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A diagnostic dilemma in evaluating- acute on chronic right hypochondriac pain: Can two pathologies co-exist?

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Abstract
Intussusception of the bowel is the telescoping of a proximal segment of the gastrointestinal tract within the lumen of an adjacent (distal) segment. This is a frequent and common condition present in children. It presents classically with the following triad: cramping abdominal pain, red recurrent jelly-like stools, and a palpable tender mass. In adults, it is a rare condition and accounts for almost 5% of all cases of intussusceptions and 1-5% of bowel obstruction. Most adult intussusceptions are idiopathic without a lead point lesion (8-20%). The causes of secondary intussusception are organic lesions like Meckel's diverticulum, inflammatory bowel disease, post-operative adhesions, benign lesions, malignant lesions, metastatic neoplasms, tuberculosis, or even iatrogenic due to intestinal tubes, jejunostomy feeding tubes or after gastric surgery. Intussusceptions with and without a lead point can be differentiated by computed tomography (CT) and CT is, therefore, the investigation of choice. Surgery, which is the manual reduction of the intussuscepted bowel with or without resection and anastomosis, is the definitive treatment for adult intussusception. Here we report a case inadequately evaluated for right hypochondriac pain that was treated for calculus cholecystitis in the presence of asymptomatic gall stones where the patient primarily suffered from acute on chronic intestinal obstruction secondary to ileocolic intussusception.

Keywords: Intussusception, cholecystitis, intestinal obstruction

Introduction
Intussusception is a rare type of bowel obstruction in adults. It is the telescoping of a proximal segment of the gastrointestinal tract, called the intussusceptum into the lumen of the adjacent distal segment of the gastrointestinal tract, which is called the intussuscipiens. The first case was reported in 1674 by Barbette of Amsterdam, and the first intussusception was operated on in 1871 by Sir Jonathan Hutchinson on a child. Adult intussusceptions are rare and account for only 5% of all intussusception cases and 1-5% of intestinal obstructions in adults. This condition varies in many aspects in pediatric intussusception, where the condition is mostly primary and benign and is treated or reduced by pneumatic (air contrast enemas) or hydrostatic in 80% of cases. Almost 90% of intussusception cases in adults are secondary to a pathological condition that provides a leading point where surgery is the definitive treatment. The pathophysiology of primary or idiopathic intussusception is unknown. In contrast, secondary intussusception initiates from any pathologic lesion of the bowel wall or any irritant within the lumen of the bowel that alters normal peristaltic activity and therefore serves as a lead point, which initiates invagination of one segment of the bowel into the adjacent bowel. It can also be depicted as an "internal prolapse of the proximal bowel and its mesenteric fold within the lumen of the adjacent distal bowel as an outcome of impaired or vigorous peristalsis leading to obstruction of a free avenue of intestinal contents and compromising the mesenteric vascular flow of the intussuscepted segment. This results in intestinal obstruction further progressing into ischemia and gangrene. Depending upon the location of intussusception, they are classified into 4 categories:-

1. Entero-enteric (limited to the small bowel)
2. Colo-colic (involving only the large bowel)
3. Ileocolic (terminal ileum into the ascending colon)
4. Ileocecal (ileocecal valve -the lead leading point of intussusception).

Case Report

A 34-year-old gentleman who was diagnosed with cholecystitis with choledocholithiasis on ultrasound in an outside hospital presented with acute continuous right and left hypochondriac pain and abdominal distention 2 weeks post ERCP procedure. He also complained of obstipation for 2 days. He had similar complaints of obstipation and abdominal distension with the passage of red currant jelly-like stools intermittently in the past, before the ERCP procedure.

He was diagnosed with cholecystitis with choledocholithiasis 1 month ago in an outside hospital based on ultrasonography, where he presented with right hypochondriac pain.

He underwent MRCP, which was suggestive of- suspicious 1.1 mm calculi in the common bile duct (CBD) with cholelithiasis and cholecystitis. Then he subsequently underwent ERCP in an outside hospital which was suggestive of prominent CBD without any obvious filling defect and sludge from CBD retrieved with inadvertent pancreatic duct cannulation.

Post ERCP stenting patient developed ERCP-induced pancreatitis for which he received conservative treatment in our hospital.

Contrast-enhanced CT (CECT) scan of the abdomen was done which was suggestive of minimal collection in the lesser sac near the tail of the pancreas along with features of air foci and fat stranding and ? Ileocecal intussusception and thickening of descending colon with 80% luminal compromise with gallstones.

