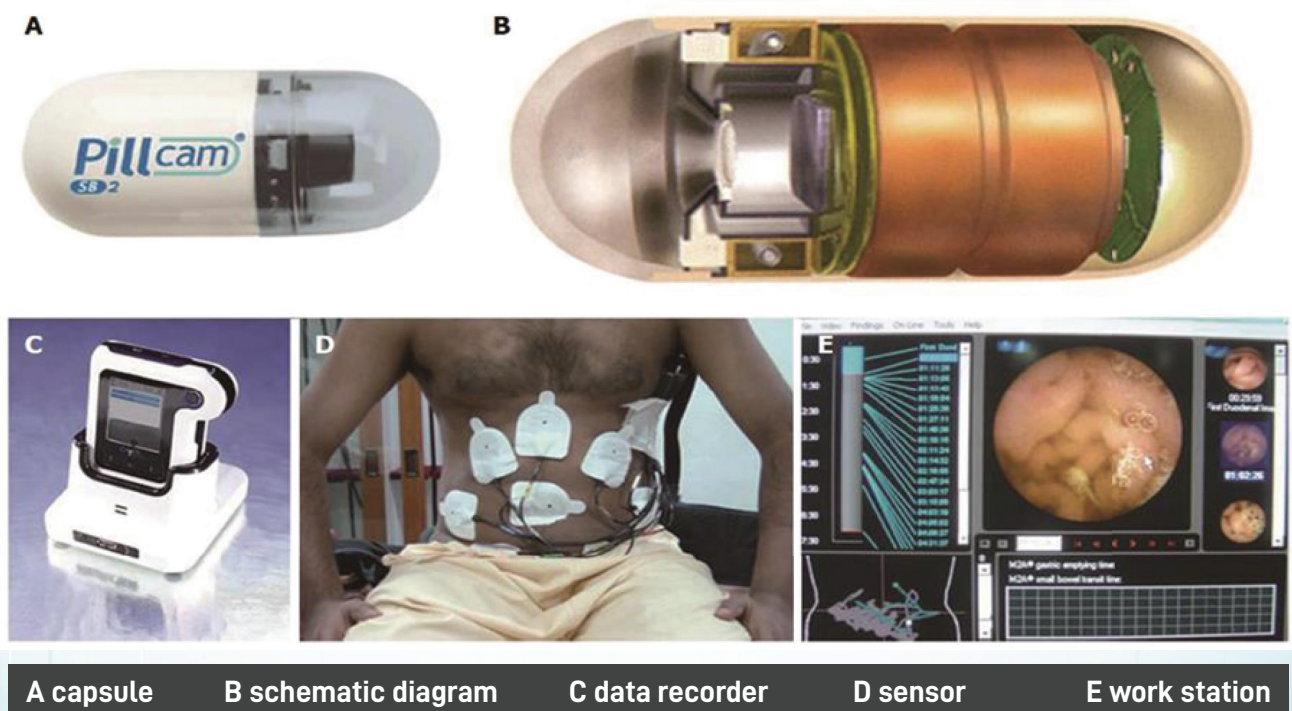




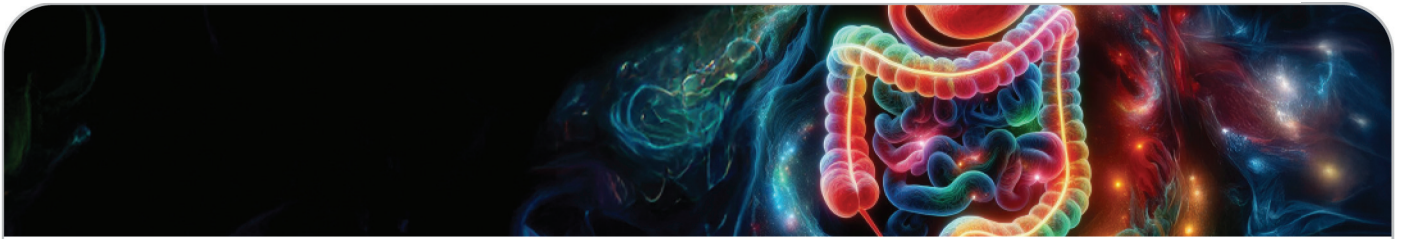


Capsule retention can occur in 1.3% to 1.4% of patients undergoing capsule endoscopy and is the most common complication. Capsule retention is usually asymptomatic and diagnosed 2 weeks after capsule ingestion via abdominal plain film x-ray. Patients with known or suspected obstructions, strictures or fistulas should not undergo capsule endoscopy due to their increased risk of retention. Crohn's disease increases a patient's risk of having capsule retention to 2.6%. Radiographic imaging such as small-bowel follow-through, CT or magnetic resonance enterography can also be used to assess lumen patency prior to the administration of the capsule. Capsules may need to be surgically or endoscopically removed if symptomatic retention occurs.

A 70 year old gentleman known diabetic and hypertensive was evaluated for overt lower gastrointestinal bleed. His radiology scan CECT abdomen revealed normal bowels. He further underwent gastroscopy and colonoscopy which showed normal mucosal study. As his bleeding stopped he was put on symptomatic treatment. Subsequently he developed another episode of lower GI bleed and CT angiogram was done which was also inconclusive. The episodes of bleed were brief and overt. He underwent capsule endoscopy which detected erosions in the jejunum and ileum with a possibility of Crohn's and NSAID enteropathy. He was started on mesalamine and budesonide and is on regular follow up.







<p>01:49:27 DB</p> <p>PillCam<sup>®</sup> SB 3</p> <p>Comments Erosions</p>	<p>26 Aug 24</p> <p>% Capsule Progress 22 % SB Time 14</p>	<p>02:07:49 DB</p> <p>PillCam<sup>®</sup> SB 3</p> <p>Comments Erosions</p>	<p>26 Aug 24</p> <p>% Capsule Progress 28 % SB Time 20</p>
<p>03:16:22 DB</p> <p>PillCam<sup>®</sup> SB 3</p> <p>Comments Prominent Blood vessels</p>	<p>26 Aug 24</p> <p>% Capsule Progress 51 % SB Time 44</p>	<p>03:20:54 DB</p> <p>PillCam<sup>®</sup> SB 3</p> <p>Comments Erosions</p>	<p>26 Aug 24</p> <p>% Capsule Progress 53 % SB Time 45</p>
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- **Dr. Tarakeshwari** (Senior Medical Gastroenterologist)



# LIVER TRANSPLANTATION



Deaths due to cirrhosis constituted 2.4% of total deaths globally in 2017 compared with 1.9% in 1990. The prevalence of decompensated cirrhosis increased from 110.6 per 100,000 population in 1990 to 132.5 in 2017.

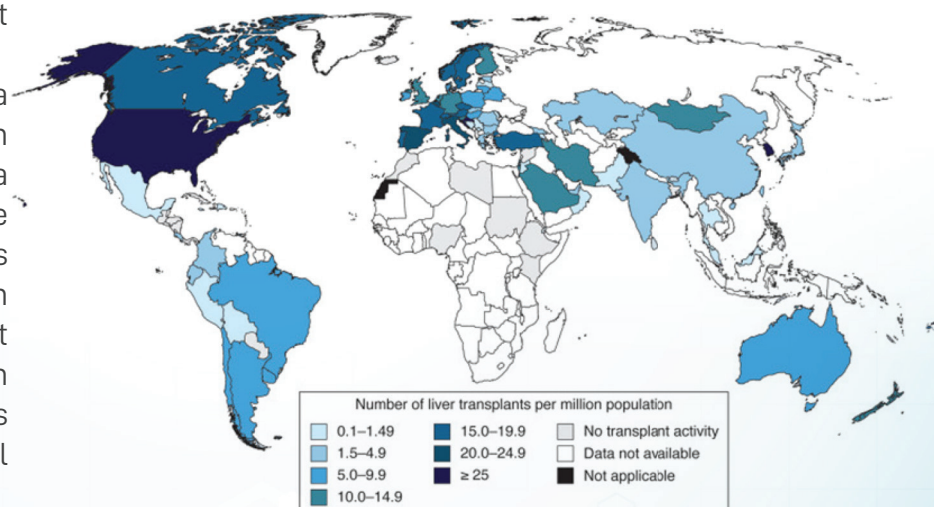
## Globally,

- 31.5% of cirrhosis deaths in males were caused by Hepatitis B,
- 25.5% by Hepatitis C,
- 27.3% by alcohol-associated liver disease (ALD),
- 7.7% by nonalcoholic fatty liver disease (NAFLD),
- 8.0% other causes

In 2021, there were 34,694 liver transplants performed globally an increase of 6.5% from 2020 and a 20% increase from 2015 (living or deceased). Although Deceased donor LT (DDLT) constitutes more than 90% of LT in the Western world. In many Asian countries, most transplants are living donor LT (LDLT).

1963 - Starzl in Colorado first attempted cadaveric liver transplantation (CLT) in human in the world. First successful cadaveric liver transplantation was performed by Starzl again in 1967 and long-term survival result was then reported.

Smith proposed the idea of liver transplantation using a liver graft from a living donor in 1969. The first attempt of LDLT was made by Raia et al in Brazil in 1988. The first successful LDLT from adult to child was performed by Strong et al in Australia in 1989.







# INDICATIONS FOR LIVER TRANSPLANTATION

## Noncholestatic Cirrhosis

- Hepatitis C virus
- Alcohol
- Cryptogenic
- Autoimmune
- Hepatitis B virus
- Nonalcoholic steatohepatitis

## Cholestatic Cirrhosis

- Primary biliary cirrhosis
- Primary sclerosing cholangitis
- Caroli disease
- Biliary atresia

## Fulminant Liver Failure

- Acetaminophen overdose
- Hepatitis
- Ischemia
- Idiosyncratic drug reaction

## Metabolic Diseases

- Alpha 1-antitrypsin deficiency
- Crigler-Najjar disease, type I
- Byler disease
- Glycogen storage disease types IA and IV
- Wilson disease
- Hemochromatosis
- Tyrosinemia
- Ornithine transcarbamylase deficiency
- Galactosemia

## Other

- Budd-Chiari syndrome
- Polycystic liver disease
- Total parenteral nutrition
- Benign hepatic tumors

**TIMING** of Liver Transplantation: MELD score predicts the risk of dying for patients awaiting liver transplantation. MELD Score depends on Creatinine mg/dL, Total bilirubin mg/dL and International normalized ratio (INR). MELD > 12- needs transplantation

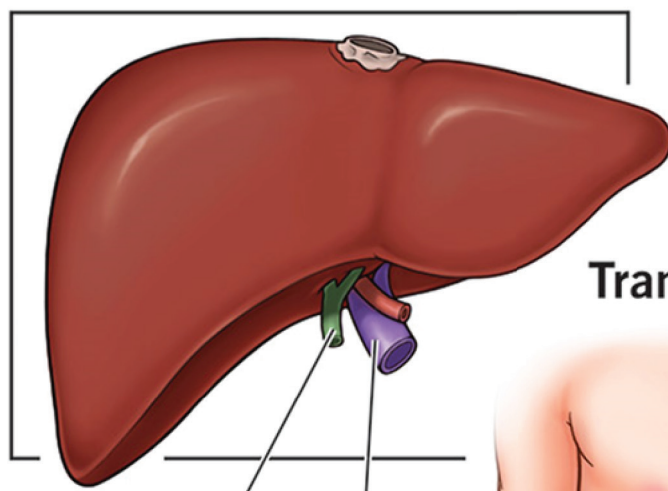
## PROCEDURE

### *DECEASED DONOR LIVER TRANSPLANTATION (CADAVERIC DONOR)*

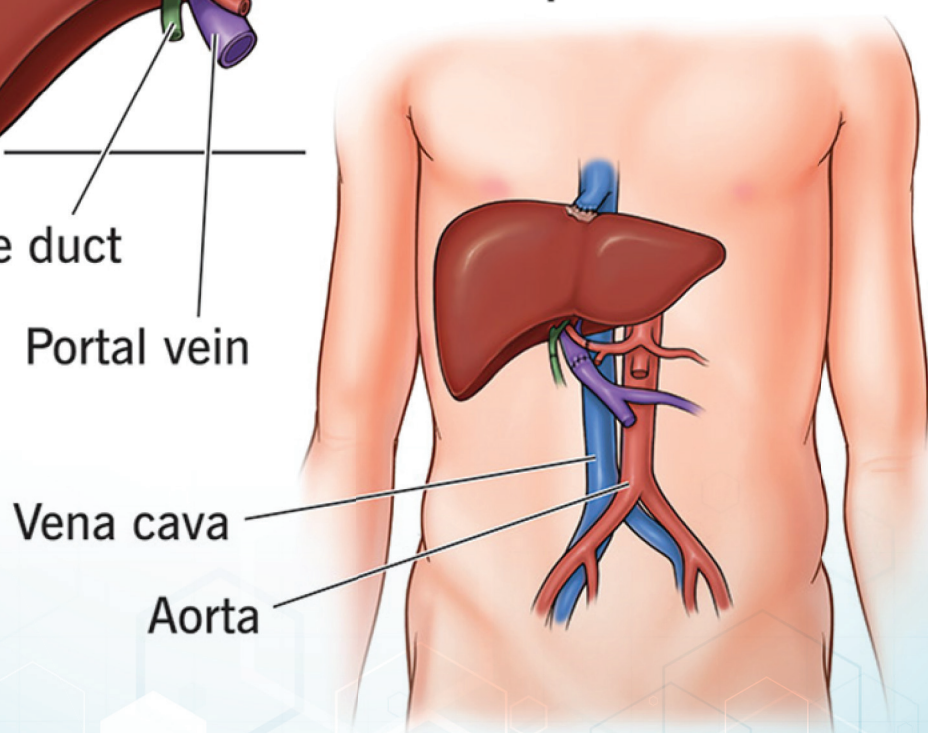
In cadaveric liver transplantation, the donor liver is harvested from the cadaveric donor. The donor liver is prepared in the Backbench. The Recipient liver is removed leaving the portal vein, Bile duct, & Hepatic veins. The donor liver is orthotopically placed in the recipient and then anastomosed to the recipient hepatic vein, portal vein, hepatic artery & bile duct.

