Billroth Hospitals

# HEALTH IS **BEYOND WEALTH**

VOLUME-03

## DIGESTING THE **DIGESTIVE MARVEL**

# MAN WITH VISION...

*"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*

## THE SEED WAS SOWN

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

*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 which would attract the best medical minds was taking shape. He dreamt of creating an institution which 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 entire spectrum of GI Cancer Care.*

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

*Ready to Care*

**EVERYWAY EVERYDAY**

BIG BILLROTH INSTITUTE OF GASTROENTEROLOGY

Institute of Gastroenterology at Billroth Hospitals, has a legacy of clinical excellence which has been highly trusted since 1990. The Founder **Dr. Jeganathan** an prominent Gastroenterologist devised remarkable LASER procedures for first time in South India. His majesty and excellence in a partial gastrectomy procedure known as "Billroth's Operation" inspired the hospital's name. Through various leaps and bounds Billroth's Institute for Gastroenterology has now evolved into specialized BIG Institutes that provide comprehensive cutting-edge Medical, Surgical and Radiational Gastroenterology treatments.

# FOOTPRINTS IN GASTROENTEROLOGY

## *The next BIG leap in the treatment of Gastrointestinal Cancers!*

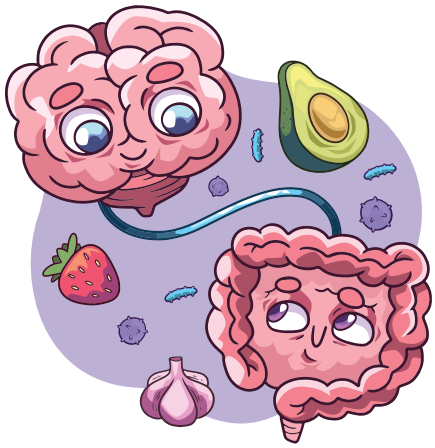
If you have been diagnosed with GI diseases you have the most advanced centre for their treatment, right here at **BIG - Billroth Institute of Gastroenterology.**

**BIG** uses technologies and techniques that are unmatched anywhere in the State to give you complete, effective care from diagnostics to treatment. This includes the latest in therapeutic endoscopy. A single capsule you swallow will give us 50,000 pictures of hard-to- access areas in your intestines. Complex problems can be taken care of comfortably through cutting-edge technologies and revolutionary approach.

One of the country's leading experts in the field will oversee your treatment, supported by a hand-picked team of specialists. And, of course you will be enjoying BIG's world-class hospital facilities.

*Feeling better already!!!????*

# UNRAVELLING THE MYSTERIES OF GUT HEALTH:



The gut, often referred to as our **"SECOND BRAIN"** plays a crucial role in our overall well-being. The stomach, that seemingly humble organ tucked away in our abdomen, plays a pivotal role in the intricate process of digestion. In the grand scheme of digestion, the stomach takes center stage, showcasing its incredible adaptability, coordination, and vital role in our overall well-being. So, here's to the unsung hero in our abdominal ensemble – the stomach, where the symphony of digestion begins and gastronomic magic unfolds!

## Digestive Symphony

Picture the stomach as a culinary maestro orchestrating a complex symphony of digestion. Its primary function is to break down the food we consume into smaller particles, preparing it for further processing in the digestive tract.

## Acidic Ambiance

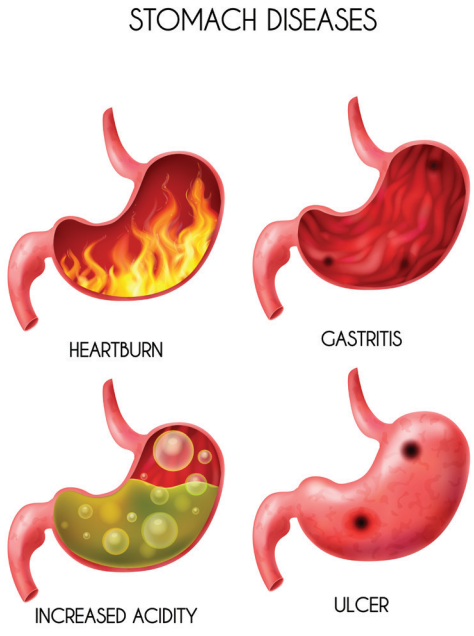
To kick off the digestive extravaganza, the stomach secretes gastric acid, a potent concoction primarily composed of hydrochloric acid. This acidic environment serves a dual purpose: it activates digestive enzymes and helps sterilize the incoming food, protecting us from harmful bacteria.

## Stretching Limits

The stomach is a remarkable expandable organ. While it has a resting capacity, it can stretch to accommodate a meal, allowing us to enjoy that occasional feast without worry. After all, who doesn't appreciate a little extra room for dessert?

## Muscular Magic

Powerful muscles lining the stomach walls churn and mix food with digestive juices, creating a semi-liquid substance known as chyme. This meticulous mixing process is a testament to the stomach's incredible muscular coordination.




## The Pyloric Squeeze

Once the stomach has performed its digestive ballet, it's time for the grand finale. The pyloric sphincter, a muscular valve at the base of the stomach, regulates the release of chyme into the small intestine. This controlled exit ensures a gradual and efficient continuation of the digestive journey.

## Nervous Network

The stomach is not just a passive participant in digestion; it's a hub of communication. Interacting with the nervous system, the stomach signals feelings of fullness and satisfaction, contributing to our overall sense of satiety.

# DID YOU KNOW?

**Your stomach lining is replaced approximately every three days?**

***This constant renewal is essential for protecting the stomach from its own powerful digestive juices.***

## LITTLE-KNOWN FACTS

**Microbial Metropolis**

The gut is home to trillions of microorganisms, collectively known as the microbiome. These tiny residents contribute to digestion, immune function, and even influence mood.

**Diverse Ecosystem**

Your gut microbiome is as unique as your fingerprint. The composition of bacteria varies from person to person, influenced by factors like diet, genetics, and environment.

**Gut-Brain Connection**

The gut and the brain communicate bidirectionally through the gut-brain axis. This connection is so influential that a healthy gut is often associated with better mental well-being.

## DEBUNKING THE MYTH!!

**Probiotics Cure Everything:** While probiotics offer numerous benefits, they're not a one-size-fits-all solution. The effectiveness varies, and it's essential to choose strains that address specific health concerns.

**All Bacteria are Bad:** Not all bacteria are villains. In fact, the gut requires a balance of good and bad bacteria for optimal functioning. It's about fostering a harmonious microbial community.

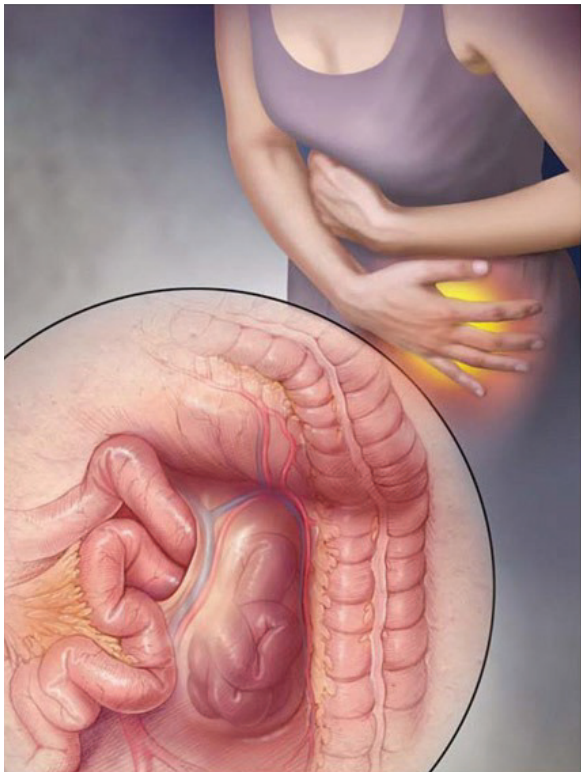
**Gut Health Only Affects Digestion:** Beyond digestion, the gut influences immune response, nutrient absorption, and even weight regulation. A healthy gut is integral to overall health.

# CASE REPORT - 1

## LAPAROSCOPIC MANAGEMENT OF LEFT PARADUODENAL HERNIA: A RARE CAUSE OF ABDOMINAL PAIN.

## INTRODUCTION

A rare presentation of a small bowel obstruction (SBO) that could be risky if ignored as non-specific abdominal pain. Internal hernias are congenital defects with less than 1% chance of causing complication such as SBO (1). Paraduodenal hernias (PDHs) wraps almost half of the propotion. PDHs are congenital mesocolic hernias with three times more common occurrences along the left than the right colonic mesenteries. Often left undiagnosed if treated symptomatically as acute abdomen which may proceed with catastrophic outcomes in the form of small bowel obstruction worsening with complications of strangulations, incarcerations and bowel perforations as well. On the other hand, internal hernias of the acquired etiology accounts 42% cause of SBO post Gastric bypass.