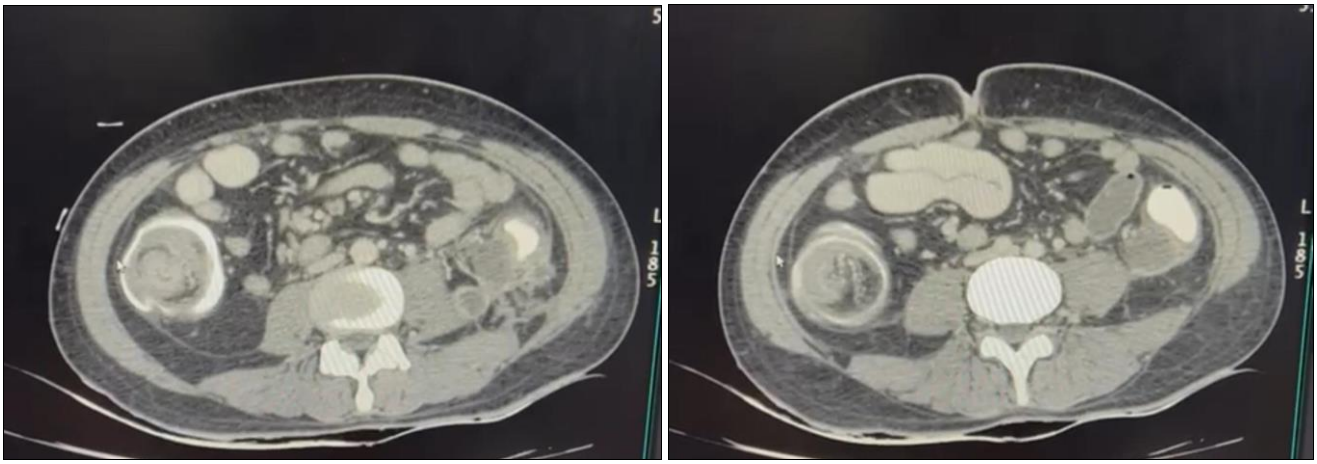

Fig 1 and 2: CT scan of abdomen

He was managed conservatively with nasogastric tube placement and intravenous fluids after which symptoms of obstruction and pancreatitis resolved and he was discharged on a soft diet.

After a brief asymptomatic period, he was readmitted with symptoms of intestinal obstruction and recurrent passage of red currant jelly stools. A repeat CECT abdomen was done and was suggestive of recurrent intussusception with bowel distension with normal pancreas and cholelithiasis.

He was taken for a diagnostic laparoscopy and an exploratory laparotomy.

Intraoperative findings: ileocecal intussusception up to hepatic flexure. Intussusception was relieved manually, which revealed an approximate 6 x 6 cm tumour in the distal ileum. Right hemicolectomy with ileotransverse anastomosis with cholecystectomy done.