## Liver transplant

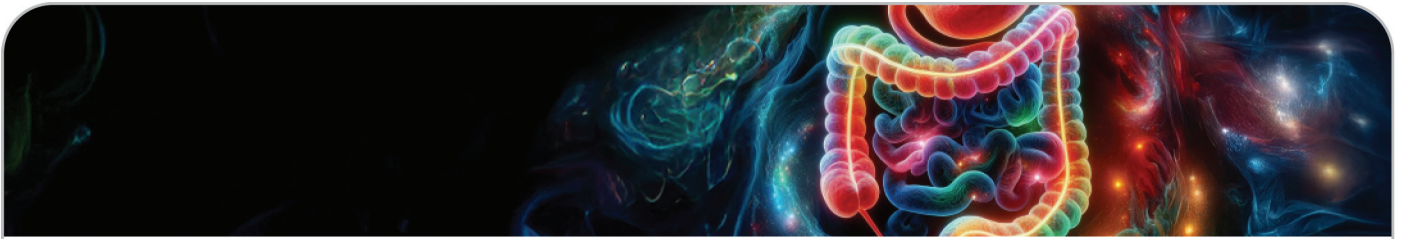
Donor liver



Transplanted liver

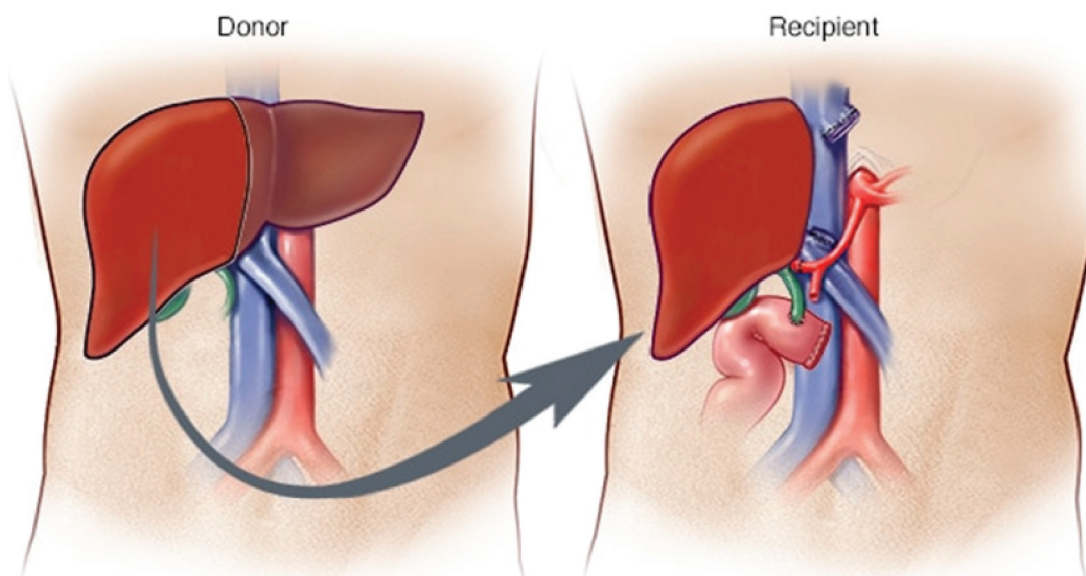






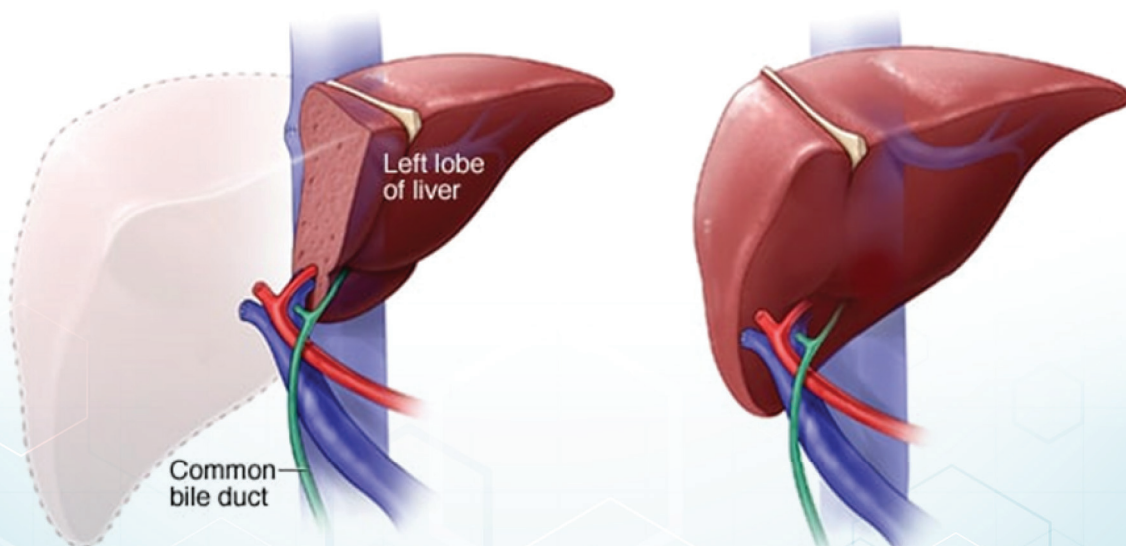
## LIVE DONOR LIVER TRANSPLANTATION

The Right or left half of the liver is removed from the live donor, with the corresponding portal vein, hepatic artery, bile duct and the hepatic vein. The liver is perfused & prepared in the backbench. The donated liver is anastomosed with the IVC or Hepatic vein, portal vein, hepatic artery and the bile duct or Roux loop of jejunum of the recipient.

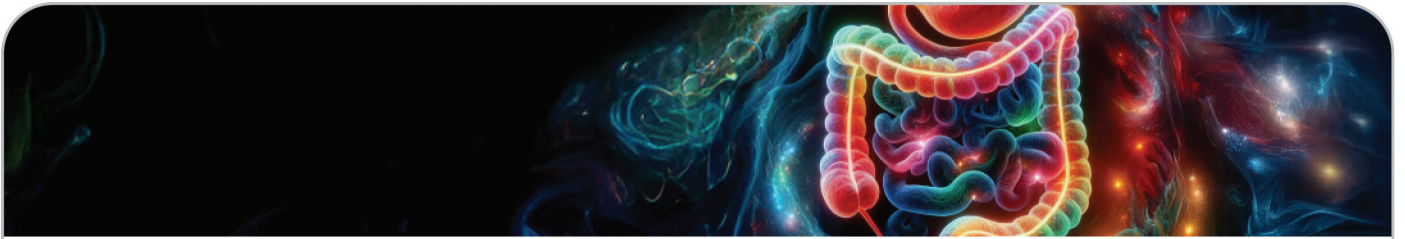


Donor liver immediately after donation

Donor liver two months after donation







## LIVER TRANSPLANTATION PROGRAMME IN BILLROTH HOSPITAL

The first liver Transplant in Billroth Hospital was done on 7th September 2021, even during the COVID pandemic due to the strong commitment of our MD, Dr. Rajesh Jeganathan, BILLROTH hospital management and untiring efforts of the Liver Transplant team headed by Dr Ilan Kumaran – The transplant surgeons, Anesthetists, Intensivists, Coordinators, Nurses & support staff. The liver Unit was inaugurated by Honorable Health Minister , Ma. Subramanian on 23rd September 2021. The first Liver transplantation with CMCHIS (Chief Minister Comprehensive Health Insurance Scheme) was done on March 2023. We had successfully completed many Liver transplantations, and progressing forward. Live Donor Liver Transplantation cases out number deceased donor transplantation. The Youngest recipient was 24 years and the oldest 66 years.





## STATE OF THE ART INSTRUMENTATION FOR LIVER TRANSPLANT AND HEPATO BILIARY PANCREATIC SURGERY



**ROTEM - ROTATIONAL THROMBOELASTOMETRY**



**CUSA EXCEL PLUS: ULTRASONIC  
TISSUE ABLATION SYSTEM**



**VIO 300 D- ADVANCED ELECTROSURGICAL  
SYSTEM WITH ARGON PLASMA COAGULATION**

# CASE REPORT - 2

## GALLBLADDER TORSION: THE GREAT MASQUERADER



### INTRODUCTION

Gallbladder torsion, also known as gallbladder volvulus, is a rare and unusual condition characterized by the rotation of the gallbladder around its own axis, leading to impairment of its blood supply. This condition can cause severe pain, inflammation, and, if untreated, can lead to gallbladder necrosis, perforation, or sepsis. Although the condition is infrequent, its clinical significance arises from its diagnostic challenge and potential for serious complications if not addressed promptly. Understanding the pathophysiology, clinical presentation, diagnostic approach, and treatment options for gallbladder torsion is crucial for clinicians to recognize and manage this rare disorder effectively.

### PATHOPHYSIOLOGY

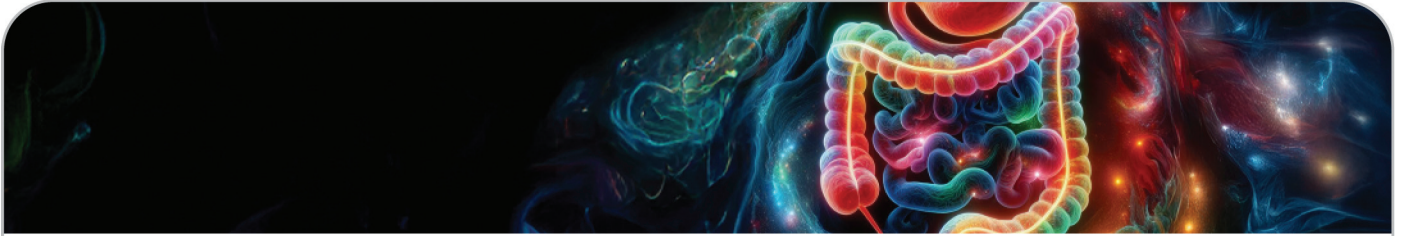
The gallbladder is a small, pear-shaped organ situated under the liver, responsible for storing bile produced by the liver. Normally, it is anchored to the liver by the cystic duct and cystic artery. Gallbladder torsion occurs when the gallbladder rotates around its axis, disrupting its normal anatomical position. The condition is typically associated with an abnormal length of the cystic duct, which allows for greater mobility of the gallbladder. In rare instances, other factors such as excessive mesenteric laxity or a congenitally elongated cystic duct can contribute to the rotation.

As the gallbladder twists, its blood supply, particularly from the cystic artery, becomes compromised. This can lead to ischemia (insufficient blood flow), resulting in pain, inflammation, and eventually gangrene or necrosis of the gallbladder if the torsion is prolonged. The torsion may be partial or complete, with complete torsion often leading to more severe outcomes.

### CLINICAL PRESENTATION

The symptoms of gallbladder torsion are nonspecific and can mimic other abdominal conditions, making diagnosis challenging. A 78 year old lady presented to the ER with H/O acute onset right sided abdomen pain and vomiting. On examination, she was underweight (BMI of 16), and kyphotic. She had RIF tenderness and guarding, with a mass in the RIF. She was further investigated with the suspicion an appendicular pathology.





## DIAGNOSTIC APPROACH

The diagnosis of gallbladder torsion is often delayed due to its rarity and nonspecific symptoms. A high index of suspicion is necessary, particularly in patients with unexplained RUQ pain and no clear diagnosis after initial evaluation. Imaging studies are essential for diagnosis.

### 1. Ultrasonography

Ultrasound is typically the first imaging modality used. It may reveal signs of gallbladder distention, absence of gallbladder wall motion, and possible gallbladder thickening. However, ultrasound alone may not always be sufficient to confirm the diagnosis, as it may not detect torsion unless associated complications such as ischemia or necrosis are present.

### 2. CT Scan

A contrast-enhanced computed tomography (CT) scan can provide more detailed information, especially in detecting gallbladder distention, abnormal positioning, and signs of ischemia or necrosis. A key feature on CT is the "whirlpool sign," which represents the twisting of the gallbladder and its associated vessels.

On CT imaging of our patient, she was diagnosed to have a torsion of the gall bladder.

### 3. Magnetic Resonance Cholangiopancreatography (MRCP)

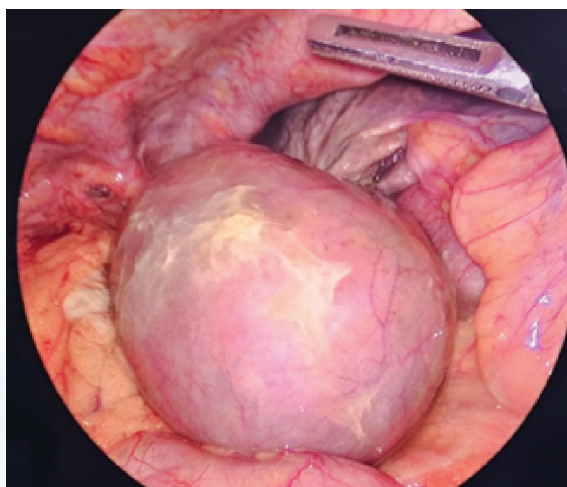
MRCP can offer further confirmation of the diagnosis, allowing visualization of the gallbladder, cystic duct, and bile ducts. It is particularly helpful in identifying any anatomical anomalies or complications related to torsion.

## TREATMENT

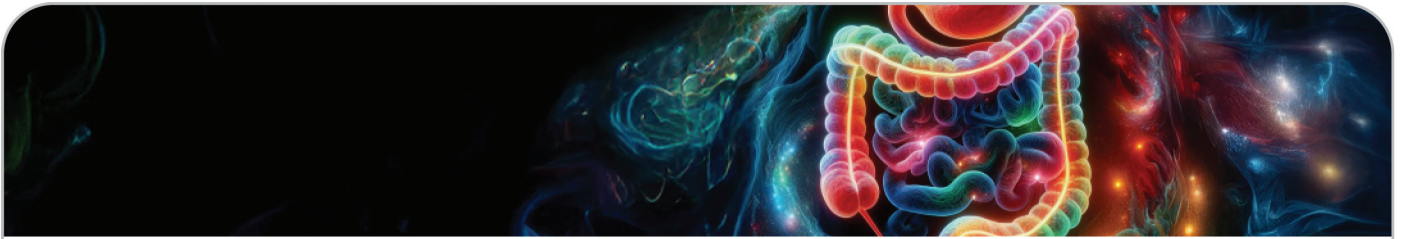
Treatment for gallbladder torsion is largely surgical. The primary goal is to relieve the torsion, restore blood flow, and prevent further complications such as gallbladder necrosis or perforation.

### 1. Laparoscopic Cholecystectomy

The most common treatment for gallbladder torsion is a laparoscopic cholecystectomy, a minimally invasive procedure that involves the removal of the gallbladder. This approach is preferred due to its reduced recovery time, lower risk of infection, and ability to visualize the gallbladder and surrounding structures with minimal disruption.