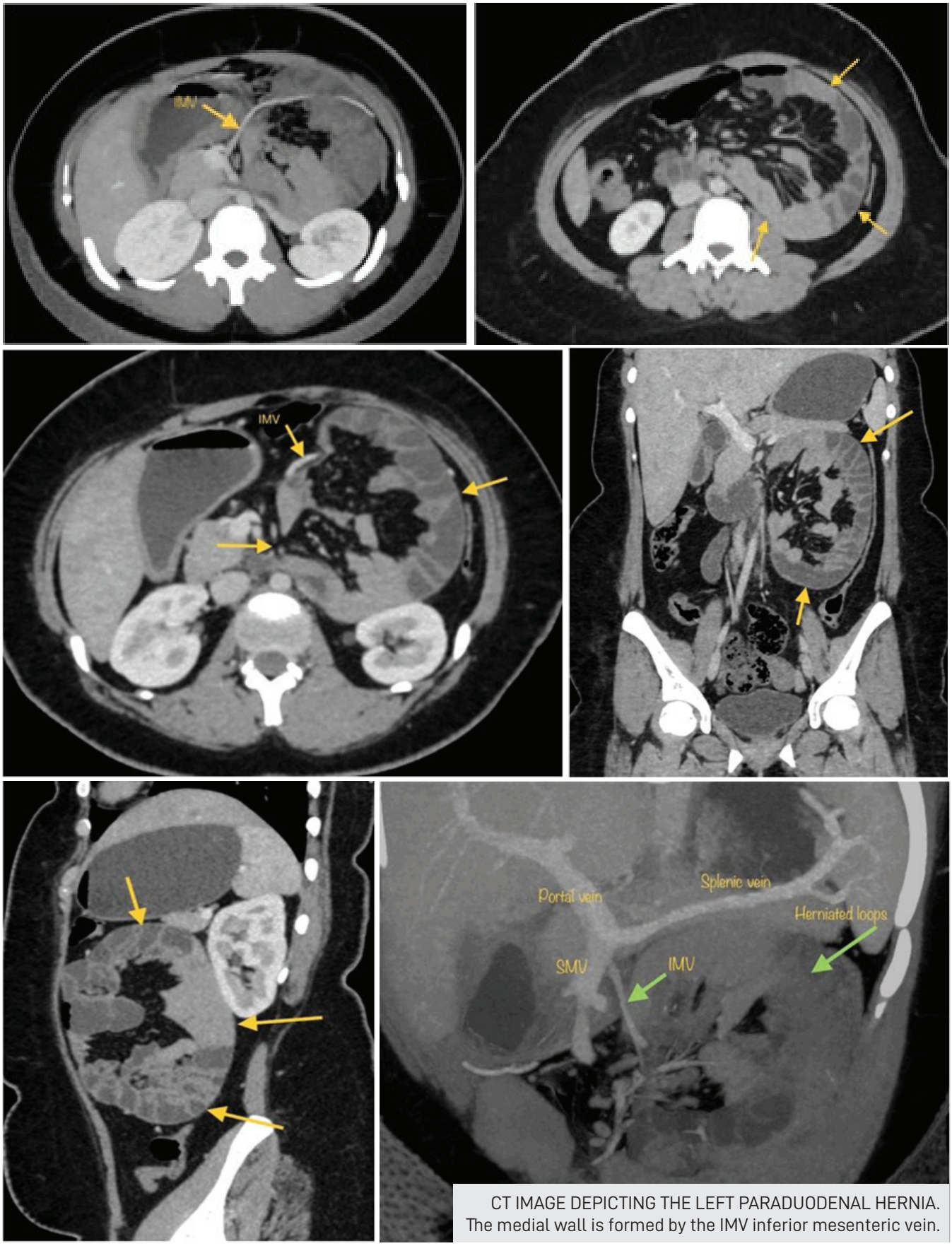
The advent of CT and the high suspicion of the above by the radiologist have eased the diagnosis at the earliest, which shall reduce the risk of acute complications. A delayed diagnosis or presentation of PDHs carry a mortality of 20-50% with a proven autopsy finding of 0.2-0.9%

Even though the reduction of Left PDHs is less complicated comparatively to its right counterpart, our presented case was interesting as the patient was a smart school going girl presented to the emergency with pain abdomen and vomiting, managed successfully by Laparoscopic surgery.

## CASE REPORT

Presenting a case of 17-years-old girl with complaints of agonising left hypochondriac pain, she had a history of self-limiting vague abdominal pain with distension post meal on and off eventually made her deprived of meals and satiety occasionally. She had no history of vomiting, loose stools, fever, dysmenorrhea, melena, bleed per rectum so far. Nil previous hospitalizations or surgical interventions. On presentation her recorded vitals were stable; on palpation her abdomen was soft with mild tender vague mass palpable with mild distension over the left hypochondrium and left lumbar regions. Hence her blood was sampled for basic routine remained inconsequential.

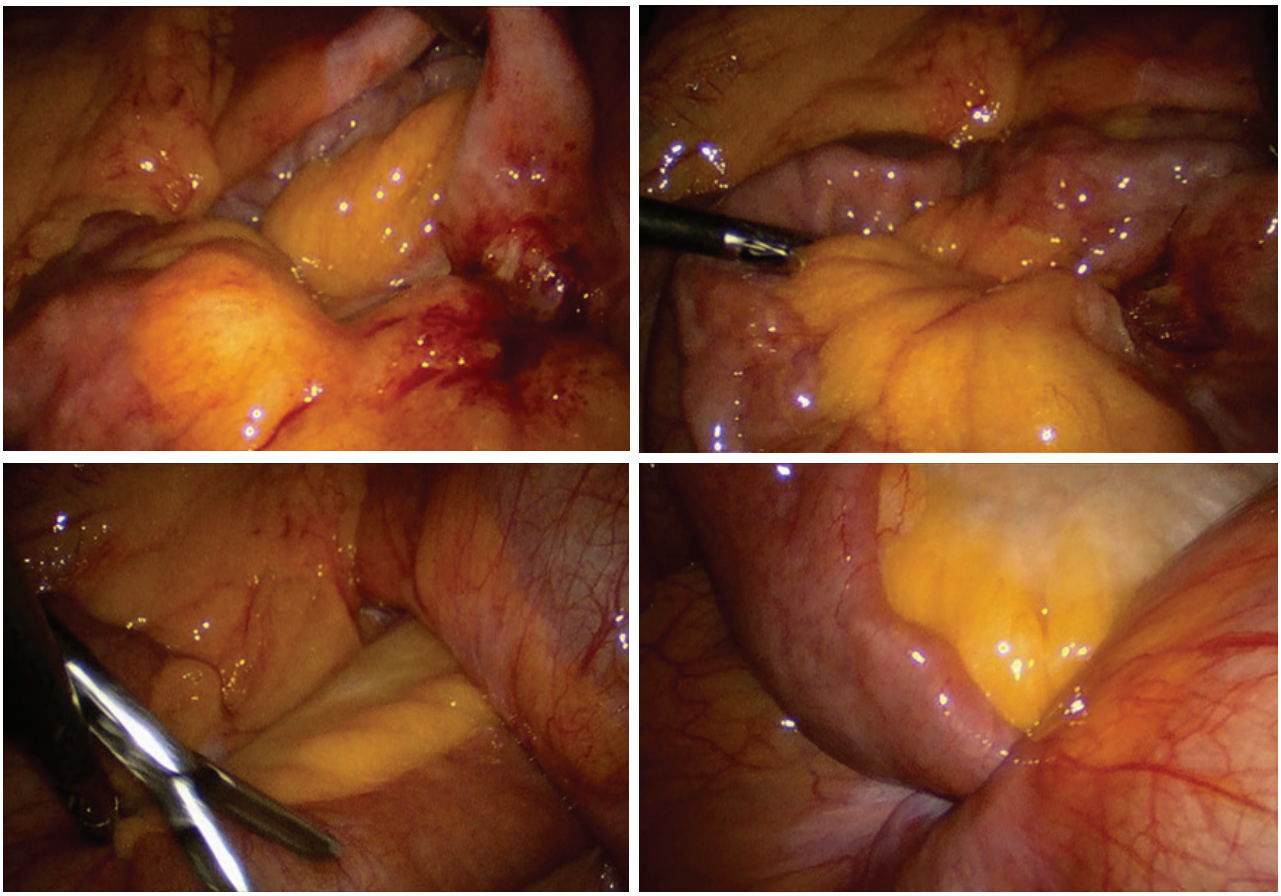
We got her contrast CT done which revealed clumsy loops of small bowel entrapped in the unusual fossa on the left lateral abdomen. After deep radiological analysis and discussion the confirmation of the diagnosis of obstructed Left PDH was concluded, luckily hoping with no features suggestive of bowel necrosis she was proposed the earlier intervention of Laparoscopic repair.




CT IMAGE DEPICTING THE LEFT PARADUODENAL HERNIA.
The medial wall is formed by the IMV inferior mesenteric vein.

## SURGICAL PROCEDURE

We proceeded with a laparoscopic repair. On initial assessment, the small bowel loops were viable and non-distended.



The entire jejunum and part of ileum was contained within the fossa was completely reduced. Since the medial wall was formed by the inferior mesenteric vein, the options were to either ligate the vein to prevent bleeding or suture the edges of the fossa. We proceeded with suturing the edges without ligation of the IMV. 2-0 prolene was used and the cavity was completely obliterated. Patient recovered uneventfully and started on oral liquids the next day, was gradually progressed to soft and normal diet in 3 days. Patient had an uneventful recovery and was discharged on post op day 5.

## DISCUSSION:

Internal hernias are abnormal penetration of the bowel loops that can lay in the unusual recess or fossas comprising few pouches due to incomplete fusion of the colonic mesenteries to the parietal peritoneal folds. Usually, they might loop in and detach themselves leaving individuals with a non-specific vague symptom with self-limiting relief or in some cases may demand conservative management, that has left us with a diagnostic delay in most cases until we might receive them back with much more complicating presentations.

