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Case Report

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Adult Jejunoileal Intussusception Due to Submucosal Angiolipofibroma and Lipoma: A Rare Phenomenon

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Abstract

Intussusception in adults is highly uncommon and accounts for only 5% of all reported case. Small bowel intussusception is much less common than the ileocolic type, with jejunoileal intussusception being amongst the most rare. Benign tumors of the small bowel are rare clinical entities. These often remain asymptomatic throughout life. Despite comprising 75% of the length and 90% of the surface area of the gastrointestinal tract, the small bowel harbors relatively few primary neoplasms and fewer than 2% of gastrointestinal malignancies. We report a case of 28 year old female with jejunal submucosal angiolipofibroma and lipoma that became symptomatic due to intermittent obstruction episodes and caused intestinal obstruction due to intussusception. Involved part of jejenum was resected and end-to-end anastomosis was done and the patient's postoperative period was uneventful. In this case report, the diagnosis and management of intussusception due to benign tumour are discussed along with a literature review.

Keywords: Intussusception; Small intestines; Obstruction; Polyp; Neoplasm.

Introduction

Intussusception is highly uncommon in adults and accounts for only 5% of all reported cases. It is more commonly secondary to an identifiable bowel lesion in 90% of cases, whereas 10% have no discernable cause[1,2]. Lipomas constitute about 10% of the gastrointestinal benign tumours[3] and there are limited scattered cases in the literature of intestinal lipomas presented with bleeding[4], and bleeding and intussusceptions[5]. Symptoms due to obstruction in adults tend to be chronic or intermittent and include pain, constipation, weight loss, or a palpable abdominal mass at physical examination. In adults, intussusceptions may be ileocolic, colocolic, enteroenteric and there is no anatomic predilection. The lead points of adult intussusceptions that involve the colon are usually malignant (carcinoma, lymphoma), whereas those that involve the small bowel tend to be benign (lipoma, polyp, Meckel diverticulum, from lymphoid hyperplasia secondary to viral infection). The clinical presentation of patients with intussusceptions also differs in these two age groups. Children present acutely with colicky abdominal pain, vomiting, and bloody stools that look like currant jelly, and often a palpable mass. Symptoms in adults tend to be more chronic or intermittent and include pain, constipation, weight loss, or a palpable abdominal mass at physical examination[6]. Diagnostic imaging plays an important role in the diagnosis of the condition. Ultrasonography and computed tomography (CT) are the most commonly used imaging techniques. Here we report a case of small intestinal (jejunal) Angiolipofibroma and Lipoma which presented with intestinal obstruction caused due to intussusception and review some aspects of diagnosis and treatment.

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Case Report

A 28 years old female patient was admitted to the emergency department with a history of pain abdomen, fullness and nausea with few episodes of vomiting for 4-5 days. He gave history of intermittent abdominal pain, distension and nausea aggravated by eating and on-off constipation for last 2 years, since then patient is on stool softener. History of loss of appetite is also present, which is associated with loss of weight from 72 to 50 kg in last 2 years. There was no past history of any previous operation. There was no family history of gastrointestinal disorders or neoplasms. Bowel sounds were slightly increased. On physical examination, the abdomen was without palpable masses, tenderness or rigidity. Mild abdominal distension was noticed. Digital examination showed that the rectum was empty of stool. Examination of the other systems was normal. Plan X-ray abdomen and results of routine laboratory tests were within normal limits. MSCT-Volume scan done using IV contrast with 0.6 mm Multiplanar Protocol Abdomen showed small gut intussusception in the left paraumblical region along with an ovoid intrasmall gut area of reduced density (-95hu) . On exploratory laparotomy, Intussusception was found. Apex was formed by multilobulated mass in jejunum (Submucus Lipoma). The affected segment of jejunum was resected with an end-to-end anastomosis. The patient's post-operative period was uneventful and was discharged on 5th post-operative day. Pathology report microscopy & impression of jejunum segmental resection suggestive of two submucosal Angiolipofibroma and one Lipoma, jejunum largest lipoma measuring 2.5 cm in greatest dimension with mature adipose and fibrous tissue and thick and thin walled vessels in varying proportions. Focal pyloric metaplasia in overlying mucosa but no evidence of granuloma or malignancy seen.