*Fig 1. Distended gall bladder in the right lumbar region, twisted along its pedicle.*



**FINDINGS:** *Distended gall bladder with toxic fluid in RIF and pelvis.  
The gall bladder was twisted along the cystic duct.*

## PROCEDURE DONE:

*The gall bladder was drained using a trocar and suction device and was untwisted.  
A regular laparoscopic cholecystectomy was done.*

### 2. Open Cholecystectomy

In cases where laparoscopic surgery is not feasible, such as in patients with severe torsion or complicated anatomy, open cholecystectomy may be required. This is a more invasive approach but may provide better exposure for managing complications like gangrene or perforation.

### 3. Conservative Management

In very early cases or where surgery is not immediately possible, conservative management may be attempted. This includes hydration, pain control, and antibiotics to prevent infection. However, this approach is rarely effective, as the risk of complications rises significantly with delayed intervention.

## PROGNOSIS

The prognosis of gallbladder torsion largely depends on the timing of diagnosis and intervention. If the torsion is recognized early and the blood supply to the gallbladder is restored, the outcome can be favorable with minimal complications. However, if the condition is diagnosed late, the gallbladder may undergo necrosis or perforation, leading to more serious outcomes such as sepsis, peritonitis, and even death in severe cases.

In general, prompt surgical intervention improves the chances of a good recovery, with most patients returning to normal activity following laparoscopic cholecystectomy.

## CONCLUSION

Gallbladder torsion is a rare and often overlooked condition that can present with acute abdominal pain and mimic other more common diagnoses. Gall bladder torsion is more common in elderly women, with lower BMI, kyphoscoliosis and hepatic atrophy. In retrospect, our patient fit the above criteria perfectly.

Early recognition through imaging studies and clinical suspicion is critical to prevent the potentially life-threatening consequences of ischemia, necrosis, and sepsis. Surgical intervention, typically in the form of laparoscopic cholecystectomy, remains the cornerstone of treatment, and timely intervention is key to a favorable prognosis. Despite its rarity, awareness of gallbladder torsion is important for clinicians in order to ensure prompt diagnosis and appropriate management.

- **Dr. Malavika K** (Consultant General & Laparoscopic Surgeon)
- **Dr. Sankar Narayanan ML** (Consultant Surgical Gastroenterologist)



# CASE REPORT - 3

## REVISITING THE IMPORTANCE OF HAND ASSISTED LAPAROSCOPIC SURGERY (HALS) IN COLORECTAL SURGERY



### AIM:

The aim of this study is to emphasise the advantages of HALS and to prove its non-inferiority over pure laparoscopic colorectal surgery. In addition, in our experience, it scores over pure laparoscopy with reduced operating time, oncological clearance, reduced blood loss and duration of hospital stay.

### KEYWORDS:

*HALS, laparoscopic surgery, open surgery, colorectal surgery and complications.*

### INTRODUCTION:

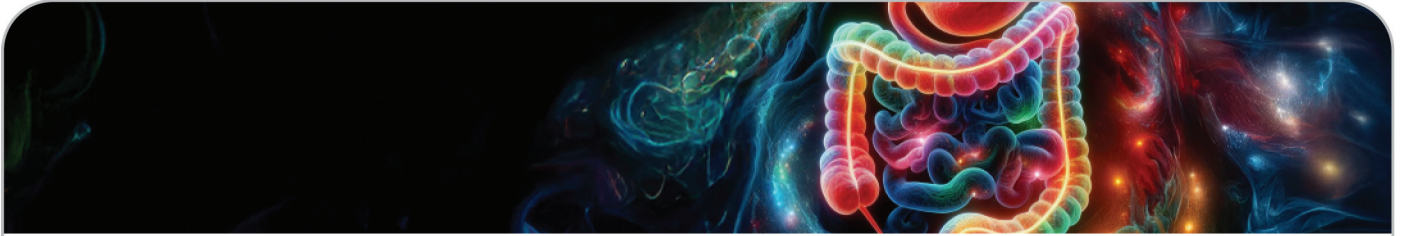
The evolution of abdominal surgeries has seen significant advancements over the last century, transforming from rudimentary procedures to sophisticated techniques involving advanced technology. The transition from open surgery to laparoscopic surgery and subsequently to robotic surgery, represents significant milestones in the evolution of surgical techniques, driven by the desire to minimize surgical trauma which enhances the recovery with improved outcomes.

Laparoscopic colorectal resections have become popular over the years. It requires high level of training and an equally trained assistant to achieve best results. Hand assisted laparoscopic surgery (HALS), a hybrid technique bridges the gap between open and laparoscopic surgery. However, the importance of HALS has been consigned to oblivion due to the misconception of inferior technique when compared to pure laparoscopy.

In India, HALS is practiced in handful of centres. This technique along with retaining all the benefits of laparoscopy, it scores superior to laparoscopy in restoring tactile feedback, precise traction thereby enabling the surgeon to perform intricate tasks. Albeit laparoscopic surgery remains a gold standard for many procedures due to its established benefits and lower costs, HALS provides a valuable intermediate option for complex situations. Studies have shown that HALS can achieve similar outcomes to standard laparoscopic surgery in terms of patient recovery, hospital stay and complication rates.

In the interest of newer surgeons, we wish to introduce HALS as a procedure which a) requires a 5 cms incision for hand port, as against pure laparoscopy which uses 3-5 cms incision for specimen retrieval at the end of the procedure, b) a well trained camera person is adequate to complete the entire dissection, all the retraction is performed by the surgeon's non dominant hand c) the retraction is atraumatic, no undue breach of tissue planes which increases the oncological safety d) reduced blood loss and operative time.

This is our initial experience of HALS, its significance and intricacies in colorectal surgery, sigmoidectomy and various complex surgeries to acknowledge their applications.



## TECHNICAL REPORT:

Hand-assisted laparoscopic surgery (HALS) involves a combination of surgeon's non-dominant hand (left hand) inside the abdomen via specialized port along with routine laparoscopic working port. Here is a general overview of the surgical technique:

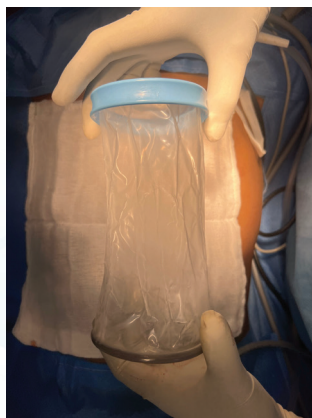
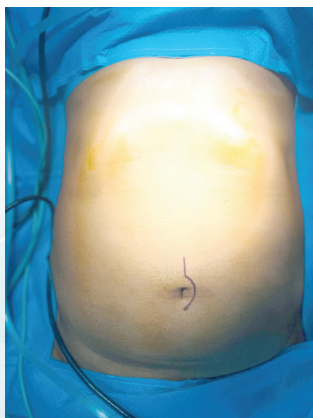
### ***Patient Positioning:***

- The patient is placed in a Lloyd- Davies position with adequate strapping onto the operating table.
- The surgeon and the camera assistant are positioned onto the right of the patient.

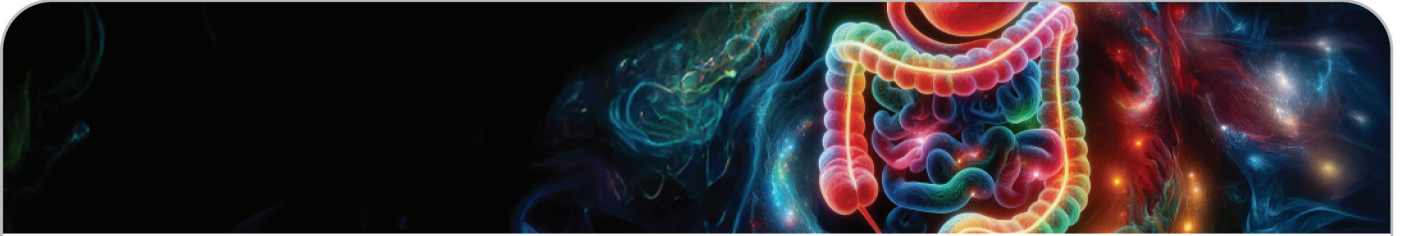


### ***Creation of Hand port, camera port and working port:***

- A vertical periumbilical incision measuring 5 cms mini laparotomy is made,
- Small size double ring retractor is introduced and rolled to appropriate level,
- Using double glove technique, surgeons left hand is introduced into the port and secured,
- A 10 mm port is placed to the right of midline at the epigastric region
- Carbon dioxide gas is introduced into the abdominal cavity to create a pneumoperitoneum, allowing for better visualization and access,
- A 12 mm working port is placed in the right iliac fossa



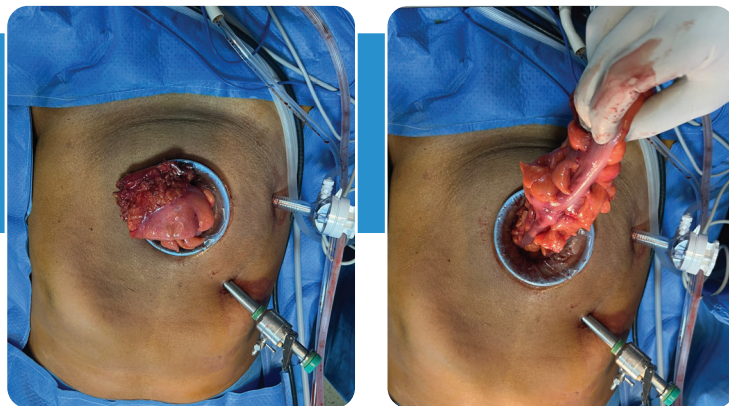




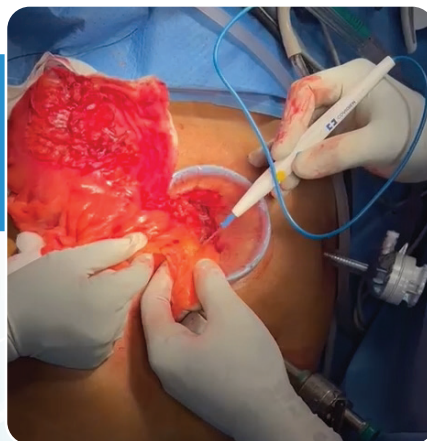
### ***Hand-Assisted Phase:***

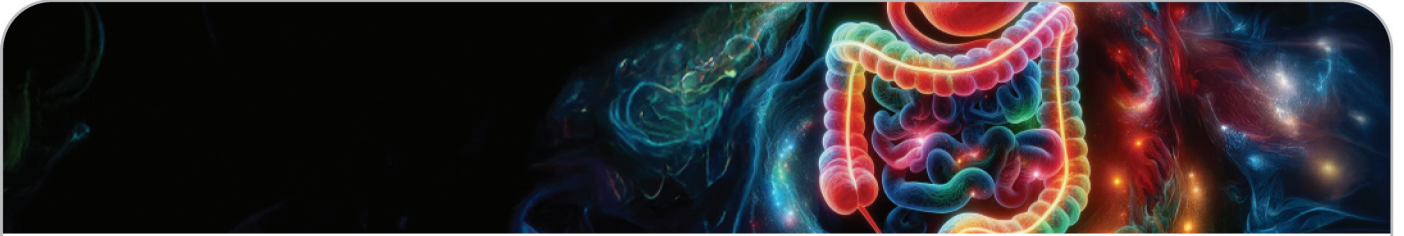
- After a complete inspection of the peritoneal cavity,
- The surgeon can palpate the tumour,
- Medial to lateral dissection is preferred
- After palpating the sacral promontory, sigmoid colon is retracted, using a harmonic scalpel, incision is made on the mesentery and pneumoperitoneum aids in further dissection. Medial and posterior dissection is done up to the recto-sigmoid level and medial to lateral dissection done with careful identification of the left ureter. Once ureter is identified, the plane above the ureter is dissected and a gauze is introduced and placed.
- Subsequently lateral dissection done and the gauze is seen to ensure correct plane.
- The index and thumb finger is used to palpate the IMA and high ligation of IMA and IMV is preferred.
- Complete mobilization of rectum 5 cms distal to the tumour along the TME plane.
- Adequate mobilization of splenic flexure done.
- Per rectal examination is done to re-confirm negative margin
- Using a laparoscopic linear stapler, distal transection is performed

- Through the midline hand port, specimen along with proximal descending colon brought out



- Mesentery ligated up to 10 cms proximal margin. Good flow of marginal vessel confirmed, specimen transected.





- Anvil introduced and end stapled using open linear cutter. Through the side of the descending colon, anvil brought out.
- Anvil end pushed inside the abdomen and hand port secured again.
- Assistant surgeon introduces the circular stapler through the anal canal and side to end stapled anastomosis performed.
- Hemostasis ensured, leak test done, drain placed in pelvis.
- Covering stoma (colostomy or ileostomy) optional.

#### **Closure:**

- Trocars are removed, and incisions are closed with sutures or staples.