Earlier the diagnosis and timely reduction of such internal hernias can prevent the mortality of 20-50% amongst SBO cases. PDH makes up 50% of all internal hernias with a lifetime risk of strangulations, intestinal infarcts, perforations or mortality. They may present chronically because the diagnosis is rare due to retroperitoneal locations of the herniated bowels. As a theoretical approach, we have studies that narrates the evolutional cause of such congenital hernias. During the embryological development, the

rapid growth of the midgut and liver leads to loss of abdominal domain with a temporary physiological hernia accommodating the transitions of our midgut during the fifth week of gestation. Prior to returning to the abdominal cavity during the 10th or 11th week, our gut undergoes 90 degrees counterclockwise followed by 180 counterclockwise before the mesenteric leaves fuse and midgut becomes fixed to the retroperitoneum along the straight line from the ligamnetum Treitz to caecum. Failure of the second stage of Gl rotation of the preaterial segment causes it to become trapped under the mesentery of the rotating colon causing an internal hernia, wherein abnormality of third rotation leaves an excessive floppy caecum causing caecal bascule or volvulus.

Mall at John Hopkins have first depicted the embryological model of the complex GIT embryogenesis (1898) further Frazer and Robbins staged the above into three (1915). Dott published the most common rotational anomalies at the end stage of developments. Also, Cateleno et al, have reported a case of LPDH associated with volvulus, bowel well ischemia, ischemia, intussusception with additional CT findings of target sign, sausage shaped mass composed of alternating high and low attenuation layers. Significant closed loop can even produce a mass effect pushing posterior stomach wall anteriorly and duodenal flexure of transverse colon internally.

In such cases the hernial sac is lined by the peritoneum and contains major vascular structures that must be carefully avoided during surgical repair, here goes the advent of radiological expertise and well precautious knowledge of possibilities of unusual peritoneal folds comes in handy enjoying the uncomplicated, advancement of comes in the hands of surgical expertise. CT has sensitivity and specificity of almost 90-100% which could reveal the site, cause and presence of ischemic changes of the involved bowel. Direct signs of closed loop at CT U or C shaped fluid filled distended loops.

Glimpse of CT of LPDH can be viewed as most of small bowel loops residing in a cliff along either of the branches of our abdominal tree-unusual peritoneal fossa, recess of the mesentery, the retroperitoneum, could reside between stomach and pancreas or behind the pancreatic tail between transverse and left adrenals. Mesenteric abnormalities could present as converging array of engorged feeding vessels with a stilliform entrance at the hernial orifice as in our case it involves the IMV leftward anteriorly and left colic artery anteromedially.

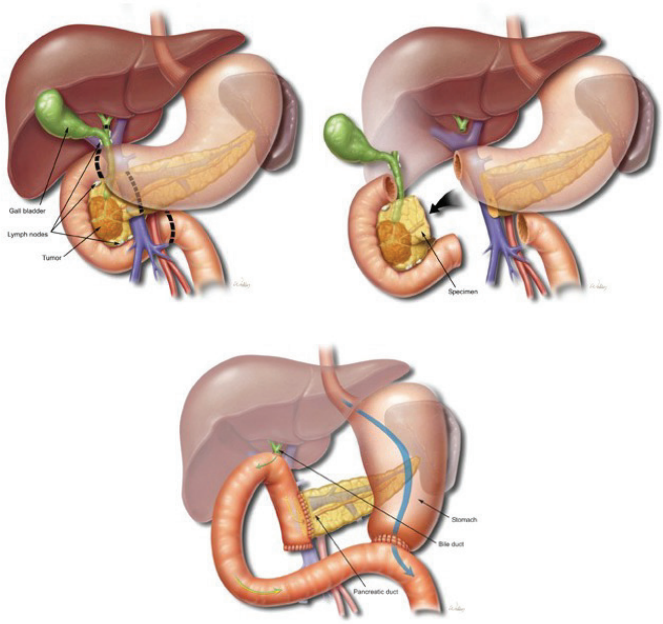
Review of 9,527 patients with LRYGB in a single institution cohort of 620 LRYGB and 8,912 incidental finding of SBO of 36%. They have found that the overwhelming cause of SBO after a Gastric bypass was due to IH of 42% of this series. Trans mesenteric hernias has higher incidence due to increased frequency of Roux en Y loops nowadays. The standard repair of the most common Left side PDH where the hernial sac is opened by incising the avascular area of descending mesocolon and dividing the ascending branch of IMA and SMV to allow closure of the hernial orifice. The hernia then becomes part of the peritoneal cavity and normal anatomy is restored. PDHS could be congenital or acquired. But frequent bothersome symptoms despite conservative management needs attention. So earlier evaluation with CT would be beneficial, as the choice of treatment could only be surgical intervention, hence timely diagnosis can rescue individuals from lifetime risk of complicating surgeries.

- **Dr. Sankar Narayanan** [Consultant Surgical Gastroenterologist]
- **Dr. Sagithya Sakthi** [DMO, Department of GI Sugery]

# CASE REPORT - 2

## A SUCCESFUL WHIPPLE PANCREATICODUODENECTOMY CURES A HIGH-RISK CARDIAC PATIENT FROM PANCREATIC CANCER

A 52-year-old presented with yellowish discoloration of the eyes after 18 days. Vomiting and abdominal pain go on and off. The patient was a known case of postpartum dilated cardiomyopathy for 25 years on medical treatment. She was not diabetic or hypertensive. On clinical examination, the patient was thin-built and jaundiced. There was no elevated JVP or pedal edema. On abdominal examination, the gall bladder was palpable; there were no ascites. patient is able to climb two flights of stairs without dyspnea. A clinical diagnosis of dilated cardiomyopathy and peri-ampullary carcinoma was made.



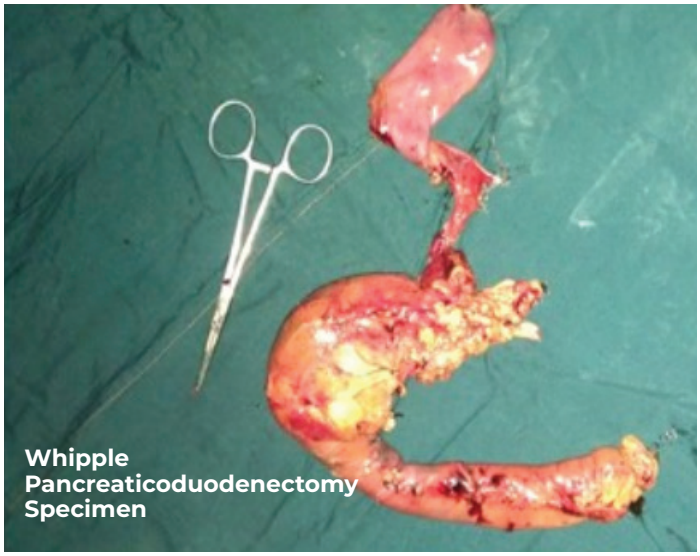

On cardiac evaluation, the ECG showed sinus bradycardia with premature atrial complexes, a non-specific intraventricular block, a rightward axis, and a LBBB. The echocardiogram showed an ejection fraction of 27%, indicating severe left ventricular dysfunction. Left ventricular enlargement was present. There was global hypokinesia of the left ventricle. Both the left and right atriums and the R ventricle were of normal dimensions.

An endoscopy was performed, and the esophagus and stomach were found to be normal. Duodenum showed periampullary growth; a biopsy was taken, which revealed a well-differentiated pancreatic ductal adenocarcinoma. Blood investigations showed a serum bilirubin of 21 mg/dl. Albumin was 3.2 g/dl. Computed tomography showed dilated CBD till the terminal end, IHBR dilatation, a present pancreatic duct dilated till the ampulla, and an impression of periampullary carcinoma.

A PET scan was done to stage the disease, which showed a metabolically active soft tissue density lesion in the periampullary region extending into the head of the pancreas. The lesion encases the terminal bile duct and pancreatic duct with proximal biliary and distal pancreatic duct dilation. Pancreatic duct dilated 7mm, CBD dilated 12mm. There is no mass/FDG uptake in lymph nodes, liver, or lung. Adrenals or bones Anaesthetic fitness was obtained, and a high-risk consent, ASA III fitness, was given. She was advised to continue Lanoxin, Cardivas, Skip Repace, and Aldactone. The preoperative anesthetic plan was to have arterial line monitoring and fluids under CVP guidance and be prepared to deal with arrhythmias and hypotension. The preoperative surgical plan was to proceed with laparotomy and assessments for resectability, followed by mobilization of the head of the pancreas, bile duct, and proximal jejunum. Not to divide any structure until complete mobilization and If the patient is stable until these steps - To divide the bile duct, stomach, proximal jejunum, and neck of the pancreas finally. If there was any sign of intraoperative hemodynamic instability, stop the gastric and biliary bypass. (Triple Bypass). The patient underwent laparotomy by bilateral subcostal incision.

## FINDINGS

Growth of the periampullary region with narrowing of the duodenum and dilatation of the bile ducts (1.2 cm) and pancreatic duct (8mm), no peritoneal metastasis or liver metastasis. During the procedure, no adverse hemodynamic changes were noted. Hence, we decided to proceed further without going to the point of no return and reassess hemodynamically again. No adverse hemodynamic events were noted. Hence Bile duct divided, stomach divided, jejunal division proceeded, and finally neck of pancreas divided, uncinate dissection done, Whipple pancreaticoduodenectomy specimen removed. Pancreatic jejunostomy, hepaticojejunostomy, gastrojejunostomy, and feeding jejunostomy are done.



Whipple Pancreaticoduodenectomy Specimen

There were no adverse anesthetic events. Operative time was 5 hours, 30 minutes; blood loss was 200 ml. Post-operatively, the patient was carefully monitored in the CCU for 4 days and discharged on the 10th POD. The postoperative period was uneventful. The biopsy showed well-differentiated adenocarcinoma, stage 2A. The patient was on follow-up only; no adjuvant therapy was advised by the medical oncologist. Patient is on 7th postoperative year follow-up at present.