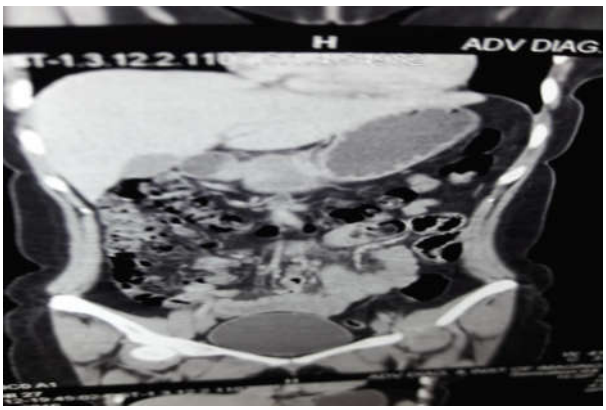

Fig. 1: Showing CT Abdomen Showing Intussusception

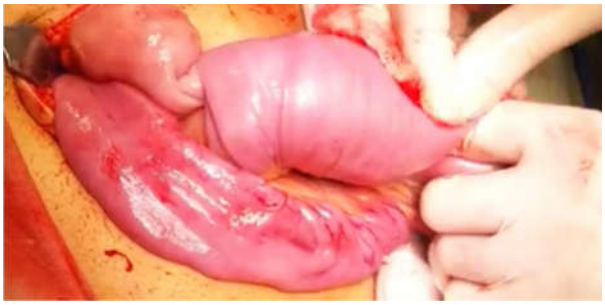

Fig. 2: Intussusception- prior to resection.

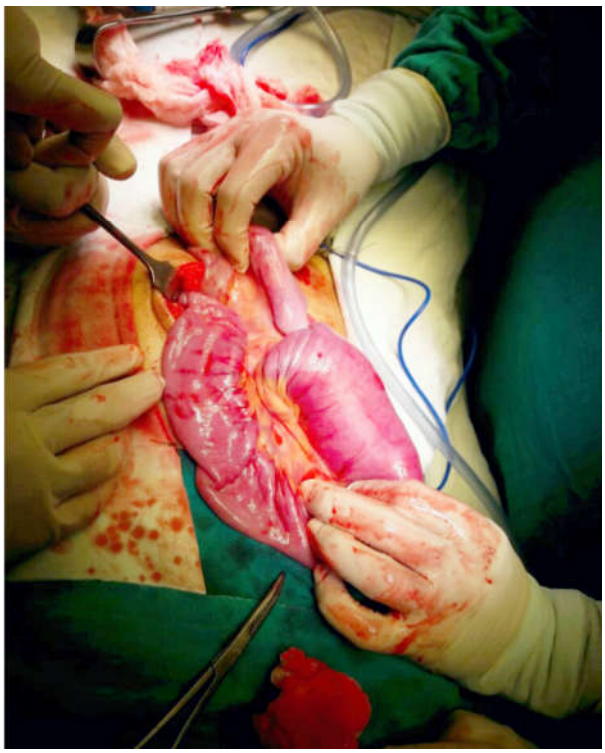

Fig. 3: Showing typical intussusception- on table look

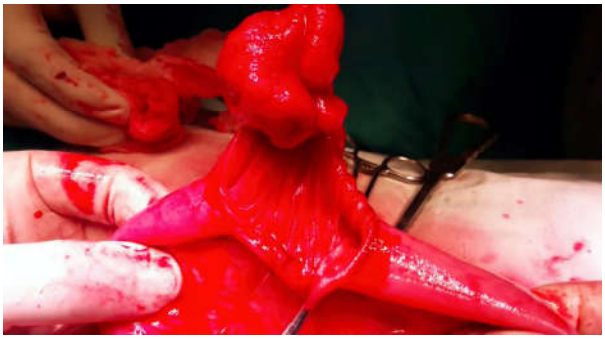

Fig 4 Bowel wall is cut away showing the mass

Discussion

Intussusception is relatively rare in the adult population, and this along with the vague clinical features, makes diagnosis difficult. Intussusception occurs when a segment of bowel, the intussusceptum,