## **METHODS:**

#### ***Patients included in our study:***

- 2 Patients with sigmoid volvulus requiring sigmoidectomy
- 3 Patients underwent anterior resection with loop colostomy
- 1 patient underwent ultra-low anterior resection
- 1 Patient requiring Abdominoperineal resection

#### ***Exclusion criteria:***

Patients with general contraindications for laparoscopic surgery such as

- A. Bleeding diathesis
- B. Pulmonary contraindications such as COPD
- C. Patients with EF below 40%



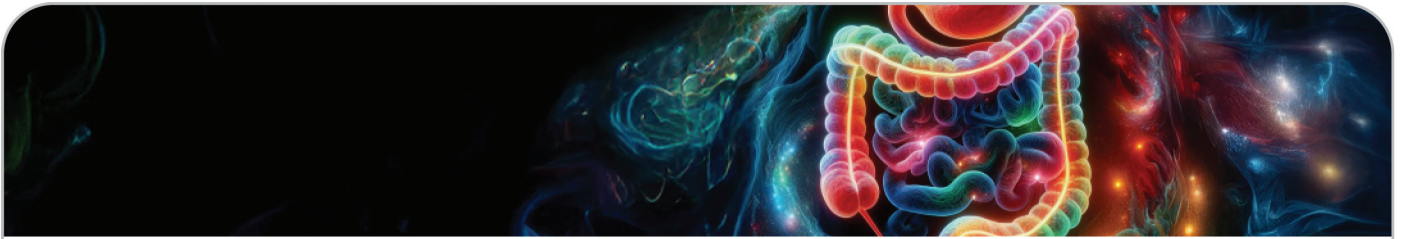
## RESULTS:

- 2 Patients with sigmoid volvulus requiring sigmoidectomy
- 3 Patients underwent anterior resection with loop colostomy
- 1 patient underwent ultra-low anterior resection
- 1 Patient requiring Abdominoperineal resection

PATIENT	PROCEDURE	OT HOURS	EXTUBATION	RT REMOVAL	AMBULATION OUT OF BED	LMWH	SIPS OF WATER	SOFT DIET	DISCHARGE
1	Sigmoid volvulus	190 min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7
2	Sigmoid volvulus	210 min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7
3	AR+ Loop colostomy	240 min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7
4	AR+ Loop colostomy	250min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7
5	AR	250 min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7
6	U-LAR+ Loop colostomy	320 min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7
7	APR	240 min	On table	POD-1	POD-1	24 HRS	POD-1	POD-5	POD-6/7

## ROUTINE PROTOCOL:

- Admission – previous day
- OT timing – in to out
- Surgery start to end
- POST OP- Ward / CCU / Step down ICU (ERAS protocol followed)
- POD 1 - Start on sips of clear liquids @30ml/hr, Mobilise patient
- POD 2 - Sips of liquids at 60ml/hr
- POD 3 - Liquids as much as tolerated by the patient
- POD 4 - Soft solid diet
- POD 5 - Abdomen drain removed when patient passes stools
- POD 6 – DISCHARGE



## DISCUSSION:

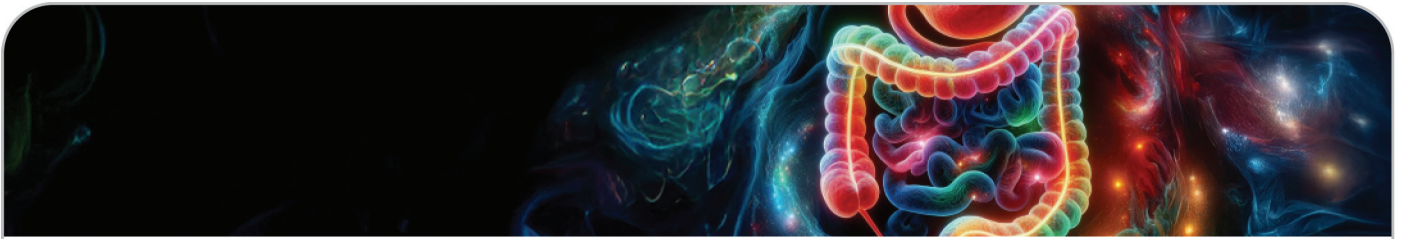
The challenges associated with pure laparoscopic surgeries are reduced depth perception, poor hand eye co-ordination and limited range of movements and loss of tactile feedback. Even with the advent of 3D laparoscopy, it is associated with higher incidence of visual strain and headache. The pure laparoscopy doesn't allow the surgeons to use their hand/fingers to assess the masses and organs, localize vessels, perform atraumatic retractions, control bleeding, localize/ dissect tissue planes (1) (2). Adopting HALS over pure laparoscopy paved way to cut down the above mentioned challenges faced by pure laparoscopy procedures, thereby minimizing the chance of conversion into large midline laparotomies.

Obesity being one of the major risk factors in performing any surgery, laparoscopic procedures also increase operating time and risk of conversion to laparotomy. As we discussed in the introduction, HALS is a versatile method that can be performed even in patients with morbid obesity. Results have shown that obesity is a highly prevalent condition across the country (India), with 40.32% of the estimated weighted prevalence among adults 18 to 80 years of age (3). With the increasing obesity trend, adopting HALS over open and laparoscopy is a brain wave, as it bridges the gap between open and laparoscopic surgery, thereby establishing a better outcome where a surgery is indeed challenging in obese patients as well as for patients with multiple comorbidities.

The operating time in TLS vs HALS can vary depending upon the procedure. Generally, HALS can potentially reduce operating time compared to total laparoscopic surgery. Although most studies have shown operative time for open colectomy to average around 140 minutes, operative time for laparoscopic sigmoid colectomy in this study was  $196 \pm 9.1$  minutes (4). In a study involving the same colorectal surgeons in sigmoid colectomy, operative time was reported as 212 minutes (5). Our average operating time for sigmoid colectomy by HALS was 190min. ultimately, the operating time required depends on the specific surgical needs, intensity of the surgery performed, and the surgeon's expertise.

With regards to hospital stay post-operatively, the studies found no significant difference between HALS and TLS. Compared to open surgery, HALS results in shorter hospital stay typically ranging from 2-6days. Although TLS have the shortest length of hospital stays, HALS over scores TLS with respect to the advantages as we have discussed above. However, individual recovery can vary widely based on various factors such as patient's overall general condition, co-morbidities, intensity of the surgery performed.





Discussing the complication rates and postoperative pain, wound infection, bowel movements, TLS and HALS has no significant difference. However it indeed scores over open surgery. Postoperative hernias occur less in HALS compared to open surgery than TLS (8) (9).

In addition to the significance of HALS mentioned above, we in our tertiary care centre follow Enhanced Recovery After Surgery (ERAS) protocol for all patients. Enhanced Recovery After Surgery (ERAS) protocols help in lowering the stress response and maintain organ function thereby achieving early recovery post-surgery. This has further lowered recovery time and postoperative complication rates (7). The most common components include pre-operative carbohydrate loading and preoperative counselling, postoperative analgesia regimen, postoperative nutrition, fluid management (6). Therefore, adopting HALS and following ERAS protocols ensures early recovery, minimizing the length of hospital stay furthermore, thereby establishing the desired outcome.

In this study, nil above mentioned patients who underwent HALS required conversion to open midline procedures.

## **CONCLUSION:**

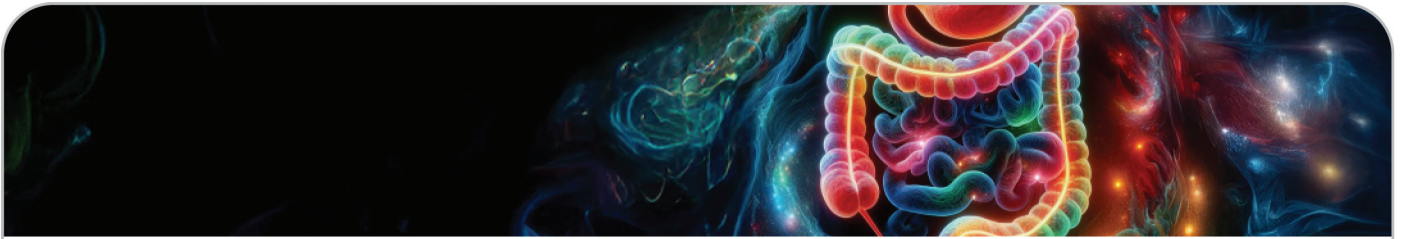
In our series, we observe that HALS is superior to TLS in terms of operative time and safety and is no different from TLS in terms of mobilization, recovery, and duration of hospital stay.

The small size of the hand port in HALS gives a better outcome than open abdominal surgery (considering the smaller incision, less trauma, early mobilisation and recovery).

The reduced operative time in HALS, owing to creation of the hand port as the first step, exteriorisation of the sigmoid colon following dissection, and using open staplers, gives a better outcome than total laparoscopic colorectal surgery.

In terms of oncological clearance and distal negative margins, HALS scores over TLS, owing to the tactile feedback available in the former, and also scores over open surgery in patients with a narrow pelvis as in ultra-low LAR.

With regards to cosmetics, in total laparoscopic surgery a 3cms incision is made in the lower abdomen for specimen extraction, whereas in HALS requires a 5cms vertical periumbilical incision. Another advantage of HALS that we have noted from our experience with our case series is precise control of IMA bleed by the surgeon's hand and avoiding inadvertent injury to the IMA during high ligation of the pedicle.



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- **Dr. Sankar Narayanan ML** (Consultant Surgical Gastroenterologist)

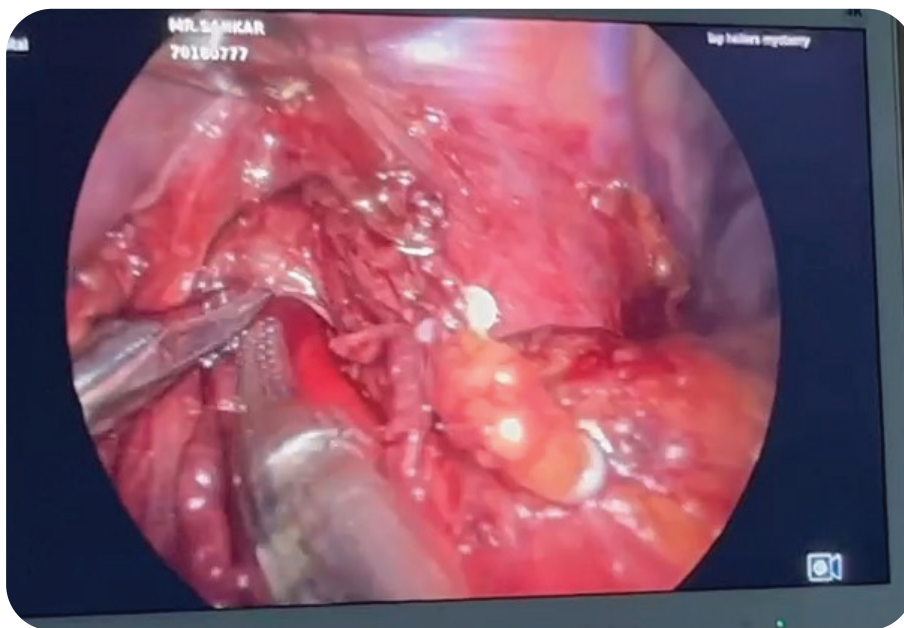


# CASE REPORT - 4

## MINIMALLY INVASIVE SURGERY IN BENIGN UPPER GASTRO INTESTINAL DISEASES



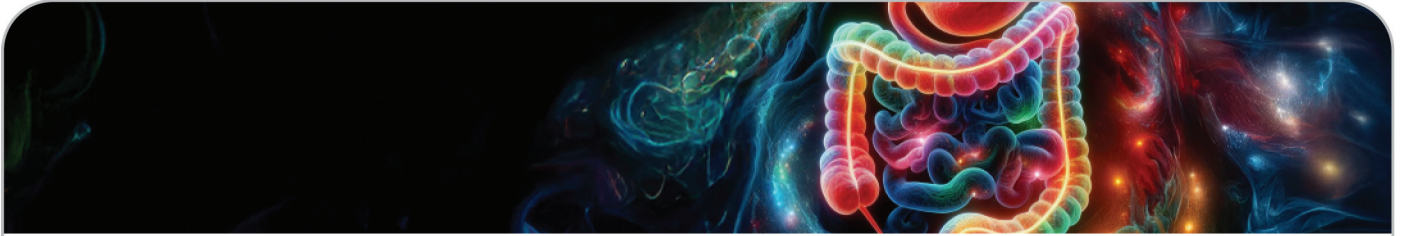
**SURGICAL MANAGEMENT OF ACHALASIA CARDIA:** Achalasia is a primary motility disorder of the esophagus characterized by aperistalsis and failure of the lower esophageal sphincter (LES) to relax appropriately in response to swallowing. It is a chronic benign disease that is a common cause of dysphagia.



***ACHALASIA CARDIA: LAPAROSCOPIC HELLER CARDIOMYOTOMY***

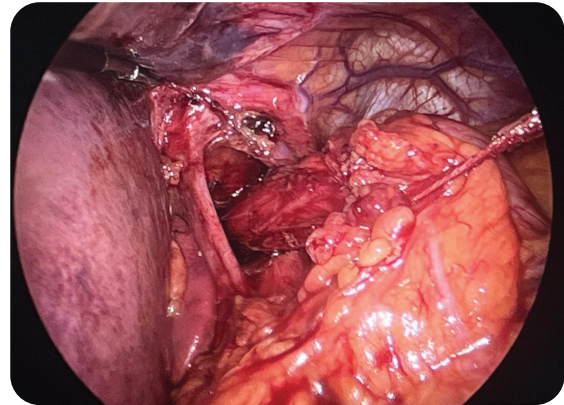
### **Treatment Is**

1. Surgical- Laparoscopic Hellers Cardio myotomy – in most of the patients who has acceptable anaesthetic risk.
  2. Medical – in old patients with serious anaesthetic risk
- Long term success rate is more than 95% for surgically treated patients when compared to endoscopic dilatation. Laparoscopy aids in faster recovery with less pain and less negligible wound complications



## LAPAROSCOPIC MANAGEMENT FOR GASTRO OESOPHAGEAL REFLUX DISEASE{GERD}:

Laparoscopic anti reflux surgery (LARS) has rapidly assumed a major role in the treatment of gastroesophageal reflux disease (GERD). Most operations for GERD involve plicating the gastric fundus 90 to 360 degrees around the distal esophagus. The most commonly performed fundoplication is the Nissen 360-degree fundoplication, which results in more than 90% long-term control of reflux symptoms.

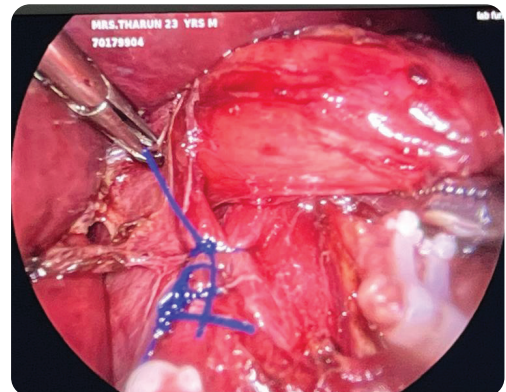


**HIATUS HERNIA : POST DISSECTION**

A randomized trial comparing transabdominal open Nissen fundoplication with medical therapy in patients with complicated GERD proved surgical therapy to be more effective. Laparoscopic approach reduces postoperative pain and shortens both hospitalization and recuperation with outcomes (symptomatic and functional) similar to that of the open operation.