## DISCUSSION

The unfavorable factors in this case were dilated cardiomyopathy, EF 27%, severe LV dysfunction, and global hypokinesia. Favorable factors were early malignancy, middle age, a thin-built, physically active patient, favorable surgical anatomy, and no intraoperative hemodynamic changes. Rate of serious complications after pancreatic resection with a history of chronic cardiac disease vs. without cardiac disease (33% vs. 24%) and perioperative mortality (4.7% vs. 2%). Mortality risk reduction in high-volume versus low-volume centers in pancreatic resection was 7.1% (5.8% vs. 12.9%).

Whipple Resection-Pancreatic Remnant

In a tertiary care centre with high volume, familiarity with these complex operations, and full access to pre- and postoperative cardiac and critical care, major pancreatic resections can be done in cardiac patients with acceptable morbidity and mortality. Proficiency with surgical procedures, experienced surgical staff, and early recognition of postoperative warning signs are essential to decreasing the risk of death.

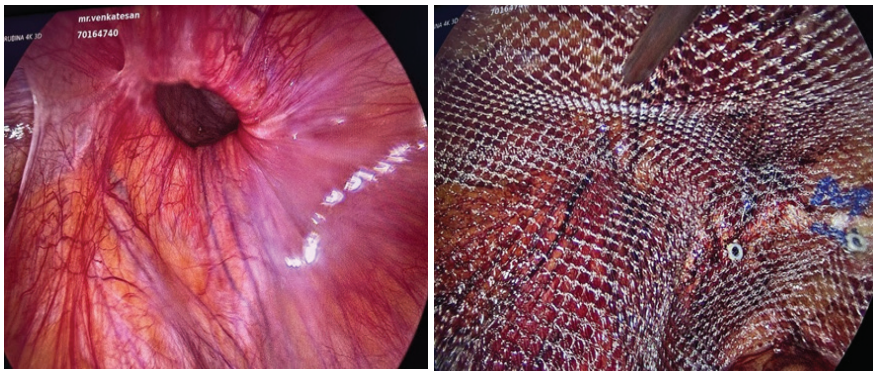
- **Dr. S. M. Sivaraj** [Consultant Surgical Gastroenterologist]

# WHAT YOU SHOULD KNOW ABOUT HERNIA

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

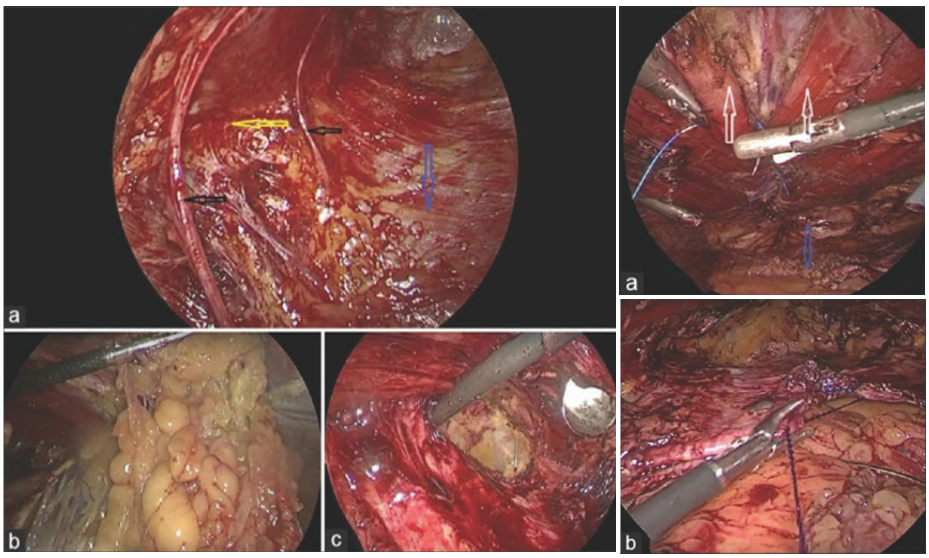
Hernia is one of the common conditions we come across in our day today practice and hernia is one of the oldest diseases known to mankind since time immemorable. The treatment of hernia has evolved greatly over the years from suture repairs to tension free mesh repairs to laparoscopic hernia surgeries. Laparoscopic hernia surgery has been in vogues 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.

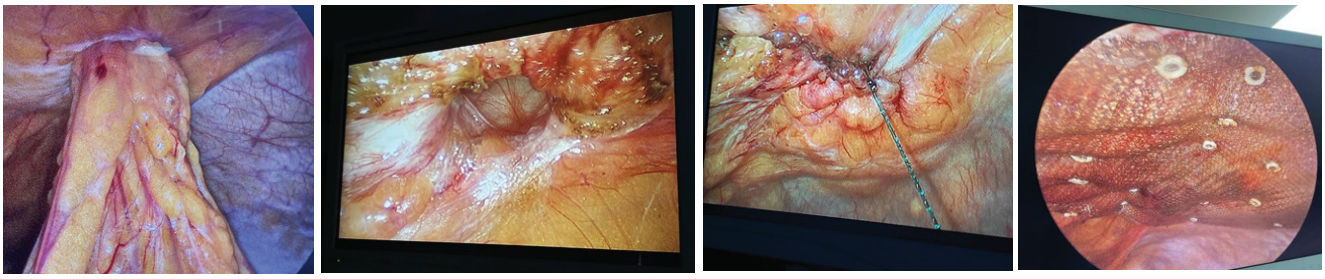
### *eTEP: EXTENDED TOTALLY EXTRAPERITONEAL REPAIR*




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.

## *IPOM: INTRAPERITONEAL ONLAY MESH REPAIR*

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.



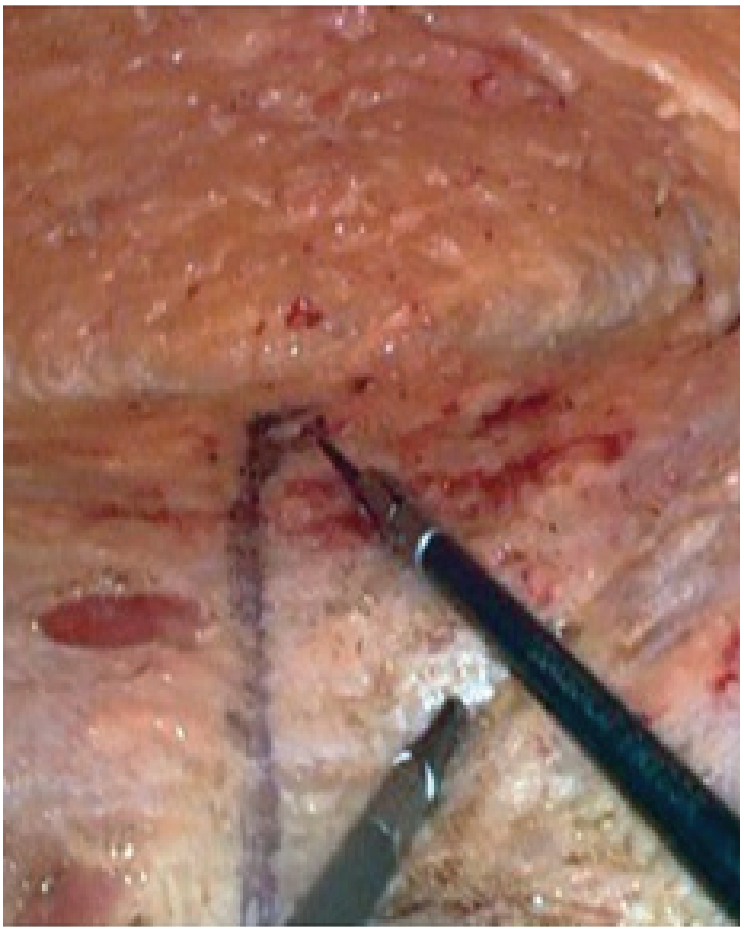
## DIVARICATION OF RECTI

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.

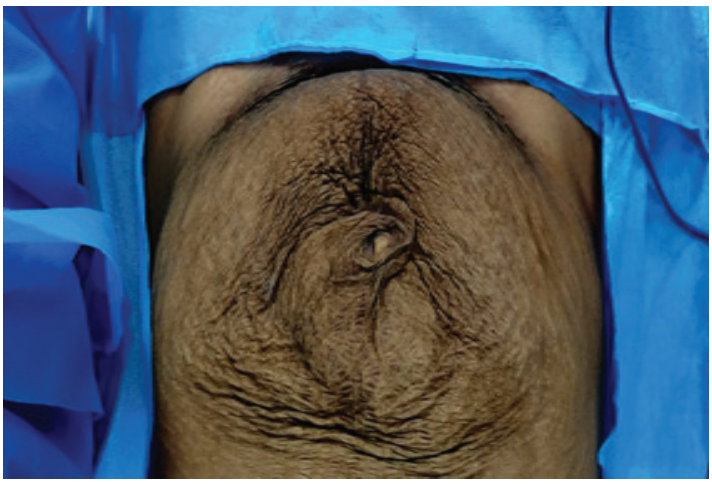


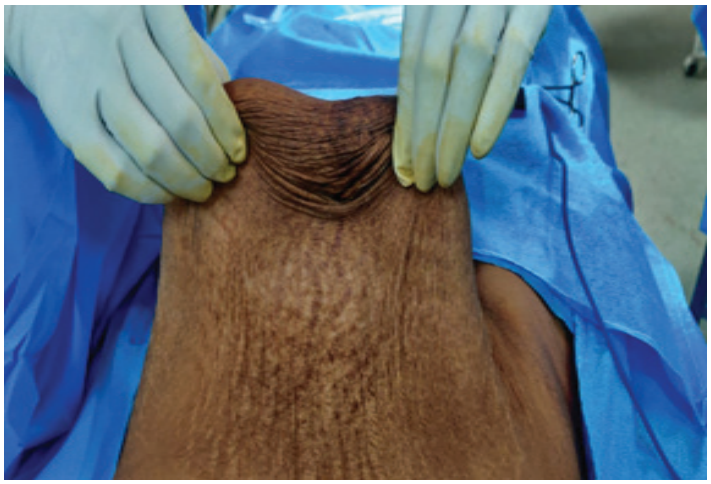
**Complex Hernia /Loss of domain:** these are huge hernias where there is loss of anatomical planes associated with huge hernias and pose a big challenge for surgery and fasciae closure. Loss of domain can be defined when there volume of hernial. Content is more than 30 percent of the abdominal volume.in 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*





