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SRI RAMAKRISHNA HOSPITAL

pulse

Happenings at Sri Ramakrishna

50 Years of Excellence

The month of May brings an opportunity to recognize the people and purpose that drive healthcare forward. On International Workers' Day, we extend our gratitude to every member of our institution whose dedication ensures seamless service and compassionate care to our patients.

This month also highlights important global health observances including World Asthma Day, International Nurses Day, World Digestive Health Day, and World No Tobacco Day. These occasions remind us of our responsibility to create awareness and promote preventive healthcare within our community.

Dr.Sundar Ramakrishnan
Managing Trustee

We take pride in our continuous efforts to enhance infrastructure, adopt advanced medical technologies, and strengthen patient-centered services. Our nurses, doctors, and support staff remain the pillars of our success, delivering excellence with empathy every day.

As we move forward, our vision remains clear—to provide accessible, high-quality healthcare while building a healthier and more informed society. Together, we will continue to uphold trust, compassion, and excellence in all that we do.

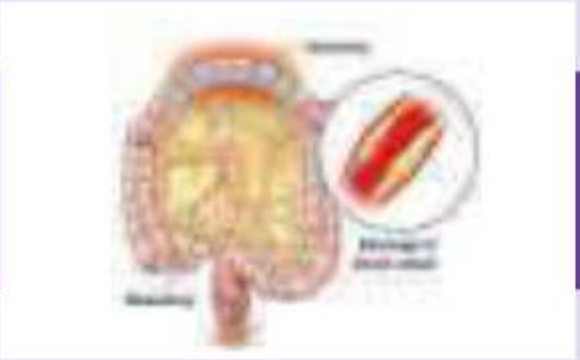
May is dedicated to raising awareness about key health issues that impact individuals and communities alike. Observances such as World Asthma Day, International Nurses Day, World Digestive Health Day, and World No Tobacco Day emphasize the importance of prevention, early diagnosis, and effective treatment.

Asthma and digestive disorders are increasingly common due to environmental and lifestyle factors, making timely medical intervention essential. At the same time, tobacco use continues to be a major risk factor for chronic diseases, reinforcing the need for strong cessation initiatives and patient education.

Dr.S.Rajagopal
Medical Director

Our nursing team plays a critical role in patient care, ensuring safety, monitoring recovery, and providing emotional support. Their contribution is vital in delivering holistic and quality healthcare outcomes.

As a healthcare institution, we remain committed to evidence-based practices, advanced treatment protocols, and community awareness programs. Our goal is to empower individuals with knowledge and care that lead to healthier lives.



ACUTE MESENTERIC ISCHEMIA

Introduction: Cokkinis(1921): Stated that "occlusion of the mesenteric vessel is regarded as one of those conditions of which the diagnosis is impossible; the prognosis is hopeless; and the conservative treatment is almost unpredictable, occlusive or non- occlusive mechanism leading to hypoperfusion of one or more mesenteric vessels.

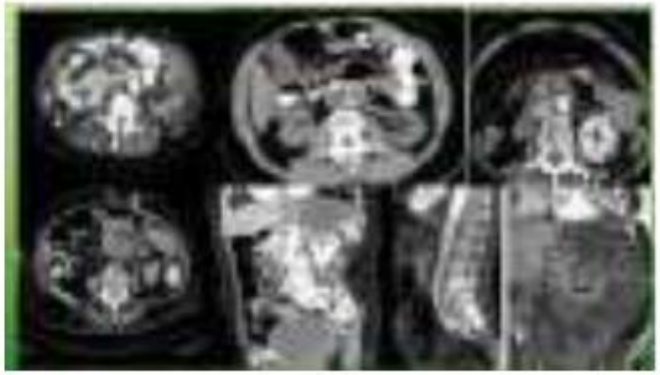
Case Series: In General Surgery department, we have treated many mesenteric Ischemia patients for the past few years, of which the **Venous Causes** were found out in **14 cases**, **Arterial Causes** is found out in 10 cases. In Venous Cases, 12 patients were treated by surgical management and 2 patients were treated conservatively. In arterial cases, **7 cases** were treated by **Surgical Management** and 3 cases were treated conservatively. **SMA occlusion** is found out in **6 cases** and **SMA and IMA** occlusion is found out in 4 cases. In SMA occlusion, 3 cases were treated conservatively, 3 cases were treated surgically. In SMA and IMA occlusion, all cases were treated surgically, conservatism is not practiced in these cases.