### Indications for Surgical Therapy

Virtually all patients should receive a short-term (2-month) trial of intensive medical therapy before considering an anti reflux operation

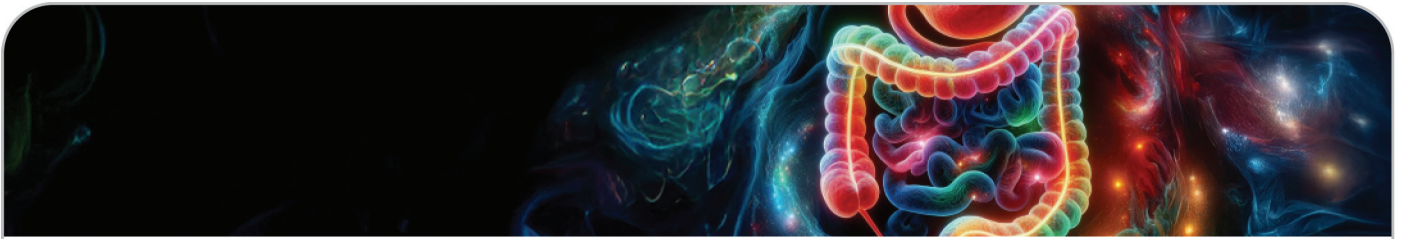


**HIATUS HERNIA:  
POST LAPAROSCOPIC REPAIR**

**Most common indications for performing anti reflux surgery can be summarized as follows:**

- (i) complications of GERD not responding to medical therapy (e.g., esophagitis, stricture, recurrent aspiration or pneumonia, Barrett esophagus);
- (ii) GERD symptoms interfering with lifestyle despite medical therapy;
- (iii) GERD associated with para esophageal hernia;
- (iv) Chronic GERD requiring continuous drug therapy in a patient desiring discontinuation of medical therapy (e.g., financial burden, noncompliance, lifestyle choice, young age); and
- (v) Intolerance to proton pump inhibitor therapy.

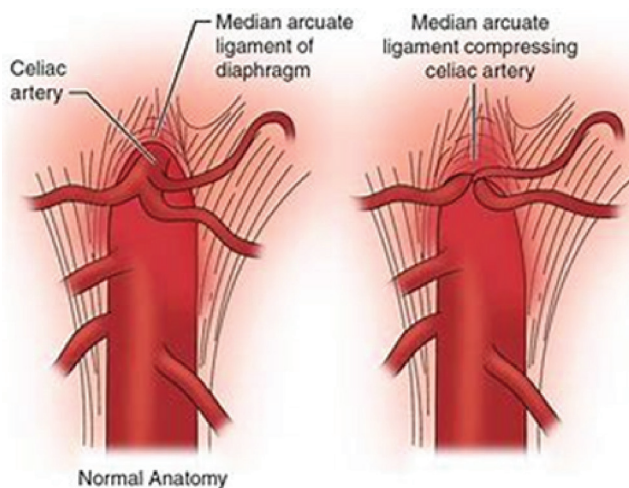




## FACTORS COMPLICATING LAPAROSCOPIC ANTI REFLUX SURGERY

- Previous upper abdominal (especially subdiaphragmatic) surgery
- Morbid obesity
- Small-body habitus
- Severe esophagitis / stricture
- Short esophagus
- Para esophageal hiatal hernia

## MEDIAN ARCULATE LIGAMENT SYNDROME{MALS}



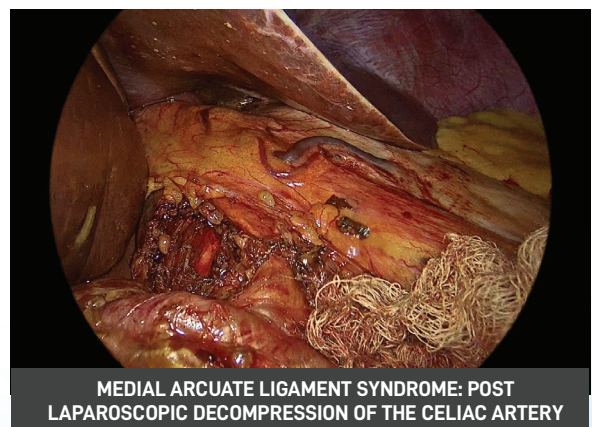
The Median Arcuate Ligament (MAL) is the fibrous muscular band of the diaphragm that attaches the right and left crura; it is positioned at Thoracic T12/Lumbar L1-2 of the spine.

MALS is caused when the ligament descends lower or the celiac artery is anatomically positioned higher on the Aorta causing the ligament to cross over and compress the celiac artery and surrounding tissue which can include the celiac plexus nerves.

Median arcuate ligament syndrome (MALS, also known as celiac artery compression

syndrome, celiac axis syndrome, celiac trunk compression syndrome or Dunbar syndrome) is a rare condition characterized by abdominal pain attributed to compression of the celiac artery and the celiac ganglia by the median arcuate ligament. The abdominal pain may be related to meals, may be accompanied by weight loss.

Treatment Decompression of the celiac artery is the general approach to treatment of MALS. The mainstay of treatment involves open or laparoscopic surgery approaches to divide, or separate, the median arcuate ligament to relieve the compression of the celiac artery. This is combined with removal of the celiac ganglia and evaluation of blood flow through the celiac artery, for example by intraoperative duplex ultrasound. If blood flow is poor, celiac artery revascularization is usually attempted; methods of revascularization include aorto celiac bypass, patch angioplasty, and others



- **Dr. S.M.Sivaraj** (Senior Surgical Gastroenterologist)

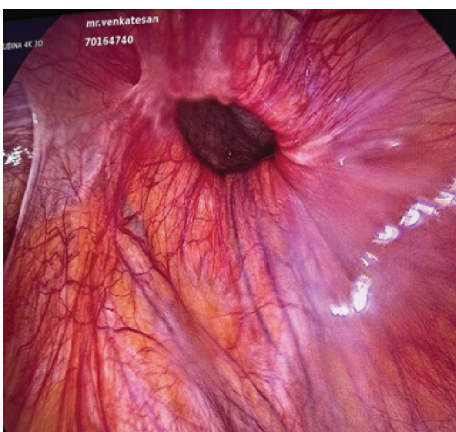
# WHAT YOU SHOULD KNOW ABOUT HERNIA



## Recognise the Advanced Surgical Treatments Possible for any High-risk Hernia. This article gives you vital information.

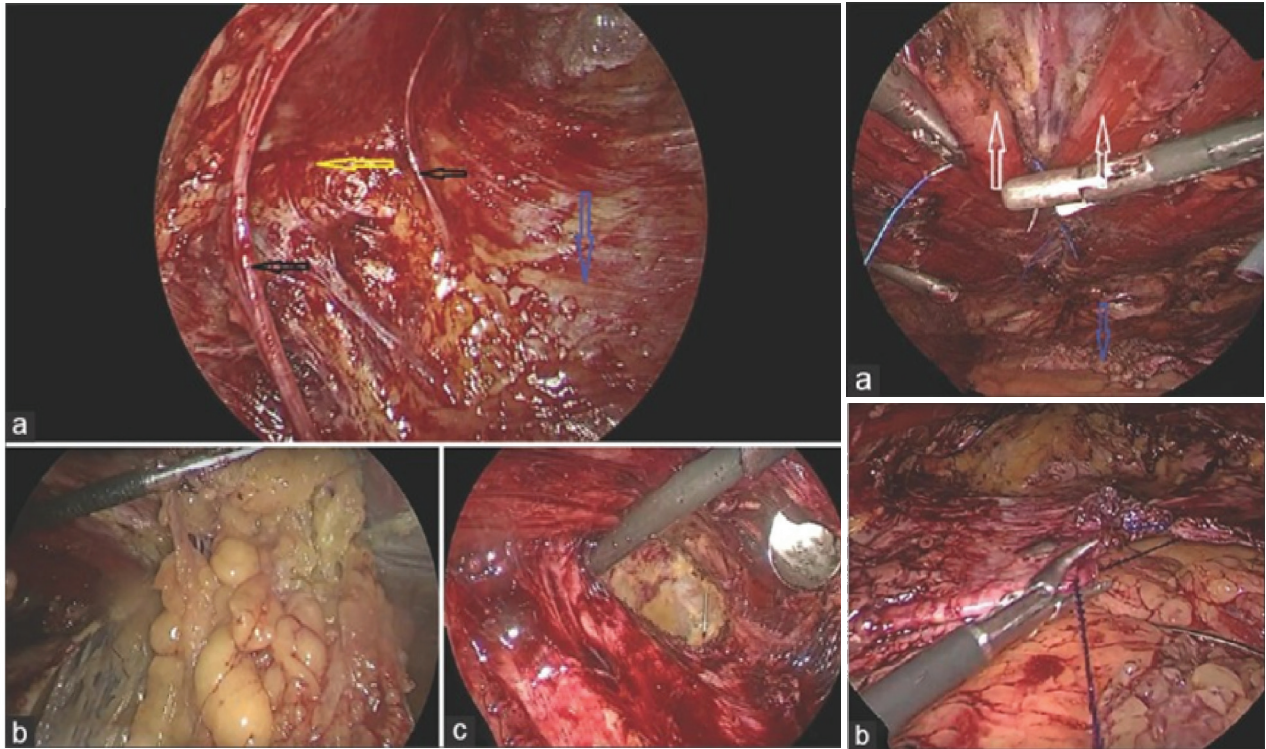
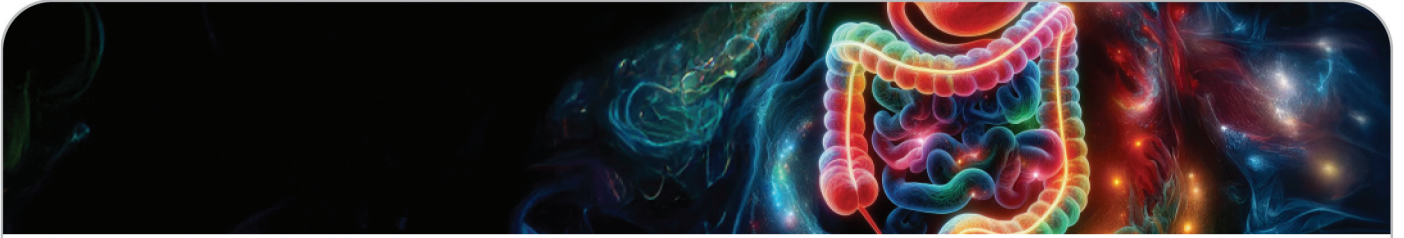
Hernia is one of the common conditions we come across in our day today practice and hernia is one of the oldest diseases known to mankind since time immemorable. The treatment of hernia has evolved greatly over the years from suture repairs to tension free mesh repairs to laparoscopic hernia surgeries. Laparoscopic hernia surgery has been in vogue for more than two decades. Even though Laparoscopic gall bladder surgery and Appendix surgery has not undergone major changes over the last decades, Laparoscopic hernia surgery has been undergoing major changes especially over the past 5 to 6 years. This is because of the vexing of issues of recurrence and various advances in hernia surgery are aimed at tackling the issue of recurrence. The recent advances in Laparoscopic hernia surgery involve the change in the approach from the intra peritoneal approach more towards the Extra peritoneal and Retro-rectus Plane approach. In this article we try to concentrate on the newer techniques for hernia surgery.

### **TAPP: TRANSABDOMINAL PREPERITONEAL PLANE**



The approach is through the abdominal cavity. This can be used for inguinal hernia, ventral hernia and umbilical hernia. The preperitoneal plane is entered by opening the peritoneum and the plane is dissected, hernia is pushed down and the defect is closed and the mesh is placed and the peritoneum is closed.

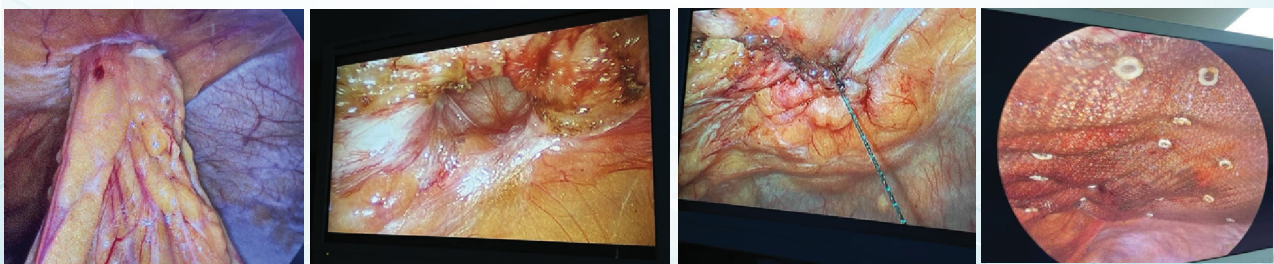




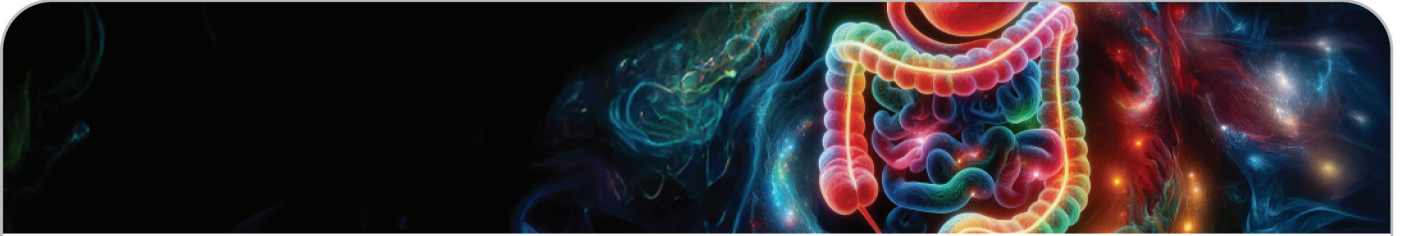
### **eTEP: EXTENDED TOTALLY EXTRAPERITONEAL REPAIR**

The extra peritoneal plane is a huge space extending from the epigastrium to the pelvis and to the flanks. The eTEP approach utilizes the space and even when the entry is made in the upper abdomen, easily the lower abdomen can be reached from the entry point. For inguinal hernia the entry is made above the umbilicus and for umbilical or infra umbilical hernia the entry is made in the upper abdomen. From the entry point, the whole of the extra peritoneal plane can be dissected and a huge mesh is placed. The rectus can be approximated resulting in correction of divarication of recti.

The process of IPOM repair involves using a composite mesh which is placed from the peritoneal side. This technique is usually used for umbilical hernia ,ventral hernia less than 4 cm in size. Defect is closed using barbed sutures and a composite mesh is placed from the inside the peritoneal cavity and fixed with trackers. It is simple to execute and enables the setting up of a bigger mesh with minimal requirements for dissection.







## DIVARICATION OF RECTI

Rectus diastasis, also known as divarication of the recti, is characterized by an abnormal expansion of the space between the two medial sides of the rectus abdominis muscle and a stretching of the linea alba (increased inter-recti distance). Many times the umbilical hernia or ventral hernia is associated with divarication and failure to correct the divarication and treating only the hernia results in recurrence.