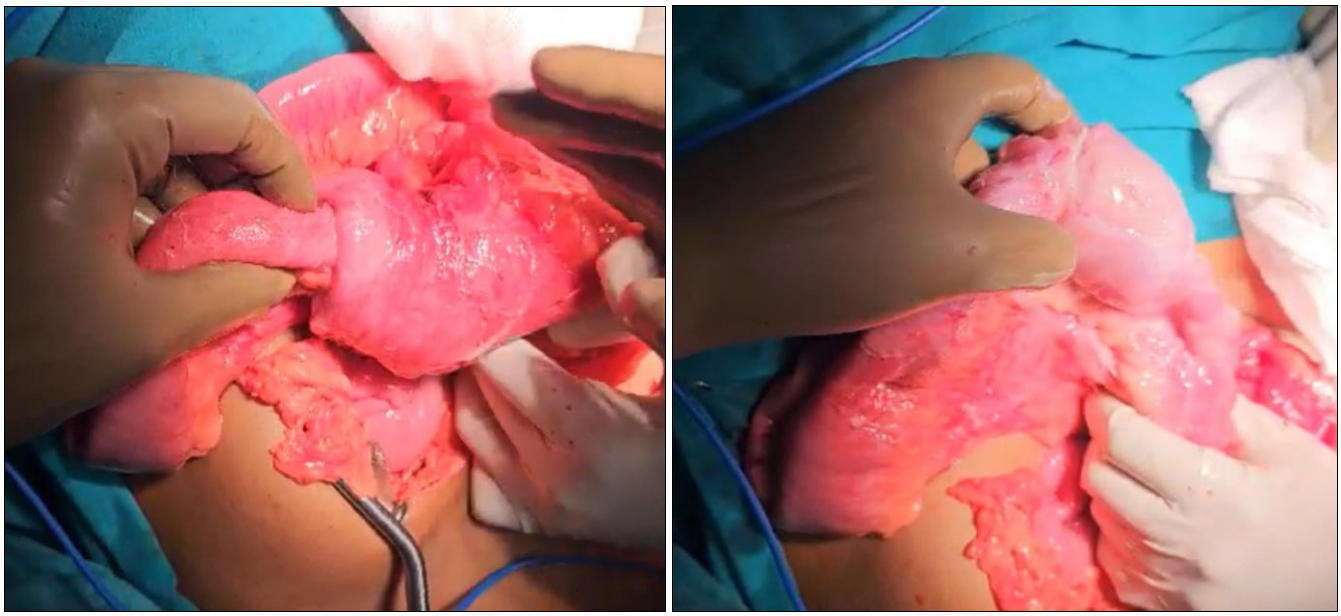

Fig 3 and 4: Intraoperative image of reduced intussuception revealing tumor

The patient started on oral sips and shifted to a soft diet on postoperative day 6, and as recovery from surgery was going well he was discharged on postoperative day 8.

Histopathology of the resected segment of the affected bowel was suggestive of extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma). Histopathology of the gallbladder was suggestive of chronic calculous cholecystitis.

Fig 5: Cut opened specimen of colon with tumor

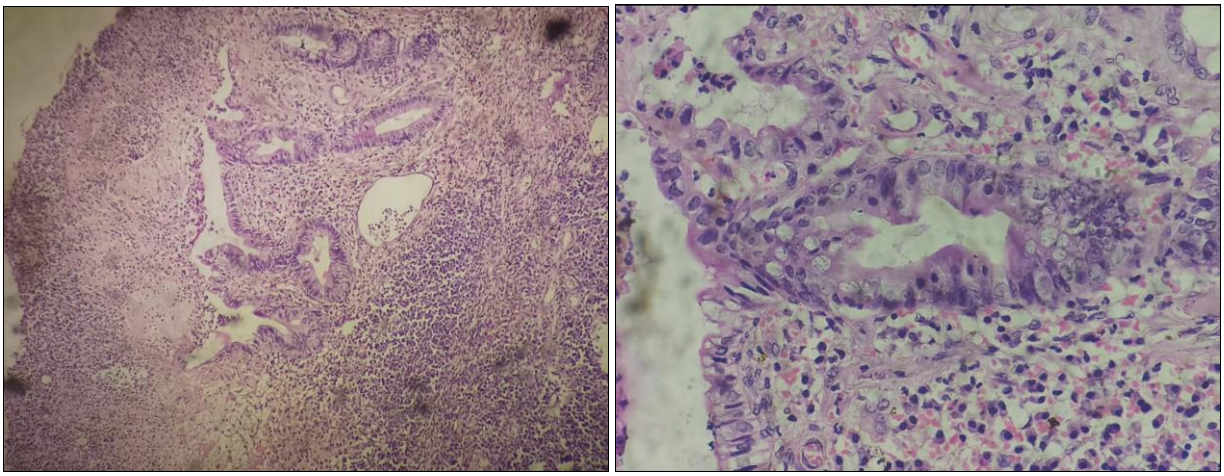

Fig 6 and 7: Histopathological slide of the tumor (MALTOMA)

Discussion

The most common site of extranodal non-Hodgkin lymphoma is the gastrointestinal tract (4-20%). Most of them originate from mature B cells (non-Hodgkin lymphoma >> Hodgkin's lymphoma), DLBCL and extranodal marginal zone B cell lymphoma, MALT type. Males are more commonly affected than females. The wide age range is 17-86 years, but usually middle-aged to older adults. A younger age of onset is present in HIV-positive patients.

Lymphomas entail a diverse group of clonal (malignant) lymphoproliferative disorders, classified by WHO based on lymphocytic origin. Extranodal MALToma more commonly occurs in the stomach. These show positivity for CD 20, BCL2, and PAX-5, which help in differentiating it from mantle cells, follicular cells, SLLs, and DLBCL tumours.

Conclusion

Regardless of good investigative modalities, detailed history and clinical examination play an important role, along with proper radiological assessment. In our case, the patient was initially diagnosed with? acute calculus cholecystitis with choledocholithiasis on ultrasound in an outside hospital, which was neither fully supported by MRCP nor by ERCP. The inadvertent cannulation of the pancreatic duct during the procedure further caused minor perforation of the pancreatic duct at the tail leading to the collection and severe pancreatitis. It was the CT scan, that brought to light a more obvious pathology that truly caused the patient's symptoms.

Thus, intestinal obstruction should also be considered in the differential diagnosis of right hypochondriac pain in young males when symptoms of vomiting, right hypochondriac pain and red currant jelly-like stools with normal liver function tests and leucocyte count suggest bowel pathology more than calculus cholecystitis. One should always have a differential diagnosis when treating acute or chronic abdominal conditions, which is supported by clinical and radiological investigations.

Conflict of Interest

Not available

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Not available

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