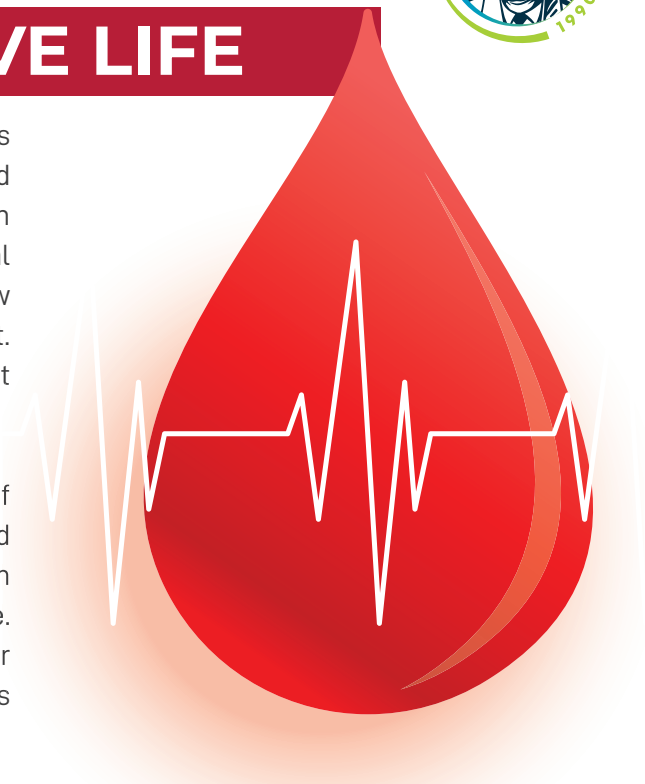
Abdominoplasty or a **'tummy tuck'** is cosmetic or reconstructive surgery. It is used to tighten muscles that have become loose or split following pregnancy or obesity and to remove fat and extra loose skin, maybe associated with mesh repair as well.

## 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]

# DONATE BLOOD SAVE LIFE



Blood in a liquid state circulates inside our body; it supplies essential substances and nutrients, such as sugar, oxygen and hormones to varies parts of our body. Blood also helps to flush out body waste through urine, sweat etc., Blood is magical liquid that can give life to someone who is in need. We are now living in a scientific world and technology has developed a lot. With technology we are inventing new products everyday but till now we are not able to produce blood artificially.

Research is still going on to produce artificial blood. If scientists discover how to produce artificial blood it will be sold to a very high cost in developing countries like India. We can donate our blood to someone who is in need and can save a life. Every time we donate blood, we save a life. The need of safer blood was increasing day by day. So voluntary blood donor's participation plays more importance.

## IMPORTANCE OF BLOOD DONATION

Whenever a major surgery is done, blood is needed. Blood is needed to patients who lost blood due to accident, patients with anaemia, patients with blood cancer, etc.

**BENEFITS OF VOLUNTARY BLOOD DONATION**

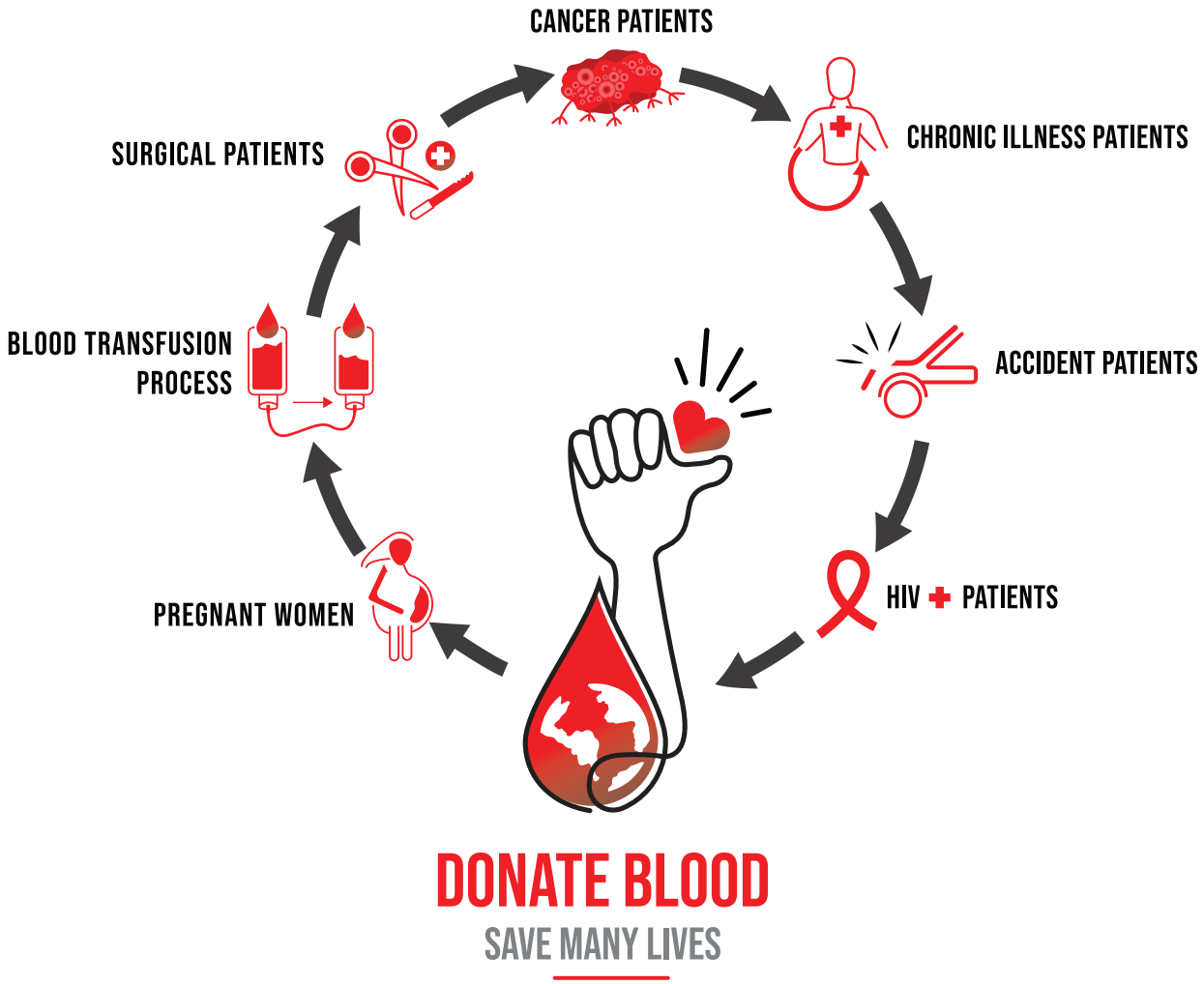
- Reduces the risk of stroke.
- The iron stores in the body are maintained at healthy levels.
- Lowers the risk of cancer.
- Helps the blood to flow better.
- Enhances the production of new blood cells.

## *WHO CAN DONATE BLOOD??*

Anyone whose age is between 18 to 60 years can donate blood. Approximately every human will have 5 liters of blood in their body and 350 ml to 450 ml blood will be taken for blood donation. Our body will compensate the donated blood volume within 24 hours. The donor's weight should be more than 45 kgs. Hemoglobin level should be more than 12.5 gms/dl. The blood pressure should be normal 100/60 mmhg & 140/90 mmhg. Blood donation can be done once in three months. It just takes 20 minutes to donate blood. After blood donation the donor can do his/ her normal routine works.

## *AFTER BLOOD DONATION*

The donated blood will be tested for HIV, VDRL, HEPATITIS B, HEPATITIS C, MALARIA and SYPHILIS The blood will be transferred to patients only if found to be negative in all the tests, if found positive for any tests the donor will be informed and proper counselling will be given.




# *WHEN SHOULD YOU AVOID BLOOD DONATION??*

- Should avoid when you are pregnant and when you are breastfeeding.
- Should avoid for 12 months if undergone any major surgery and 6 months for minor surgery.
- Should avoid for 3 months if undergone treatment for malaria.
- Should avoid for 1 year after recovery if undergone treatment for jaundice.
- Women should avoid blood donation during menstruation period.
- Ones who take steroids or any drugs related to hormone problems should not donate blood.
- Drug addicts and those who have sex with multiple men and women should not donate blood.