### ***DIVARICATION CORRECTION:***

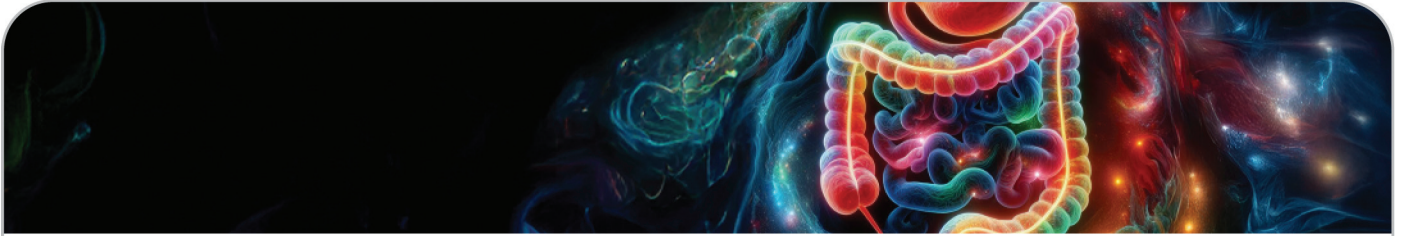
#### ***SCOLA: SUBCUTANEOUS ONLAY LAPAROSCOPIC APPROACH***

In SCOLA procedure, Subcutaneous dissection was done from the Linea semilunaris laterally and superiorly to the xiphoid process in the suprapubic area. Using running barbed suture, the rectus was approximated and the hernia's contents were decreased. The entire dissected area was covered with overlay mesh, and subcutaneous drains were inserted. This is very useful technique in patients with umbilical hernia with divarication without too much of overhanging fat giving a very good cosmetic result.

**Complex Hernia /Loss of domain:** these are huge hernias where there is loss of anatomical planes associated with huge hernias and pose a big challenge for surgery and fasciae closure. Loss of domain can be defined when there volume of hernial. Content is more than 30 percent of the abdominal volume.in such cases techniques like1) Botox 2) positive pressure pneumoperitoneum 3) component separation can be used. To attain fasciae closures







## **OPEN COMPONENT SEPARATION AND ABDOMINAL WALL RECONSTRUCTION**

In patients with complex hernia and loss of domain the techniques involve separating the layers of the abdominal wall and closing separately and reconstructing the abdominal wall. The cause of hernia now a days is attributed to failure of whole of the abdominal wall mechanism and the principle of treatment is no more aimed at correcting only the hernia but it is aimed at treating the whole abdominal wall mechanism. This has led to the concept of AWR - ABDOMINAL WALL RECONSTRUCTION.

### **ABDOMINOPLASTY**



Abdominoplasty or a '**tummy tuck**' is cosmetic or reconstructive surgery. It is used to tighten muscles that have become loose or split following pregnancy or obesity and to remove fat and extra loose skin, maybe associated with mesh repair as well.

## **CONCLUSION**

Even though many techniques of hernial repair have been described , we have to choose the right technique for the right patient to achieve good results and to prevent recurrence.

- **Dr. Kumaragurubaran** [Gastro Hernia and Laparoscopic Surgeon]

# CASE REPORT - 5

## ***LASER HEMORRHOIDOPLASTY: A MODERN APPROACH TO HEMORRHOID TREATMENT***



Laser Hemorrhoidoplasty is an advanced, minimally invasive procedure used to treat symptomatic hemorrhoidal disease, particularly in cases of Grade II and Grade III hemorrhoids, which do not respond to conservative measures like diet modification, stool softeners, or topical treatments. Hemorrhoids are swollen blood vessels located in the rectal or anal region, and they can cause symptoms such as bleeding, itching, pain, and prolapse (when hemorrhoids protrude from the anus). While traditional treatments for hemorrhoids have included conservative management, rubber band ligation, and surgical hemorrhoidectomy, Laser Hemorrhoidoplasty is gaining traction due to its ability to provide effective relief with reduced pain, quicker recovery, and fewer complications.

The procedure involves the use of a high-energy laser fiber, with a wavelength of 1470nm and power of 6 watts, which is inserted into the hemorrhoidal tissue through a small probe. An equivalent of a hemorrhoidal artery ligation is done by delivering laser energy of about 60joules superficially over the pedicle. It is then directed into hemorrhoid tissue, causing coagulation (clotting) of the hemorrhoidal vessels. This process leads to the shrinkage of the hemorrhoids, effectively relieving the symptoms of prolapse and bleeding. Laser Hemorrhoidoplasty is typically performed under local or regional anesthesia on an outpatient basis, and the procedure generally takes less than 30 minutes. The laser energy not only helps to shrink the hemorrhoidal tissue but also minimizes bleeding during the procedure, as the laser cauterizes the blood vessels as it works. This results in a safer, more controlled treatment compared to traditional surgical methods.

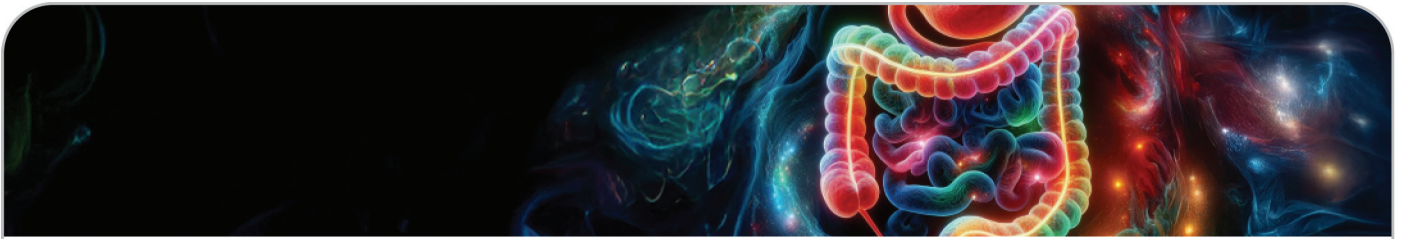


***Fig. 1 Laser probe in right hand***



***Fig. 2 Laser probe delivering energy  
over hemorrhoid***





One of the major advantages of Laser Hemorrhoidoplasty is its minimally invasive nature. Since it does not involve excision of hemorrhoidal tissue, patients tend to experience less pain and a faster recovery compared to conventional hemorrhoidectomy, which often involves the removal of hemorrhoidal lumps and requires a longer healing period. The risk of complications is also lower, with less bleeding and a reduced likelihood of infection. Most patients are able to return to their normal activities within a few days after the procedure. Additionally, the laser treatment is less likely to cause anal stenosis (narrowing of the anal canal), a potential complication of traditional hemorrhoidectomy that can affect bowel movements.

One of the major advantages of Laser Hemorrhoidoplasty is its minimally invasive nature. Since it does not involve excision of hemorrhoidal tissue, patients tend to experience less pain and a faster recovery compared to conventional hemorrhoidectomy, which often involves the removal of hemorrhoidal lumps and requires a longer healing period. The risk of complications is also lower, with less bleeding and a reduced likelihood of infection. Most patients are able to return to their normal activities within a few days after the procedure. Additionally, the laser treatment is less likely to cause anal stenosis (narrowing of the anal canal), a potential complication of traditional hemorrhoidectomy that can affect bowel movements.

Post-operative care after Laser Hemorrhoidoplasty typically includes the use of stool softeners, analgesics for pain relief, and sitz baths to soothe the anal area. Patients are advised to maintain good hygiene and avoid constipation, which could strain the healing tissue. Follow-up visits are essential to monitor for any complications or recurrence of symptoms.

## CONCLUSION

In conclusion, Laser Hemorrhoidoplasty represents an effective, less invasive option for patients with hemorrhoidal disease, offering benefits such as reduced pain, faster recovery, and lower risk of complications. While it is particularly suitable for moderate hemorrhoidal disease, it is important to properly assess each patient's condition and ensure that they are suitable candidates for this procedure. When performed by an experienced surgeon, Laser Hemorrhoidoplasty can offer significant improvements in quality of life for patients suffering from hemorrhoids.

- **Dr. Sankar Narayanan ML** (*Consultant Surgical Gastroenterologist*)
- **Dr. Malavika K** (*Consultant General & Laparoscopic Surgeon*)

# CASE REPORT - 6

## MINIMALLY INVASIVE PROCEDURE FOR HEMORRHOIDS (MIPH)



One of the major advantages of Laser Hemorrhoidoplasty is its minimally invasive nature. Since it does not involve excision of hemorrhoidal tissue, patients tend to experience less pain and a faster recovery compared to conventional hemorrhoidectomy, which often involves the removal of hemorrhoidal lumps and requires a longer healing period. The risk of complications is also lower, with less bleeding and a reduced likelihood of infection. Most patients are able to return to their normal activities within a few days after the procedure. Additionally, the laser treatment is less likely to cause anal stenosis (narrowing of the anal canal), a potential complication of traditional hemorrhoidectomy that can affect bowel movements.

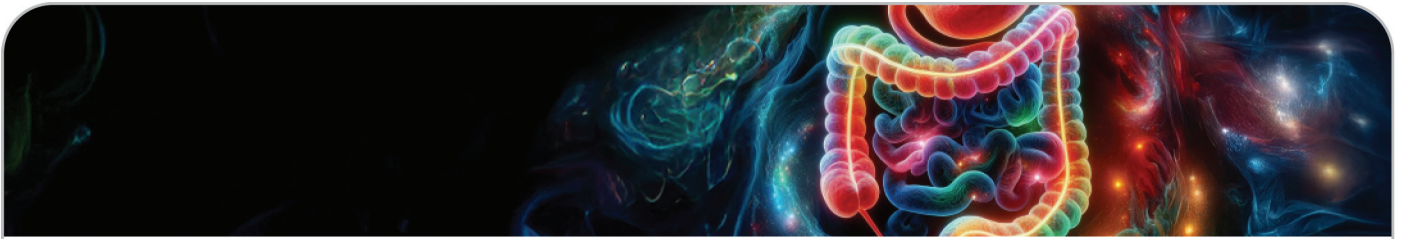
MIPH involves the use of a specialized circular stapling device that is inserted into the anal canal. Under general or regional anesthesia, the surgeon uses the stapler to excise a ring of tissue from the anal canal, which helps to lift and reposition the hemorrhoidal tissue back to its normal anatomical position. This not only alleviates the symptoms of prolapse but also reduces the blood supply to the hemorrhoids, leading to their shrinkage and eventual resolution of symptoms. The advantage of MIPH over traditional hemorrhoidectomy lies in its less traumatic nature, as it does not involve the



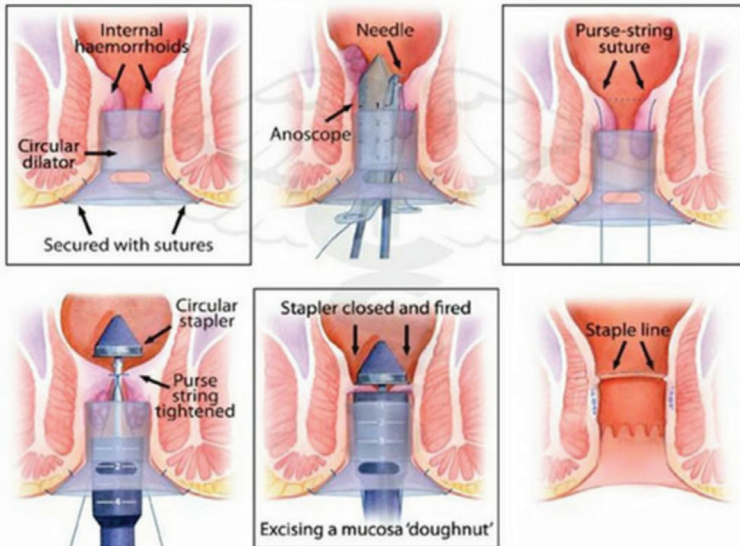
**Fig. 1. Circular stapler used for MIPH**

excision of hemorrhoidal tissue in the same manner as traditional methods. Instead, it focuses on repositioning and reducing the blood flow to the affected areas. The procedure is typically done on an outpatient basis, allowing most patients to return home the same day





### Stapled Haemorrhoidectomy



One of the key benefits of MIPH is the reduced postoperative pain compared to traditional hemorrhoidectomy, which often requires more extensive tissue removal and can result in significant discomfort during the healing process. Additionally, the recovery time after MIPH is generally quicker, with many patients resuming normal activities within a few days. The risk of complications is also lower, though, as with any surgical procedure, there are potential risks, including bleeding, infection, anal stenosis (narrowing of the anal canal), and recurrence of

hemorrhoids. A rare but possible complication is the development of anastomotic leaks (a failure of the stapled tissue to properly heal), which can lead to infections and other issues. To mitigate these risks, proper patient selection is crucial, and the procedure is not recommended for patients with significant anal or rectal pathology, such as anal fissures or inflammatory bowel disease, which may complicate healing.



**Fig. 2 External with grade 3 internal hemorrhoids**

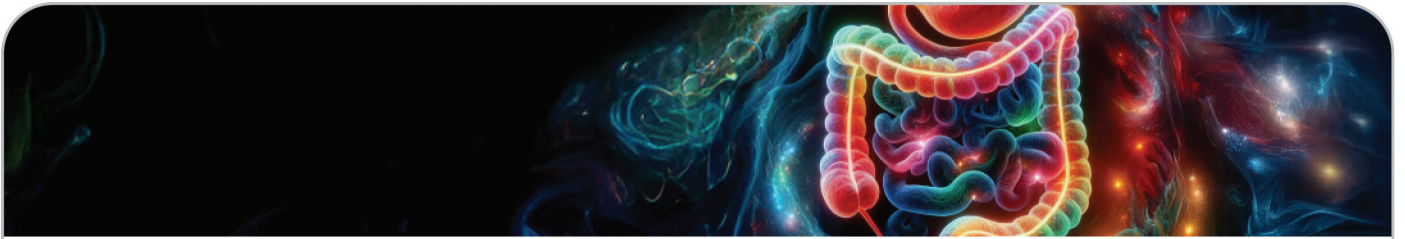


**Fig. 3 Intraop after firing of circular stapler**



**Fig. 4 Anal packing done**





Postoperative care after MIPH generally involves managing pain, avoiding constipation, and maintaining good hygiene in the anal region. Patients are usually advised to follow a high-fiber diet to ensure soft stools and to prevent strain during bowel movements, which can reduce the risk of complications. Stool softeners and sitz baths are often recommended to alleviate any discomfort in the recovery period. While the procedure has proven to be effective in the majority of cases, long-term follow-up is important to monitor for any signs of recurrence or complications.



***Fig. 3 Post op management with fibre rich diet and hydration***

In conclusion, MIPH offers a less invasive and more comfortable option for patients suffering from advanced hemorrhoidal disease. It provides effective relief from symptoms with minimal postoperative pain and a faster recovery time compared to traditional hemorrhoidectomy. However, it requires careful patient selection and expertise to achieve optimal outcomes. For many patients, MIPH has become a preferred treatment for hemorrhoids, significantly improving quality of life and minimizing the disruption caused by this common, yet often debilitating condition.