Discussion: Acute Mesenteric Ischemia is a catastropic Abdominal Emergency charecterised by sudden critical interruption to the intestinal blood flow, which commonly leads to bowel infarction and death. In mesenteric Ischemia patients, severe abdomen pain that is out of proportion to physical findings in 95% of cases. The early presentation includes: mainly symptoms of GI emptying, post prandial pain, nausea, vomiting, diarrhea. Early diagnosis requires high index of suspicion. Late symptoms include bloody diarrhea, abdomen distension, features of peritonitis, fever, shock and tachycardia.

Investigations:
Preliminary: Blood tests; Hemoconcentration, Leukocytosis, Metabolic acidosis

Other Serum Markers: Raised amylase and ALP intestinal fatty acid binding protein (IFABP)- urinary levels may prove to be valuable
Xray Abdomen Erect: Dilated small bowel loops, gas in portal vein, thumb printing sign, USG abdomen, CECT abdomen, CT angiography, diagnostic laparoscopy are useful in diagnosing mesenteric Ischemia whenever needed
Complications if not treated
Early Bowel Gangrene
Perforation of bowel wall -> Peritonitis
Severe sepsis -> Multiorgan failure

Conclusion: Acute Mesentric Ischemia is life threatening vascular emergency characterized by sudden reduction in intestinal blood flow, leading to bowel ischemia and potential necrosis. It is most commonly caused by arterial embolism, arterial thrombosis or mesentric veneous thrombosis. Early diagnosis is challenging due to non specific symptoms but severe abdominal pain out of propostion to physical findings is a clinical clue, prompt recognition and rapid intervention such as revascularization or surgical management are critical for improving the outcome. Every minute we waste is every centimeter of small bowel we lose. Preoperative and post operative heparin infusion is must. Delayed treatment can result in bowel infarction, sepsis and high mortality rates Therefore , high index of suspicion early imaging and urgent management are essential to reduce the morbidity and mortality. In summary acute mesentric ischemia demands timely diagnosis and aggressive treatment as early intervention significantly improves survival and preserves bowel function .



Dr.S.SUREES KUMAR
MBBS, DNB. FMAS (General Surgery)

Consultant Surgeon

Obesity as a Disease

The medical landscape of 2026 marks a transformative period in the clinical understanding of obesity, shifting definitively from a perception of a behavioral condition to its recognition as a complex, multifactorial, chronic, and relapsing disease. As the global prevalence of obesity continues to rise, the scientific community has established that obesity is characterized by the dysregulation of neuroendocrine pathways, adaptive thermogenesis, and chronic low-grade inflammation.

The Biological Architecture of Weight Regulation

Obesity is fundamentally a disease of energy homeostasis dysregulation. The CNS, particularly the hypothalamus, serves as the primary integration centre for neural and hormonal signals that regulate food intake and energy expenditure. The persistence of obesity is not a failure of individual choice but a result of biological vulnerabilities interacting with an obesogenic environment.

Neuroendocrine Pathways and the Set-Point Theory

Energy balance is governed by complex feedback loops between the gut, adipose tissue, and the brain. The arcuate nucleus of the hypothalamus contains two functionally opposing neuronal populations: the anorexigenic pathway, which suppresses appetite, and the orexigenic pathway, which stimulates it.

In individuals with obesity, these mechanisms often enter a state of dysregulation known as the "set-point" or "settling-point" model, where the body defends a higher weight through adaptive thermogenesis. When weight loss is attempted, the body initiates coordinated reductions in energy expenditure that exceed what would be predicted based on changes in body mass alone, creating a significant biological barrier to long-term weight maintenance.

Adipose Tissue as a Pathological Endocrine Organ

Excess adipose tissue, particularly visceral fatfunctions as a metabolically active endocrine organ. In a state of chronic obesity, adipocytes undergo hypertrophy and hyperplasia, leading to the secretion of inflammatory cytokines such as TNFα and IL-6. These mediators drive systemic low-grade inflammation and oxidative stress, which are the primary catalysts for insulin resistance and endothelial dysfunction.