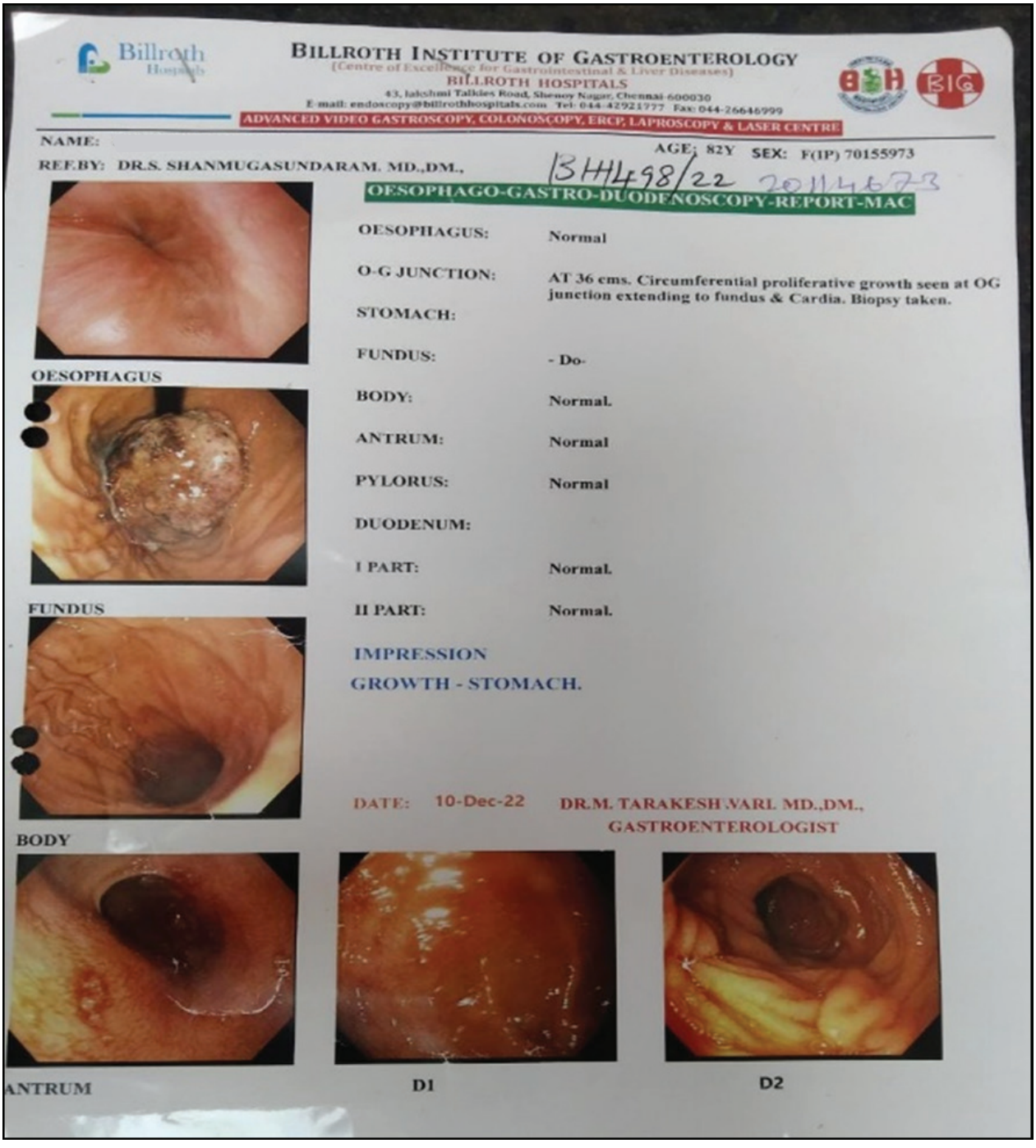
- **Dr. Indumathi. D** [MD - Consultant Transfusion Medicine]

# A RARE PATHOLOGY FINDING

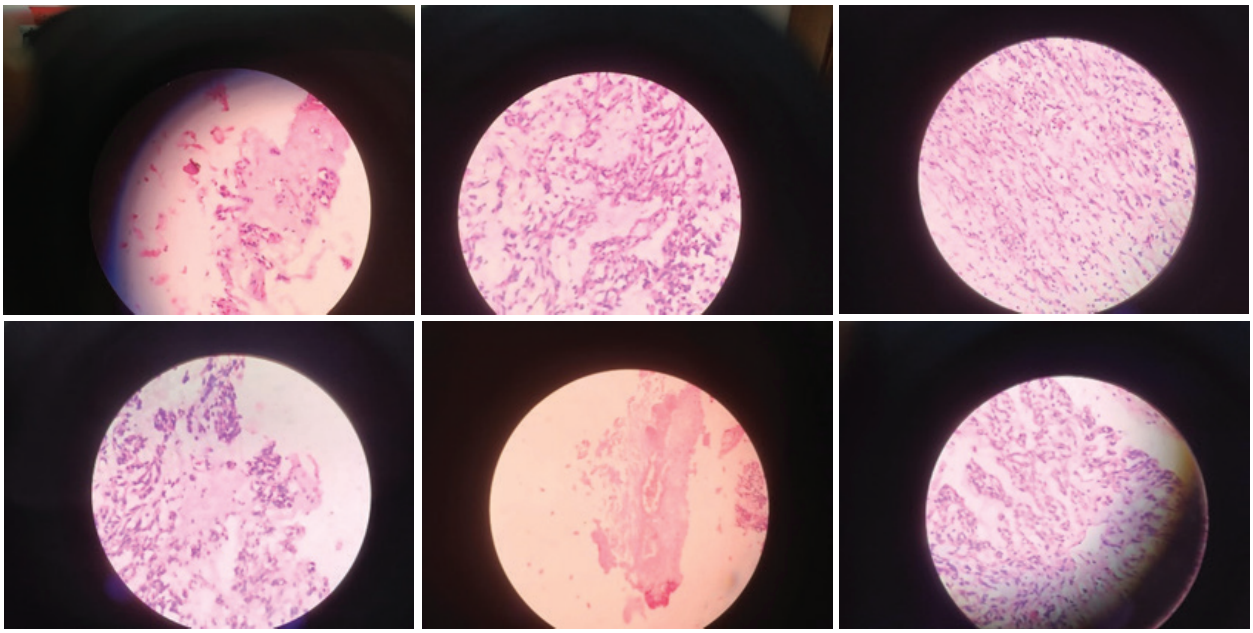
## Circumferential proliferative growth at the OG junction extends to the fundus and cardia

A 82-year-old female, a known case of coronary artery disease, diabetes, and hypertension, presented with pain in the abdomen and a loss of weight. Endoscopic findings: Circumferential proliferative growth at the OG junction extends to the fundus and cardia. Other areas were normal.

### ENDOSCOPIC PICTURE



# HPE IMAGES



## HPE REPORT

- Fragmented glands composed of few round cells with dark staining nuclei admixed with spindle cells, plump oval nuclei, increased vascularity, areas of ulceration, inflammatory exudate, collection of eosinophils, polymorphs in a background of mucoid material.
- **Impression:** 1.] Poorly differentiated adenocarcinoma.
  2.] GIST.
- Advised IHC markers for confirmation.

## OG JUNCTION TUMORS

- GIST
- Sarcomatoid carcinoma (carcinosarcoma)
- Synovial sarcoma
- Leiomyoma
- Lymphoma
- Neurogenic tumors

## SYMPTOMS

- Abdominal pain
- Dysphagia
- Gastrointestinal bleeding
- Symptoms of bowel obstruction
- Small tumors may be asymptomatic

## DIAGNOSIS

- CT - A well circumscribed gastric mass with its epicentre in the submucosa and absence of perigastric lymphadenopathy favors a benign GIST diagnosis.
- GIST tumour mimics,
- <3 cm - leiomyoma, polyps, Gastric metastasis, Ectopic pancreas.
- >5 cms - large adenocarcinoma, exophytic hemangioma of the liver, extragastric adenocarcinomas.

## HISTORY OF GIST

- Late 1960's → smooth muscle neoplasms of the gastrointestinal tract
- Immuno-histochemistry in the 1980's → some lacked features of smooth muscle differentiation
- Mazur and Clark → "Gastrointestinal stromal tumors" = Neurogenic or Myogenic differentiation
- Mutations c-kit gene can cause constitutive activation of the tyrosine kinase function of c-kit
- These mutations result in:
  - Auto-phosphorylation of c-kit
  - Ligand-independent tyrosine kinase activity
  - Uncontrolled cell proliferation
  - Stimulation of downstream signaling pathways

## CAJAL CELL

- Intestinal pacemaker cell
- Characteristics of both smooth muscle and neural differentiation on ultrastructural study

## KIT

- Approximately 5% of GIST cells show not activation and aberrant signaling of the KIT receptor, but rather mutational activation of a structurally related kinase, PDGFR- (PDGFRA).
- 90% rate of mutations seen in a more recent series searching for potential mutations in each of exons 11, 9, 13, and 17

## KIT & OTHER MARKERS

- C KIT - CD117 - Cell membrane and cytoplasmic staining.
- PDGFRA - KIT negative tumours.
- Protein kinase C Theta (PKCTheta)
- DOG-1 High sensitivity and specificity
- Wild type = KIT negative GIST Epithelioid morphology arise in omentum harbour, PDGFRA mutation.

## PDFGR

- FDG PET = mandatory
- FDG-PET CT scan is ideal
- MD-CE-CT = image modality of choice for abdomen (if FDG-PET-CT is not available)
- MR
- Evaluate by Chol or RECIST criterion

## DISTRIBUTION

- Stomach 50-60%
- Small bowel 20-30%
- Large bowel 10%
- Esophagus 5%
- Elsewhere in abdomen 5%

## MALIGNANT VERSUS BENIGN

| | SIZE | Mitotic count |
|---|---|---|
| Very Low risk | <2 cm | <5/50 HPF |
| Low risk | 2-5 cm | <5/50 HPF |
| Intermediate risk | <5 cm<br><5/50 HPF | 6-10/50 HPF<br><5/50 HPF |
| High risk | >5 cm<br>>10 cm<br>Any size | >5/50 HPF<br>Any count<br>>10/50 HPF |

## DEFINITION

- GI submucosal mesenchymal tumour that is not myogenic (eg: leiomyosarcoma) or neurogenic (eg: schwannoma) in origin.
- GI mesenchymal tumours that express the CD117 and/or CD34 antigen
- Carney's triad - Pulmonary chondroma
- Extra adrenal paraganglioma
- GIST
- Familial paraganglioma [Carney - stratakis syndrome - young females, multinodular epithelioid morphology.
- 5% with Von Recklinghausen's Disease, multiple lack KIT or PDGFRA mutation - small bowel.