- **Dr. Sankar Narayanan ML** (Consultant Surgical Gastroenterologist)
- **Dr. Malavika K** (Consultant General & Laparoscopic Surgeon)



# CASE REPORT - 7

## STAPLED TRANSANAL RECTAL RESECTION (STARR)



### STAPLED TRANSANAL RECTAL RESECTION (STARR)

Stapled Transanal Rectal Resection (STARR) is a modern, minimally invasive surgical technique primarily used for treating obstructed defecation syndrome (ODS), a condition in which patients experience difficulty in passing stool due to structural or functional abnormalities in the rectum. ODS is often caused by rectal prolapse, rectocele (an abnormal bulging of the rectum into the vagina), internal rectal intussusception (where a part of the rectum folds into itself), or other types of rectal outlet obstruction. When conservative measures such as dietary modifications, laxatives, or pelvic floor rehabilitation fail, STARR offers an effective surgical alternative, especially in patients with complex, structural issues. The procedure is performed transanally, meaning it involves no abdominal incision, thus reducing the risk of complications and promoting a faster recovery compared to traditional open surgeries.

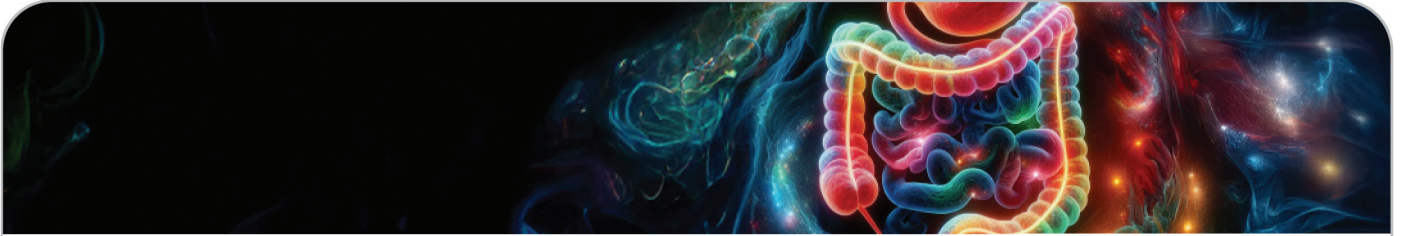
### EVALUATION OF A PATIENT WITH RECTAL PROLAPSE

1. Per rectal examination

2. Anal manometry

3. MRI defecography

Oxford Grading System for Rectal Prolapse		
Internal Rectal Prolapse		
Rectal Intussusception	Grade I	Descends no lower than the proximal limit of a rectocele
	Grade II	Descends into the level of a rectocele, but not into the anal canal
Rectoanal Intussusception	Grade III	Descends to the top of the anal canal
	Grade IV	Descends into the anal canal
External Rectal Prolapse	Grade V	Protrudes from the anus
The National Institute for Health and Care Excellence (NICE). Laparoscopic Ventral Mesh Rectopexy for Internal Rectal Prolapse.; 2018. <a href="https://www.nice.org.uk/guidance/ipg618/evidence/overview-final-pdf-4897863901">https://www.nice.org.uk/guidance/ipg618/evidence/overview-final-pdf-4897863901</a> .		

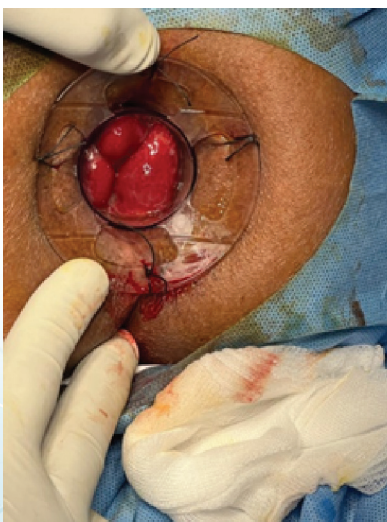


**Fig. 1. Circular stapler used for STARR**

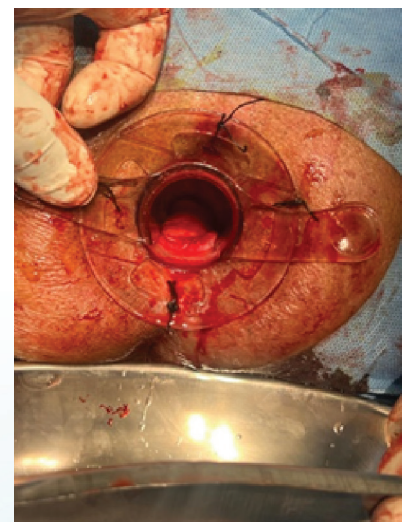
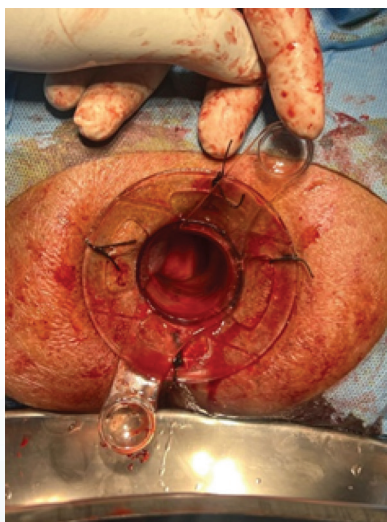
The STARR procedure involves the use of two circular stapling device that is inserted through the anus to excise a segment of the rectal wall, typically around the lower rectum. This excision helps to correct anatomical abnormalities, such as rectal prolapse or a large rectocele, by removing redundant or prolapsed tissue and reshaping the rectal structure to restore proper function. The procedure not only eliminates the mechanical obstruction but also helps to

improve rectal compliance, making it easier for patients to pass stool. Unlike traditional open surgery, the transanal approach minimizes tissue trauma, reduces postoperative pain, and shortens the hospital stay, allowing patients to return to normal activities more quickly. STARR is generally performed under general or regional anesthesia and takes approximately 45 minutes to an hour.

Our patient was a 73 yrs gentleman, with mass descending per rectal. He was a known diabetic, hypertensive, COPD and old CVA on blood thinners. On examination had a full thickness rectal prolapse (grade IV). Patient had adequate anal tone and colonoscopy revealed edematous mucosa. Patient was counselled regarding the condition and was given the option of abdominal approach as first option and STARR as second option. After complete assessment of risk benefit ration, family decided to go for STARR despite understanding the chances of recurrence. Initially the prolapse was reduced and after 48 hrs patient was taken up for STARR.

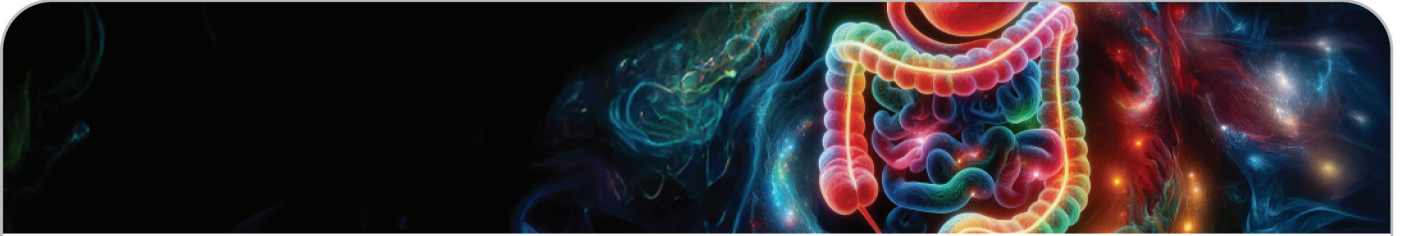


**Fig. 2. Rectal prolapse**



**Fig. 3 & 4 After STARR**





Despite its advantages, STARR is not without risks. Potential complications include bleeding, infection, anastomotic leaks (where the stapled tissue does not heal properly), and injury to surrounding tissues, such as the anal sphincter or pelvic nerves, most worrisome will be damage to the urethra. Furthermore, the procedure does not guarantee long-term success for all patients. Some studies report a relatively high recurrence rate of symptoms, especially in patients with extensive or multiple rectal abnormalities. In some cases, additional surgeries may be needed.

As such, patient selection is crucial—STARR is most effective for individuals with isolated rectal outlet obstruction and is less suitable for those with significant anal sphincter dysfunction or more complex pelvic floor disorders.



***Fig. 3 Post op management with fibre rich diet and hydration***

Postoperative care typically involves pain management, dietary adjustments, and pelvic floor rehabilitation to prevent further issues. Patients are generally advised to follow a high-fiber diet and engage in physical therapy to strengthen the pelvic floor muscles and enhance bowel function. Regular follow-up visits are necessary to monitor for any recurrence of symptoms and to ensure the proper healing of the surgical site. Overall, STARR has proven to be a valuable tool in the management of obstructed defecation syndrome, offering many patients an improved quality of life by alleviating the debilitating symptoms associated with chronic rectal outlet obstruction. However, as with any surgical procedure, careful patient assessment and expert surgical technique are essential for optimizing outcomes.

- **Dr. Sankar Narayanan ML** (Consultant Surgical Gastroenterologist)
- **Dr. Malavika K** (Consultant General & Laparoscopic Surgeon)

# UNDERSTANDING HERNIAS: DO'S AND DON'TS FOR A HEALTHY LIFE



With 25 years of expertise, **Dr. Kumaragurubaran** Hernia, Gastro and Laparoscopic surgeon at Billroth Hospitals, offers his expert advice on the do's and don'ts of Hernia. Hernias are one of the oldest and most common medical conditions known to humankind. They occur when an organ or tissue from the abdomen protrudes out through a hole or defect in the abdominal wall. Understanding hernias and their management is crucial for timely intervention and prevention of complications.

## WHAT IS A HERNIA?

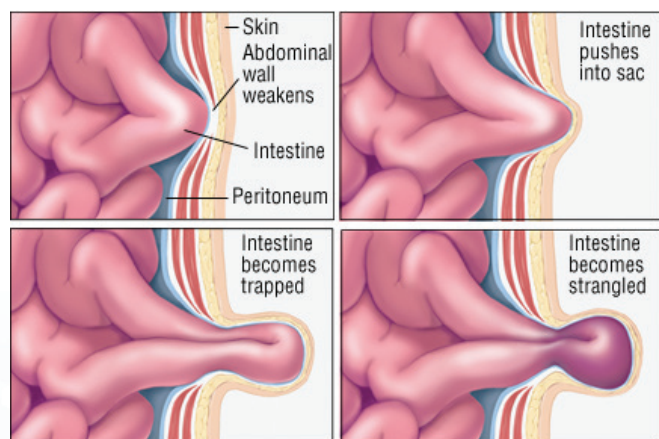
A hernia appears as a swelling or bulge in the abdomen. Imagine a hole in a shirt pocket through which a pen slips out; the hole represents the defect, and the pen symbolizes the hernia's content, such as intestines, bladder, or fat.

## COMMON SYMPTOMS

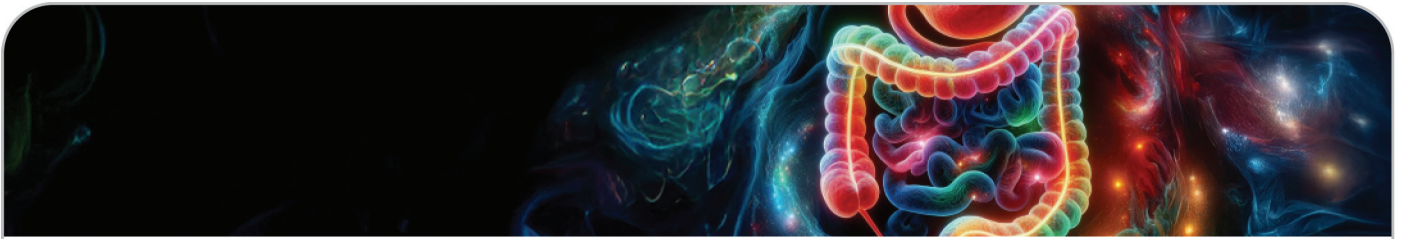
- 1. Bulge or Swelling:** The most noticeable sign, typically appearing when standing and disappearing when lying down in early stages.
- 2. Pain:** Discomfort during strain, indicating possible complications.
- 3. Nausea or Vomiting:** Often signals obstruction.
- 4. Constipation:** Occurs when the large bowel is involved.
- 5. Urinary Issues:** Arise if the urinary bladder is affected.
- 6. Severe Symptoms:** Persistent pain, abdominal distension, and vomiting suggest advanced complications needing urgent medical care.

## TYPES AND STAGES OF HERNIAS

Hernias are categorized into Internal and External types. Internal hernias include Hiatus and Diaphragmatic hernias. External hernias, more commonly visible, occur in areas like the groin (inguinal), navel (umbilical), or thigh (femoral). They progress through four stages, from reducible bulges to life threatening gangrene (rotten tissue) if left untreated.







## DIVARICATION OF RECTI

Divarication of Recti is a condition where the Vertical muscles (Rectus) on the two sides of the abdomen, move apart. Many times Umbilical and Ventral Hernias are associated with Divarication of Recti (Diastasis) and needs special attention. It is more common after pregnancy . Care has to be taken to correct the Divarication during Hernia surgery.

## CAUSES OF HERNIAS

- 1. Maintain Healthy Weight:** Reduces strain on the abdomen.
- 2. Practice Safe Lifting:** Bend at the knees and avoid twisting the torso.
- 3. Strengthen Core Muscles:** Engage in low-impact, core strengthening exercises like yoga or Pilates.
- 4. Stop Smoking:** Prevents connective tissue weakening.
- 5. Manage Chronic Conditions:** Treat chronic coughs and constipation early.
- 6. Post-Surgery Care:** Follow recovery instructions to avoid Incisional hernias.
- 7. Post-Pregnancy Rehabilitation:** Safely rebuild core strength and avoid high-impact activities and a binder may be useful.

## TREATMENT OPTIONS

Hernias are mechanical issues requiring surgical correction. Small, asymptomatic hernias may be monitored, but larger, symptomatic ones demand timely intervention. Surgery involves closing the defect and reinforcing it with a mesh, often through minimally invasive Laparoscopic techniques. Complex hernias may need advanced Abdominal Wall Reconstruction (AWR).

## LIFE AFTER SURGERY

Hernia surgery usually allows for a quick recovery and normal life. Most patients resume light activity within a week and regular physical tasks in 10 days' time, following their doctor's advice. Proper follow-up ensures long term success and prevents recurrence. By recognizing symptoms, taking preventive measures, and seeking timely medical advice, you can manage hernias effectively and maintain a healthy, active lifestyle.