Lipotoxicity: the ectopic deposition of fat in non-adipose tissues such as the liver, heart, and skeletal muscle further accelerates organ damage. This process is central to the development of metabolic dysfunction-associated steatotic liver disease (MASLD) and the structural cardiac changes associated with heart failure.

The Lancet Commission and the Redefinition of Clinical Obesity

In January 2025, the Lancet Diabetes & Endocrinology Commission proposed a major overhaul of the diagnostic criteria for obesity, moving away from a reliance on Body Mass Index (BMI) alone. The Commission argued that BMI, originally developed on populations of white men, fails to account for ethnic variability in fat distribution and does not directly measure adiposity or its impact on health.

Diagnostic Overhaul: Beyond BMI

The new framework recognizes that some individuals with a "normal" BMI may face substantial metabolic risk due to visceral fat accumulation, while others with high muscle mass may be misclassified as having obesity. To address this, the Commission recommends these diagnostic tools:

For adults, the Commission established 18 diagnostic criteria for "clinical obesity," including breathlessness caused by fat accumulation on the lungs and obesity-induced heart failure. For the Indian population, where metabolic abnormalities occur at lower BMI thresholds, the consensus defines obesity starting at a BMI of ≥ 25 kg/m² and overweight at 23-24.9 kg/m²

The Indian "Skinny-Fat" Phenotype: A critical insight from the ICMR-INDIAB 2025 analysis reveals that only 26.6% of Indian adults are truly metabolically healthy. Many Indians exhibit a "skinny-fat" phenotype, where they appear lean but carry high levels of visceral fat and have significant insulin resistance. This unique phenotype places them at extraordinarily high risk for cardiometabolic diseases even when their BMI falls within the "normal" range.

Cardio-Kidney-Metabolic (CKM) Syndrome: A New Clinical Paradigm

The American Heart Association recently introduced the Cardio-Kidney-Metabolic (CKM) framework to describe the continuum through which metabolic abnormalities initiate and accelerate cardiovascular and renal injury.

The pathophysiology of CKM syndrome is multifactorial, involving complex interactions between insulin resistance, neurohormonal activation, and inflammation.

Management focuses on early risk factor modification. Lifestyle interventions, such as the Mediterranean or DASH diets, remain the cornerstone. Pharmacological advancements, including Sodium-Glucose Cotransporter-2 (SGLT2) inhibitors and Glucagon-Like Peptide-1 (GLP-1) receptor agonists, have significantly improved outcomes by providing both cardio-renal protection and weight loss.

Anti-Obesity drugs

Semaglutide: Injectable and Oral Breakthroughs
Semaglutide is a GLP-1 receptor aganist.

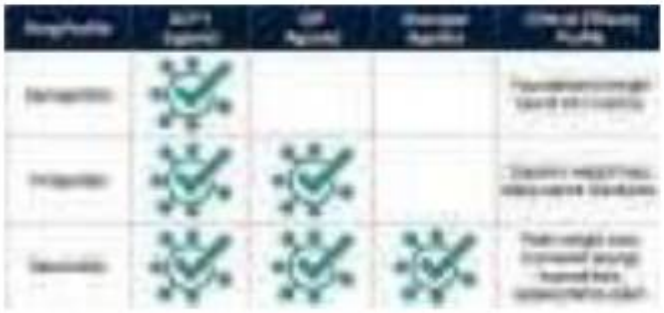
- Injectable: Administered once weekly, it has shown an average body weight reduction of 14.9%. A higher dose version (7.2 mg) demonstrated even greater weight loss (up to 18.7%).
- Oral: The OASIS-4 clinical trial of oral semaglutide 25 mg demonstrated significant weight loss and high efficacy.

Tirzepatide: The Dual Agonist

Tirzepatide is a dual GIP/GLP-1 receptor agonist. It offers superior weight loss compared to semaglutide alone, with clinical trials (SURMOUNT-1) showing an average body weight reduction of up to 22.5% at 72 weeks. It is also approved for treating moderate-to-severe obstructive sleep apnea.