## GIST SUMMARY

- All have malignant potential
- CD 34, CD 117, PET for Diagnosis
- Complete surgical resection important
- Metastatic disease responds to Imatinib
- Role of Imatinib
- No role of chemo or radiation

## PROGNOSIS

- The overall survival rate → 35% at 5 years
- complete resection → 54% at 5 years
- Incomplete resection → 12 months
- Metastasis → 19 months
- Local recurrence → 12 months

- **Dr. Ezhilvizhi** [Senior Consultant Pathologist]

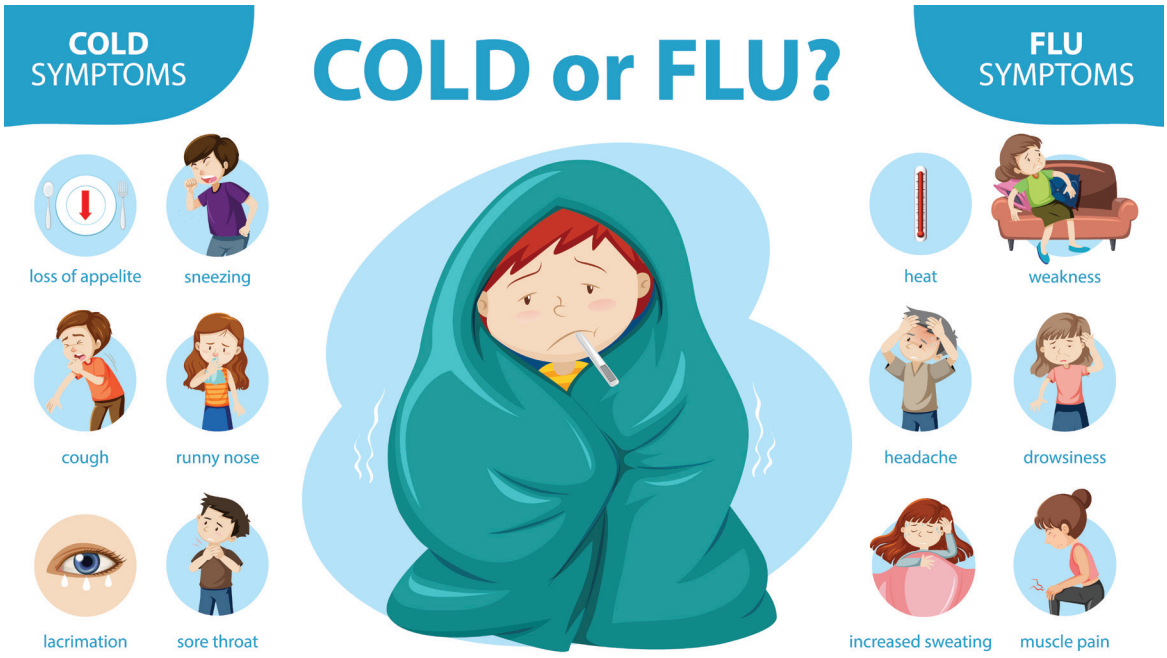
# WINTER IS COMING...

## SO DO THE SEASONAL DISEASES.

International Infection Prevention Week was celebrated from 15 to 21 October, 2023. Motto for this year is improving awareness on the significance of infection prevention. As a way to commemorate the week, I would like to highlight the seasonal diseases and how to prevent them. India being a tropical country faces seasonal variation where cyclic changes in disease occurrence and severity occur.

## SEASONAL DISEASES

The summer hits on our gastrointestinal and respiratory systems. Salmonella, Shigella, Cholera infections are common. School going children should be screened for scabies and group A Streptococcus. Measles, Mumps, Chickenpox, and Herpes Simplex Virus 1 are common in both children and adults. Rainy season floods us with Dengue, Malaria, Chikungunya, Leptospirosis because of mosquito and rodents respectively. Hepatitis and enteric infections make way when pani puri is enjoyed during the rain. Winter increases the incidence of Influenza, Pneumococcal infections and exacerbations.




## PREVENTION

It is equally important to vaccinate the adults as much as the children are vaccine protected. Adult vaccines like **dT, PCV13, PPSV23, H1N1, Shringrix** help co-morbid patients more. Children should be screened for group A Streptococcus to prevent the impending RHD. Importance of hand washing cannot be emphasised enough. Self-quarantine, cough etiquette, wearing surgical masks in case of respiratory infections helps self and others. Avoid visiting sick persons either in hospitals or their homes unless necessary. Home prepared food and keeping our surroundings clean always goes a long way.

- **Dr. Lavanyaadevi. V. M. D.,** [Microbiologist & ICO]

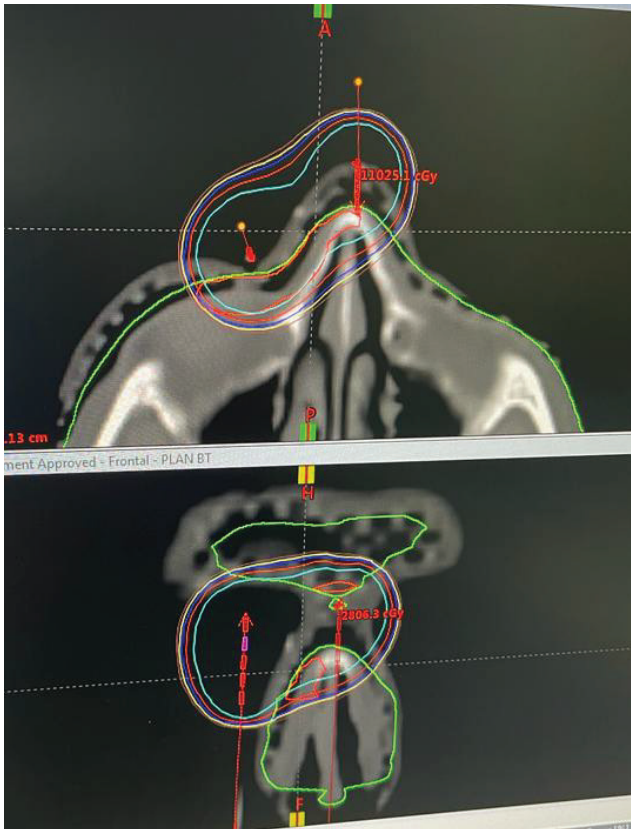
# STORIES OF HOPE

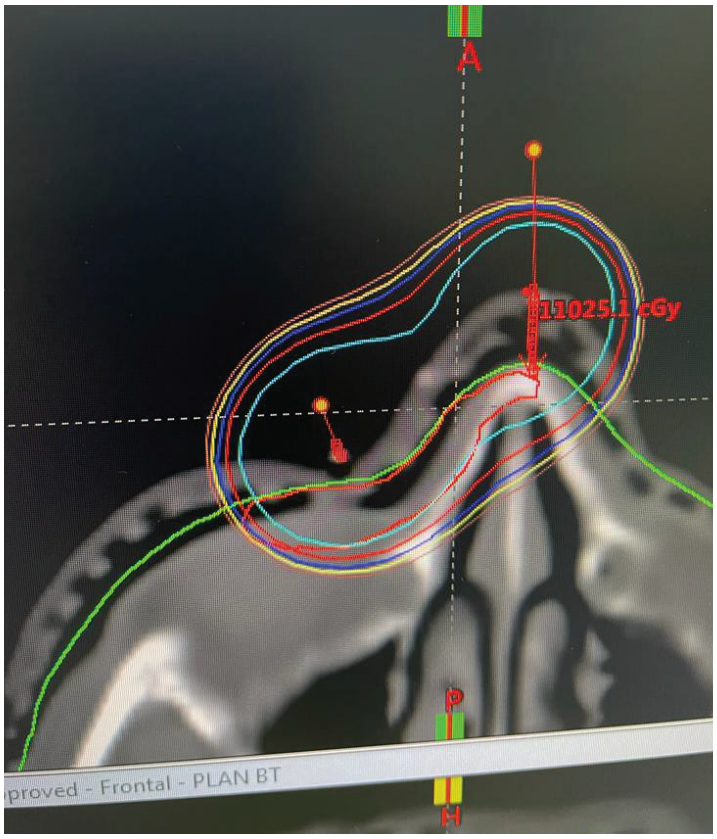
## TRIUMPH OVER BASAL CELL CARCINOMA: A HEALING JOURNEY AT BILLROTH HOSPITALS

In the quiet corridors of Billroth Hospitals, a 77-year-old patient embarked on a courageous journey against Basal Cell Carcinoma (BCC) of the right canthus [Nasal Bridge]. His story is one of resilience, medical expertise, and the unwavering support of a dedicated healthcare team.

### Discovery of the Diagnosis

His journey began with the discovery of a basal cell carcinoma at the delicate site of his right canthus. Recognizing the importance of immediate care, without any delay our expert multi-disciplinary doctors assembled to craft a personalized treatment plan.



## Innovative Intervention: Surface Mould Brachytherapy

On detailed biopsy, our dermatologist confirmed Basal Cell Carcinoma of skin, with that the decision was made to employ **Surface Mould Brachytherapy -** an innovative radiation therapy approach that offers targeted treatment with minimal impact on surrounding healthy tissues. Our expert doctors comprisng of **Radiation Oncologists, Medical Physicists and Radiation Technologists** meticulously planned a personalized treatment regimen of twice daily session with 8 hour interval for a duration of 3 days. With a **TD-30 Gy** for the entire treatment.