- **Dr. Kumaragurubaran** (Surgical Gastroenterologist and General /Laparoscopic/Hernia and Laser Surgeon.)

# TIPS TO KEEP YOUR LIVER HEALTHY



## 1. DIET

- Eat plenty fruits and vegetables
- Vegetable oils , seeds , nuts , fish
- Black coffee reduces chances of chronic liver disease
- Limit refined carbohydrates and sugar, processed foods , red meat and saturated fats

## 2. EXERCISE

- Aim for 150 minutes of physical activity per week
- Maintain BMI 18-25

## 3. ALCOHOL

- Limit the consumption to a drink a day or preferably strict abstinence from alcohol

## 4. PARACETAMOL

- Don't overuse paracetamol without supervision

## 5. SAFE SEX

- Prevents from hepatitis viruses

## 6. HERBAL SUPPLEMENTS

- Be careful avoid herbal pills and supplements which contains heavy metals and harms liver
- Take them under supervision

## 7. WATCH FOR NEEDLE RISKS / TATTOOS

- Injection of illegal drugs have high risk of hepatitis B and hepatitis C
- Tattoos should be done carefully without sharing needles

## 8. VACCINATION

- Hepatitis A and B vaccination as advised

## 9. HAND HYGIENE

- Prevents hepatitis A

## 10. HEALTH CHECK UPS

- Regular master health check up including Liver Function test, ultrasound abdomen and Fibroscan

- **Dr. B. Padam Kumar** (Consultant Laparoscopic & General Surgeon)



# FOUNDER'S DAY

CELEBRATION - DECEMBER 19, 2024



## ***HONORING OUR LEGACY: A DAY OF REFLECTION AND GRATITUDE***

On December 19th, 2024, Billroth Hospitals celebrated its annual Founder's Day, marking another milestone in our journey of excellence in healthcare. The event brought together the entire Billroth family – from our distinguished medical professionals to our dedicated support staff and valued well-wishers.

## ***A CELEBRATION OF VISION AND VALUES***

The celebration served as a powerful reminder of our founder's pioneering vision and the principles that continue to guide us. Through engaging presentations and heartfelt speeches, we reflected on our institution's remarkable journey and the countless lives we've touched along the way.

### **FOUNDER'S DAY- 2024**





# FOUNDER'S DAY

## CELEBRATION - DECEMBER 19, 2024



### HIGHLIGHTS OF ACHIEVEMENT

During the ceremony, we celebrated our key accomplishments and reaffirmed our commitment to:

- Delivering patient-centered, exceptional healthcare services
- Advancing medical excellence through continuous innovation
- Maintaining the highest standards of medical care and ethics
- Fostering a culture of compassion and dedication

FOUNDER'S DAY- 2024



FOUNDER'S DAY- 2024



### LOOKING AHEAD

As we honor our past, we also embrace our future with renewed vigor. Our commitment to excellence in healthcare remains stronger than ever, inspired by our founder's vision and strengthened by our collective dedication.

### MESSAGE OF GRATITUDE

We extend our deepest appreciation to all who participated in making this Founder's Day a truly memorable occasion. Your presence and continued support inspire us to reach greater heights in our mission of providing outstanding healthcare services.





# ENHANCE YOUR SURGICAL SKILLS WITH EXPERT TRAINING!



## LAPIMA 2024

INDIAN MEDICAL ASSOCIATION TAMILNADU  
FELLOWSHIP COURSE IN BASIC & ADVANCED LAPAROSCOPY  
IMA AMS LAPAROSCOPIC COURSE  
6 Months training program in association with Billroth Hospitals



**Dr. S.M. Sivaraj**  
MBBS, MS (Genl), M.Ch(Gastro)  
COURSE DIRECTOR & SENIOR CONSULTANT



**Dr. G. Kumaragurubaran**  
MBBS, MS, MRCS(England)/FIAGES, FMAS,  
Dip.ALS.FALS(Hernia), FALS(Colorectal),  
FALS(Bariatric), FALS(Robotic)  
SENIOR CONSULTANT



**Dr. M.L. Sankar Narayanan**  
MBBS, MS (Genl), M.Ch(Gastro)  
SENIOR CONSULTANT

### AREA COVERED

- ▶ Principles of Laparoscopic Surgery
- ▶ Laparoscopic Suturing
- ▶ Difficult Cholecystectomy Procedures
- ▶ Laparoscopic Ventral & Groin Hernia Surgery
- ▶ Complicated Hernia Surgery
- ▶ Laparoscopic Surgery for Hiatus Hernia & GERD
- ▶ Introduction to Bariatric Surgery & Advanced Laparoscopy (Colorectal Surgery)

### COURSE DETAILS

Course Starts on: January 2025  
Venue: Billroth Hospital, Shenoy Nagar,  
Chennai 600030  
Course Fee: ₹30,000/- (Inclusive of GST)

### PAYMENT DETAILS

A/C Name: Indian Medical Association AMS.  
A/C No: 75240100001890 Bank Name: Bank of Baroda  
Branch: Ramnagar, Coimbatore  
IFSC Code: BARB0RAMNAG

### ELIGIBILITY POINTS & DETAILS OF THE COURSE FOR JOINING :

1. Admission is on first come first serve basis.
2. For some candidates, Online entrance exam may be conducted.
3. Candidates must hold MBBS or equivalent.
4. Atleast 3 years post-registration experience in General surgery or degree of M.S.,  
Doctors should have valid medical registration under NMC/MCI/TNMC.
5. Must be IMA Life Member and IMA AMS Life Member from any state and also post-graduation completed in their respective field.
6. Students can be admitted as per the facilities and infra-structure available in the Centre.
7. IMA AMS State Br. shall assess the facilities and infra-structure available in the Centre.
8. A minimum of 80% attendance and updates shall be maintained by students.
9. Monthly attendance and updates about classes shall be sent to IMA AMS.
10. One assignment may be arranged for students.
11. At the end of the course "Theory examination" shall be conducted by IMA AMS

### FOR ADMISSION CONTACT:

Mr. Y. Chellathurai, Manager-IMA TNSB Wings,  
Mobile: 7338785360, 9444561752 (Whatsapp).  
State Office: Email: imatamilnadu@gmail.com.  
Tel: 044-47797871 Mobile: 9087180123

### FILED APPLICATION IS TO REACH THE FOLLOWING ADDRESS

Dr. S. KARTHICK PRABHU  
Hony. State Secretary-IMA TNSB, IMA TN HQs. Building,  
No.1, Doctors Colony 2nd Cross Street,  
Bharathidasan Nagar Extn.,  
Off. Mudichur Road, Tambaram West,  
Chennai-600 045.

Shenoy Nagar: 044-4292 1777 Ext: 4036

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academics@billrothhospitals.com | Follow us on



# BILLROTH'S MAGICAL CHRISTMAS CELEBRATION

## A DAY OF JOY, UNITY, AND HOLIDAY SPIRIT

The halls of Billroth Hospitals transformed into a winter wonderland this Christmas as staff, patients, and visitors came together for an unforgettable celebration. The festive atmosphere permeated every corner of the hospital, creating moments of joy and warmth for everyone present.





# BILLROTH'S MAGICAL CHRISTMAS CELEBRATION

## MUSICAL MAGIC IN THE AIR

The celebration came alive with the harmonious sounds of Christmas carols echoing through the corridors. Staff members and professional carolers joined forces to create a magical musical experience, lifting spirits and spreading cheer throughout the facility.

## SANTA'S SPECIAL VISIT

The highlight of the day was an unexpected visit from Santa Claus himself, who brought an extra dose of Christmas magic to our patients. With his trademark jolly demeanor, Santa distributed gifts and spent precious moments with patients, creating memories that will be cherished for years to come.

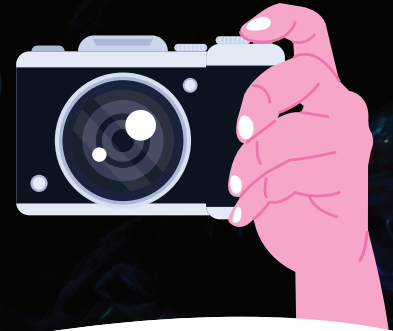
## HEALING THROUGH HAPPINESS

Perhaps the most heartwarming aspect of the celebration was witnessing the genuine smiles and laughter from our patients.





# CAPTURING PRECIOUS MOMENTS: *A SPECIAL INITIATIVE FOR NEW PARENTS*



In a heartwarming display of our commitment to creating memorable patient experiences, Billroth Hospitals has launched a unique initiative for our maternity patients. Going beyond traditional healthcare services, we now offer complimentary newborn photography sessions and beautifully framed photographs to celebrate the joyous arrival of new family members.



Our **Chief Operating Officer, Mr. Rajmohan**, personally presented a complimentary photo frame to one of our recent maternity patients, capturing a tender moment between parent and child. The professionally taken photograph, part of our exclusive newborn photography service, preserves the precious early moments that families hold dear.







"We believe healthcare isn't just about medical treatment—it's about being part of our patients' life journeys," shares Mr. Rajmohan. "These photographs represent more than just images; they're treasured memories that families can cherish for generations."

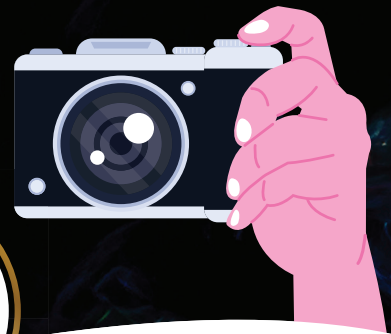
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This new service reflects Billroth Hospitals' holistic approach to healthcare, where we strive to create positive, lasting memories while providing excellent medical care. It's just one of the many ways we work to make every patient's journey with us truly exceptional.



***Billroth Hospitals - Where we celebrate life's precious moments with you.***

# A SPECIAL CELEBRATION ON FOUNDERS' DAY



This Founders' Day was extra special as we welcomed a newborn baby into the world at our hospital! In a heartwarming gesture, our **Obstetrics Team**, along with our **Medical Superintendent and COO**, presented a special gift to the proud parents, celebrating this joyous occasion.



The birth of a child is always a moment of immense happiness, and this occasion holds even greater significance as it coincided with the hospital's Founders' Day—a day that marks our commitment to excellence in healthcare.

We extend our warmest wishes to the baby and the family for a future filled with health, happiness, and prosperity. Moments like these reinforce our dedication to providing the best maternity care and being a part of life's most precious milestones.





# CARDIAC CME MEETING – DECEMBER 2024



The **Cardiac CME Meeting** was successfully conducted on **Saturday, December 21, 2024**, from **8:30 AM to 9:30 AM** at the **Billroth Annexe Auditorium**. The session featured insightful discussions on key advancements in cardiology, with eminent speakers sharing their expertise.

The meeting commenced with **Dr. Sathyanarayana SA**, who presented on **SGLT2 inhibitors** and their evolving role in managing heart failure and diabetes. He highlighted the latest clinical evidence supporting their cardiovascular benefits and their impact on patient outcomes.



Following this, **Dr. Aswin Venkatesh** delivered an informative talk on the **differences between mechanical and bioprosthetic valves**. He discussed the advantages and limitations of both types, emphasizing patient selection criteria, durability, and anticoagulation strategies.

The session concluded with an engaging case discussion by **Dr. Ilayaraja U**, who presented a rare and challenging case of **WPW Syndrome with cardiogenic shock**. He elaborated on the pathophysiology, diagnostic approach, and management strategies, sparking an engaging discussion among attendees.

The **CME session proved to be highly informative**, providing attendees with valuable insights into modern cardiology practices. Participants actively engaged in discussions, enhancing their clinical understanding.

Special thanks to the speakers and attendees for their enthusiastic participation. The event reaffirmed the commitment to continuous medical education and the advancement of cardiology.

# NEURO CME – DECEMBER 2024



The **Neuro CME Meeting** was successfully held on Tuesday, December 24, 2024, from 1:00 PM to 2:00 PM. The session featured an insightful lecture by **Dr. Shankar Subramanian, Consultant Neurophysician**, who shared his expertise on the **Management of Peripheral Neuropathy**.

**Dr. Shankar Subramanian** provided a comprehensive overview of **peripheral neuropathy**, covering its causes, clinical presentation, diagnostic approaches, and latest treatment modalities. He discussed the role of metabolic disorders, autoimmune conditions, and neurotoxic agents in the development of neuropathy, emphasizing the importance of early diagnosis for effective management.



The session highlighted advancements in **pharmacological and non-pharmacological treatments**, including the latest medications, physiotherapy approaches, and lifestyle modifications to improve patient outcomes. Case studies and real-world clinical scenarios were also presented, allowing participants to engage in interactive discussions.

The **CME session proved to be highly valuable**, offering attendees practical insights into managing peripheral neuropathy in clinical practice. The interactive format encouraged meaningful discussions, enabling healthcare professionals to enhance their understanding of this complex neurological condition.

Special appreciation goes to **Dr. Shankar Subramanian** for his engaging presentation and to all attendees for their active participation. The session reaffirmed the importance of continuous medical education in improving patient care and advancing neurology practice.



# IN-HOUSE BLOOD DONATION DRIVE: A REMARKABLE SUCCESS!



We are thrilled to share the success of our recent In-House Blood Donation Drive, where over 30 units of blood were collected in a single day! This incredible achievement was made possible by the generosity and enthusiasm of our donors and dedicated team members.



Blood donation is a simple yet powerful act that saves lives. Every unit collected contributes to providing critical care to patients in need. Your support and participation in this initiative highlight the spirit of compassion and community service that drives us forward.

***Together, we care, we give, we save lives.***





# BILLROTH HOSPITALS CAMP AT FOOD CORPORATION OF INDIA: A HEARTWARMING SUCCESS



On 12th December 2024, Billroth Hospitals organized a health camp at the Food Corporation of India (FCI), providing crucial medical services to over 350 individuals from the FCI community. The camp focused on **General Medicine, Diabetes Care, and Cardiology**, offering a comprehensive range of medical consultations, tests, and advice to attendees.

Despite the rain, the dedication of our medical team and volunteers ensured the camp's success, with many individuals benefiting from early diagnosis, treatment options, and lifestyle guidance. This initiative further reflects Billroth Hospitals' commitment to improving community health and well-being through outreach programs.



This event was a testament to the unwavering spirit of our team, who worked tirelessly to ensure the camp's success, despite the challenges posed by the weather. The enthusiastic participation of the community further inspired us to continue our mission of bringing quality healthcare to every doorstep.



# From *Bloating to* *Butterflies*

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