Retatrutide: The Triple Agonist "Triple-G" Drug

Retatrutide is an investigational triple agonist targeting GLP-1, GIP, and glucagon receptors.



The 2026 Generic Revolution in India

March 20, 2026, marked the expiration of key patents for semaglutide in India, leading to an immediate launch of affordable generic versions by Indian pharmaceutical companies. This shift is critical for a country with one of the world's largest diabetes and obesity burdens, as it allows for long-term treatment adherence which is necessary for managing obesity as a chronic disease.

The Four Pillars of Obesity Management

Despite the efficacy of pharmacotherapy, Obesity Medicine Association (OMA) emphasize that medication should be part of a comprehensive care plan built on four pillars:

Conclusions and Future Outlook

As we move forward in 2026, the recognition of obesity as a chronic, systemic disease is driving a new standard of care. The integration of advanced diagnostic frameworks like the Lancet criteria and the CKM syndrome staging allows for more precise risk stratification and early intervention.

The explosion of the GLP-1 and triple-agonist pharmacotherapy market and the subsequent generic revolution in India offers an unprecedented opportunity to curb the obesity epidemic and its downstream consequences, such as heart failure, kidney disease, and cancer. However, clinical competence and patient advocacy remain vital to ensure these treatments are used appropriately and that weight stigma is reduced within the healthcare system.

The message for 2026 is clear: obesity is a disease that requires a lifelong, structured management approach, and the tools to provide that care are now more accessible than ever before.

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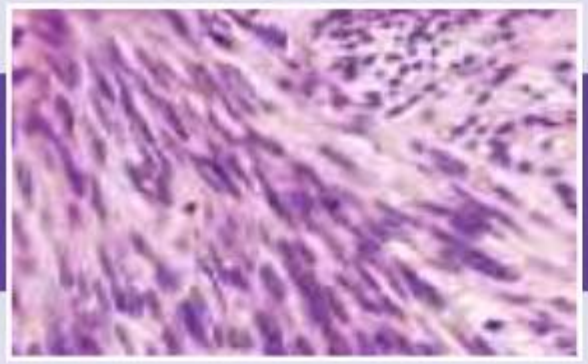

C-KIT Positive Gastro Intestinal Stromal Tumour in a Patient with Type 1 Neurofibromatosis: A Case Study

Abstract:

Gastrointestinal stromal tumours (GISTs) are uncommon mesenchymal tumours of the gastrointestinal tract. Their association with Type 1 Neurofibromatosis (NF-1) is well recognized, though they differ in clinical and molecular characteristics from sporadic GISTs. We present a case of a 35-year-old male with NF-1 presenting with upper gastrointestinal bleeding, subsequently diagnosed with a C-KIT positive GIST arising from the third part of the duodenum.

Introduction:

Neurofibromatosis Type 1 (NF-1) is an autosomal dominant disorder characterized by multiple neurofibromas, café-au-lait spots, and an increased predisposition to tumours, including gastrointestinal stromal tumours (GISTs). GISTs in NF-1 patients typically arise in the small intestine and demonstrate distinct biological behaviour compared to sporadic cases.

Case Report:

A 35-year-old male, a known case of NF-1, presented with a short history of haematemesis, melena, and abdominal pain.

Upper gastrointestinal endoscopy revealed severe erosive gastritis and duodenitis with evidence of recent bleeding, but no identifiable bleeding source.

Ultrasound of the abdomen detected a solid mesenteric mass, which was further characterized by contrast-enhanced CT scan as a lobulated, intensely enhancing mesenteric mass supplied by branches of the superior mesenteric artery.

Selective tumour embolization was performed to control vascularity prior to surgery.

Exploratory laparotomy revealed a mass originating from the third part of the duodenum. Surgical management included resection of the tumour along with adjacent bowel segment, followed by side-to-side anastomosis.

Histopathological examination showed features consistent with a gastrointestinal stromal tumour (GIST) arising from the muscularis propria. Immunohistochemistry confirmed C-KIT positivity, establishing the diagnosis.

Discussion:

GISTs associated with NF-1 have several distinguishing features:

The incidence of GIST in NF-1 ranges from 5% to 25%, indicating it is not uncommon in these patients.