### Precision in Action

Each session delivered a carefully calculated dose to the lesion, ensuring the maximum therapeutic effect on the cancerous cells. The precision of Surface Mould Brachytherapy was key, aiming to eradicate the malignancy while preserving the delicate structures around the canthus.

### Recovery and Resumption of Life

His resilience, coupled with the expertise of the medical team, resulted in a remarkable recovery. Post-treatment assessments revealed a significant reduction in the size of the lesion, affirming the success of the intervention. More importantly, his quality of life was swiftly restored.

### Returning to Normalcy

In a testament to the effectiveness of the treatment and the patient's fortitude, He not only recovered well but also regained his daily life. With the shadow of cancer lifted, he returned to his freedom. The success of the intervention at Billroth Hospitals was not just about defeating the disease; it was about empowering a patient to reclaim his life.

### Celebrating Triumph Over Adversity

His journey is more than a case; it's a celebration of triumph over adversity. Billroth Hospitals, through their innovative approach and compassionate care, exemplified their commitment to not just treating ailments but restoring lives. This story stands as a beacon of hope, inspiring others facing similar challenges and showcasing the transformative power of dedicated healthcare.

- **Dr. D. Saritha** [Senior Clinical & Radiation Oncologist]

# BILLROTH HOSPITALS PROUDLY ANNOUNCES THE INAUGRATION OF STATE OF THE ART FACILITIES FOR

# CARDIAC CARE, MHC & CCU ATTENDANT'S WAITING LOUNGE

On October 12th – Billroth Hospital, a pioneer in healthcare excellence, commemorated the grand inauguration of its state-of-the-art High Dependency Cardiac Care Unit (HCCU), and the new facility for Master Health Checkup, and an exclusive Attendant's Waiting Lounge featuring Café Coffee Day. These new additions underscore Billroth Hospital's commitment to providing comprehensive healthcare solutions with a focus on patient comfort, cutting-edge technology, and holistic wellness.

# HIGH DEPENDENCY CARDIAC CARE UNIT (HCCU)

The High Dependency Cardiac Care Unit (HCCU) at Billroth Hospital represents a breakthrough in cardiac care. This specialized unit is equipped with the latest advancements in medical technology and staffed by a team of dedicated professionals. The HCCU is designed to provide intensive care for patients requiring advanced interventions such as FFR, IVUS, IVL, ROTA, TAVI & EP Study. Measures have been taken to rush the patient from ER to Cathlab with a super minimal turnaround time of 30 minutes. With continuous monitoring, state-of-the-art equipment, and a team of experienced cardiologists and nurses, the HCCU aims to significantly improve patient outcomes in critical cardiac cases. With this addition, Billroth Hospital aims to enhance patient outcomes by providing timely and specialized care to those in need.

# A COMFORT OASIS

Understanding the importance of preventive healthcare, Billroth Hospital's new facility for the Master Health Checkup, tailored to meet the diverse healthcare needs of individuals. Recognizing the role of family and friends in the healing process, Billroth Hospital proudly introduced a dedicated Attenders Waiting Lounge. This comfortable and inviting space provides a tranquil environment for attenders to wait while their loved ones receive care.

To further enhance the experience, the lounge includes a Café Coffee Day outlet, offering a range of beverages and refreshments. This thoughtful addition ensures that attenders can relax and recharge, promoting a supportive atmosphere that contributes to the well-being of both patients and their families.

# Elevating Patient Care


**The inauguration of the HCCU, Master Health Checkup and the Attenders Waiting Lounge with Café Coffee Day** all align with Billroth Hospital's commitment to advancing healthcare standards. These facilities and services are poised to significantly improve patient outcomes by providing specialized care, promoting preventive health measures, and fostering a supportive environment for patients and their attenders.


# EXPERIENCE SUPER COMFORT AT OUR MODERNIZED MHC DEPARTMENT

We're thrilled to announce the completion of the renovation of our Master Health Check-Up Department! Our state-of-the-art facilities are now ready to offer an even more comfortable and efficient experience for your comprehensive health assessments.

## WHAT'S NEW:

**Modernized Environment:**
Experience a welcoming and contemporary space designed with your comfort in mind.

**Streamlined Processes:**
Expect faster and smoother check-in and check-out procedures for your convenience.

## BILLROTH HOSPITALS'

# EMPOWERING PINKTOBER:

# A JOURNEY THROUGH BREAST CANCER AWARENESS

October at Billroth Hospitals in Chennai was not just a month; it was a celebration of strength, awareness, and solidarity in the fight against breast cancer. In honour of **Breast Cancer Awareness Month,** Billroth Hospitals orchestrated a series of events, with the highlight being the awareness talks by **Dr. D. Saritha,** Senior Clinical & Radiation Oncologist and **Dr. Maalavika,** Billroth Hospitals. The talks were not just confined to the medical staff but extended to include the hospital's dedicated nursing students.


# HIGHLIGHTS OF PINK OCTOBER

The heart of the initiative was the special talks delivered by expert oncologists taking centre stage. Their expertise illuminated the room as they delved into the intricacies of breast cancer, sharing valuable insights on early detection, treatment options, and the importance of regular self-screenings.

The hospital was adorned in shades of pink, creating an ambience that resonated with the spirit of Pink October. Educational posters and displays were strategically placed throughout the hospital, offering information on Breast Cancer self-examination, signs to watch out for, and the significance of regular check-ups. A heartfelt nod was given to the hospital's staff, who work tirelessly to support patients battling breast cancer.


Recognizing that today's nursing students are tomorrow's healthcare advocates, Billroth Hospitals took the opportunity to instil a sense of responsibility towards breast cancer awareness. Beyond the hospital walls, Billroth Hospitals extended their outreach into the community. Billroth Hospitals' celebration of Pink October was more than a series of events.

It was a testament to their dedication to holistic healthcare. As October drew to a close, the pink legacy lived on, leaving an indelible mark on the hearts and minds of those touched by this empowering initiative.

# ADVANCING CARDIAC CARE:

## Insights from Dr. Ilana Kutinsky's CME Program at Billroth Hospitals

In a commitment to staying at the forefront of medical advancements, Billroth Hospitals recently hosted a CME program that proved to be a beacon of knowledge in the realm of cardiac electrophysiology. The session, focusing on the **"Clinical Evidence Update and Indications for Leadless Pacemakers",** was expertly led by the distinguished **Dr. Ilana Kutinsky, a Cardiac Electrophysiologist from Beaumont Hospital, Michigan, USA.** Dr. Ilana Kutinsky's reputation precedes her, known for her expertise and contributions to the field of cardiac electrophysiology. As a prominent figure from Beaumont Hospital, USA, her insights into the latest clinical evidence and advancements in leadless pacemakers brought a valuable international perspective to the medical community at Billroth Hospitals.

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# DIABETIC FOOT CARE:

# THE NEXT LEVEL CME PROGRAMME

On 29th October 2023, Billroth Hospitals organized a **Diabetes & Diabetic Foot Care CME programme** at Hotel Ramada, Chennai. The event gathered healthcare professionals, specialists, and practitioners to explore key insights across diabetic care, with an emphasis on preventive measures and management of diabetic foot complications. The success of the program was amplified by the participation of expert doctors who delivered insightful presentations on various aspects of diabetic foot care. The primary focus of the program was on diabetic foot care - a critical aspect of diabetes management often overlooked. The sessions delved into preventive strategies, early identification of complications, and evidence-based interventions to ensure optimal foot health in diabetic patients.






The Diabetic Foot Care CME program conducted by Billroth Hospitals on October 29, 2023, at Hotel Ramada, Chennai, stood out as a successful initiative in promoting awareness and understanding of diabetic care. By combining expert insights, interactive sessions, and a touch of fun in learning, the program not only educated attendees but also inspired a collective commitment to improving diabetic care practices. Billroth Hospitals continues to lead the way in facilitating educational forums that contribute to the enhancement of healthcare standards and the overall well-being of the community.




**On 22 October 2023, Chennai** — In a heartwarming display of empathy and commitment to the well-being of Billroth family that includes Housekeeping staffs, ward aids, Para medics and Doctors. Dr. Rajesh Jeganathan, the Managing Director of Billroth Hospitals, has undertaken a legendary act by providing 4500 tickets to the members of the Billroth family for the screening of the much-anticipated Leo movie.

# A GIFT OF JOY AMIDST CHALLENGES

Recognizing the challenges faced and the strain on healthcare professionals, Dr. Rajesh's initiative aims to bring a moment of joy, relaxation, and respite to those who have shown immense strength in the face of adversity. The generous act extends beyond the patient community, as Dr. Rajesh includes the staff of Billroth Hospitals in this cinematic experience. This gesture serves as a token of appreciation for their tireless efforts, unwavering dedication, and the compassionate care they provide every day. Dr. Rajesh's initiative goes beyond a simple movie outing; it fosters a sense of unity, support, and shared experiences within the Billroth family. Dr. Rajesh's believes that moments of collective joy can significantly contribute to the overall well-being of both patients and staff, creating a stronger, more connected healthcare community.

***Dr. Rajesh Jeganathan, Managing Director of Billroth Hospitals, expressed his words saying,***

*"In the spirit of togetherness, we want to create an atmosphere of joy and camaraderie within the Billroth family. This small act is our way of saying 'thank you' to our incredible staff for their support in the Venture of Healthcare."*

# Do You Know Your
# Diabetes Status?

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**WORLD DIABETES DAY SPECIAL DISCOUNTED PRICE**

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## Rs 1200

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