Unlike sporadic GISTs, which commonly present around the age of 56, NF-1-associated GISTs may occur earlier.

These tumours are predominantly located in the small intestine, particularly the jejunum and duodenum.

C-KIT mutations are rare in NF-1-associated GISTs, despite immunohistochemical positivity.

They frequently demonstrate S-100 protein positivity, reflecting neural differentiation.

Imatinib therapy is less effective due to the absence of typical activating mutations.

These tumours tend to have a lower metastatic potential compared to sporadic GISTs.

This case is notable due to the presence of C-KIT positivity in an NF-1-associated GIST, which is relatively uncommon and has implications for diagnosis and therapeutic planning.

Conclusion:

GISTs should be considered in NF-1 patients presenting with gastrointestinal bleeding or abdominal symptoms. Although these tumours often lack typical molecular mutations, immunohistochemistry remains crucial for diagnosis. Surgical resection is the mainstay of treatment, and the role of targeted therapy may be limited.

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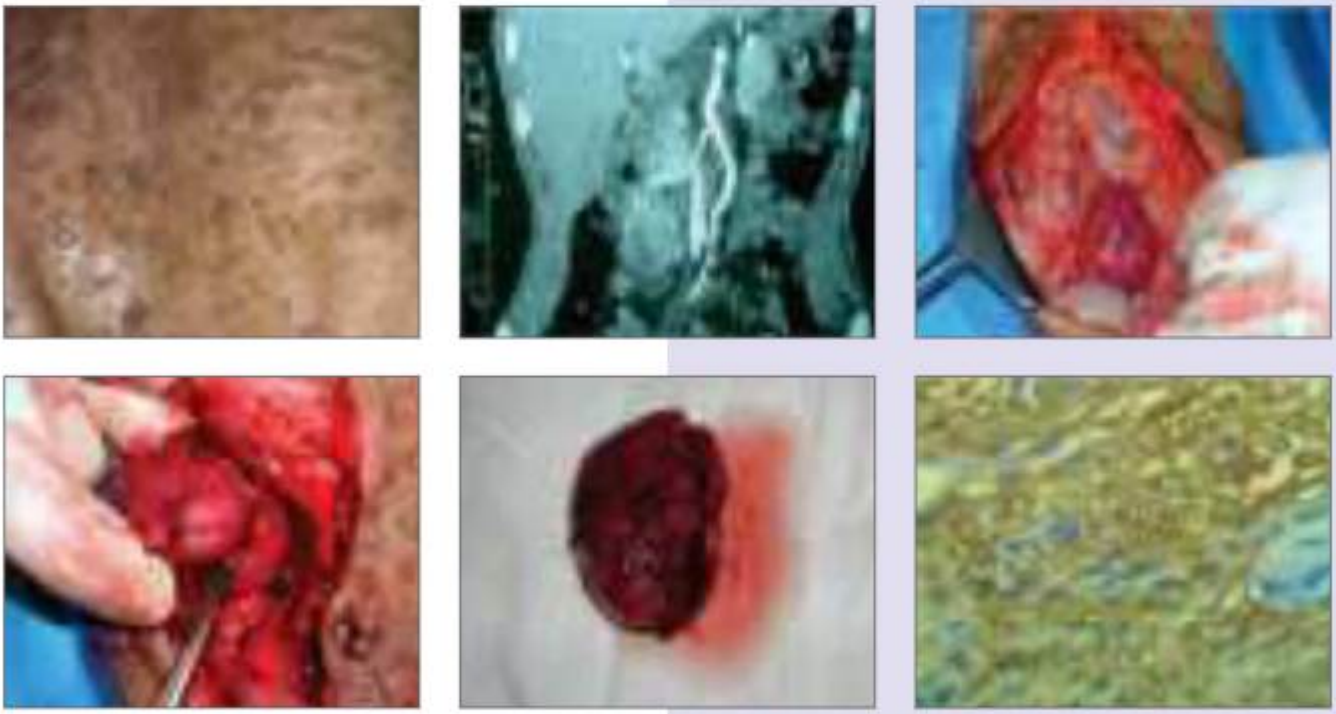

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