invaginates into the lumen of the more distal bowel, the intussuscipiens. Intussusception in adult patients may be caused by intraluminal, mural or extraluminal lesions [7,8]. The primary mechanism by which intussusception is thought to occur is when an intraluminal mass is pulled forward by peristalsis and drags the attached bowel wall segment with it. Pedunculated tumors, such as adenomatous polyps or lipomas, are the classic examples of this group [9-11]. Adult intussusception is rare and usually associated with neoplasms, of which up to 77% are malignant [12]. Polyps, lipomas, fibroma and leiomyoma are known to be the commonest type benign tumours in the small bowel. Lipomas account for 10-12% of all benign tumours of the small intestine. Ileum is the commonest site of the small bowel lipomas, followed by jejunum and duodenum. Their size ranges between 1 and 6 cm but they may occasionally reach a size up to 30 cm. Small intestinal lipomas are usually single and they are multiple in about 10% to 15% of cases are often considered in distinctive diagnosis. Therefore, because of these characteristics, they are mostly removed to exclude the diagnosis of malignant lesions[13-15]. The majority of lipomas are submucosal (90%), although they can also be subserosal or intramuscular. Adult intussusception is not easily diagnosed because patients usually present with non-specific vague symptoms such as abdominal pain, the most common symptom. Other symptoms include nausea, vomiting, and possible bleeding from the rectum [16]. Approximately 50% of patients will have had symptoms for more than one month prior to an acute exacerbation of symptoms that leads to diagnosis [17,18]. The physical findings are also non- specific and are not consistent with an acute abdomen. Early diagnosis of intussusception may prevent the necrosis of the bowel and, in some cases, even save the patient's life [16]. As symptoms are vague, diagnostic imaging plays the main role in diagnosis. . Barium enema and endoscopy are not useful for the diagnosis of jejunal or ileal lipomas, although they are basic measures for investigating colonic or duodenal lipomas. Many imaging modalities are used for diagnosis, such as radiographs, ultrasonography, CT and magnetic resonance imaging. The most commonly used are ultrasonography and CT scan. The classic appearance of an intussuscepted bowel on a sonographic image in a transverse plane is called the "doughnut sign" or a "target lesion" and represents several concentric rings of the bowel. Usually there is a thick hypoechoic rim with an echogenic area in the middle. The hypoechoic rim represents an edematous bowel wall, and the echogenic center corresponds to intussuscepted mesenteric fat. Sometimes, within the echogenic area in the center, an additional anechoic spot may be seen, which is believed to represent a collection of fluid in the apex of the intussusceptum [7,19]. The longitudinal appearance of intussusception usually appears as multiple parallel lines, the so- called "sandwich appearance" or "pseudo-kidney sign". The lines demonstrate bowel walls and their layers. The major limitation of ultrasonography for evaluating acute obstructive symptoms is the presence of air in the bowel, which leads to poor transmission and difficulties in image interpretation. Like sonography, CT scanning can be used to identify the intussusception; however, the underlying cause can still be difficult to determine. Although intestinal lipomas are rare, they should be kept in mind when evaluating the adult patient with intermittent abdominal symptoms. They should be removed because they can cause symptoms such as obstruction or bleeding and usually a histological evaluation is indicated in intestinal mass to exclude the possibility of malignancy. Endoscopic removal entails a risk of perforation or bleeding due to submucosal origin of the majority of the lipomas. The size of the stalk is of greater importance than the diameter of the lipoma itself when patient is evaluated for endoscopic resection. Laparoscopic resection is also a viable alternative to open excision in selected cases. In our patient the intussusception was diagnosed with abdominal CT. Our patient went on to surgery, where the CT findings were confirmed.

Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

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Should Gastric Sleeve Be Fixed? Torsion of Gastric Sleeve After Laparoscopic Sleeve Gastrectomy

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Abstract

The stomach is normally positioned and fixed by ligamentous attachments to the spleen, liver, and diaphragm. Due to this rapid growth, new complications are sure to be noticed. Once SG has been performed, GV is no longer a valid term to be used when the remaining stomach, twists, folds, or turns, because the attachments have been disrupted and make the sleeve susceptible to this problem. Therefore, we believe that gastric torsion (GT) is a better term after SG or any gastric procedure that detaches the stomach from its natural points of fixation. GT after SG is a rare complication. To our knowledge, there are only 7 cases reported in the literature. Here, we expand on these reports by presenting a patient diagnosed with GT after SG and their subsequent management.

Keywords: Sleeve Gastrectomy Gastric Torsion.

Introduction

The stomach is normally positioned and fixed by ligamentous attachments to the spleen, liver, and diaphragm. Gastric volvulus (GV) occurs primarily when the stomach suffers torsion on itself due to the laxity or elongation of these attachments and secondary to fixation at a specific point such as adhesions, tumors, or diaphragmatic and hiatal hernias. GV may be mesenteroaxial (when the stomach suffers torsion on its short axis), organoaxial (when the stomach suffers torsion along its long axis), and mixed (Mesenteroaxial and Organoaxial) [1]. Positioned between gastric bypass and adjustable gastric banding due to its safety and good results, sleeve gastrectomy (SG) is well established as a treatment for morbid obesity [2]. The most common complications related to SG are leaks (0.7%), abscesses (0.7%), hemorrhages (0.7%), and strictures (0.7%) [3]. Furthermore, its mortality rate (0.5%) is quite low [4]. SG popularity worldwide has grown significantly among bariatric/metabolic procedures and now encompasses 27.8% of procedures performed in the past 8 years [5]. Due to this rapid growth, new complications are sure to be noticed. Once SG has been performed, GV is no longer a valid term to be used when the remaining stomach "twists, folds, or turns," because the attachments have been disrupted and make the sleeve susceptible to this problem. Therefore, we believe that gastric torsion (GT) is a better term after SG or any gastric procedure that detaches the stomach from its natural points of fixation. GT after SG is a rare complication. To our knowledge, there are only 7 cases reported in the literature. Here, we expand on these reports by presenting a patient diagnosed with GT after SG and their subsequent management.

Case Report

A 33-year-oldman, with initial BMI of 54.08 kg/m^2 and comorbidities including hypertension, dyslipidemia, and gastroesophageal reflux disease,

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underwent SG . His recovery was uneventful. He subsequently presented with dysphagia, dyspepsis and recurrent vomiting one month after the SG. Barium meal finding suggestive of torsion of the proximal part of the stomach resulting in loop formation and mild dilation of the distal esophagus and mild gastroesophageal reflux with delay of the contrast passage to duodenum due to loop formation, no significant stenosis seen. Endoscopy findings demonstrated that the SG had no stricture, but an anticlockwise twist of the distal sleeve was noted which was nonobstructive. The decision was made to proceed for diagnostic laparoscopy, which revealed organoaxial GT secondary to adhesions between the sleeve's staple line and the liver, falciform ligament, and retroperitoneum (Figure 1). Alaparoscopic lysis of adhesion was performed; the stomach was untwisted and clockwise rotated and returned to the normal anatomic position.Intraoperative upper GI endoscopy was done to confirm torsion, after untwisting the anterior wall of sleeve fixed to the greater omentum and gastrocolic ligament and fascia over the pancreas in lesser sac to maintaining correct sleeve orientation with non absorbable prolene 1-0,to prevent retwist. Surgical duration was 30 minutes. Patient had an uneventful recovery and he started tolerating liquids almost immediately.

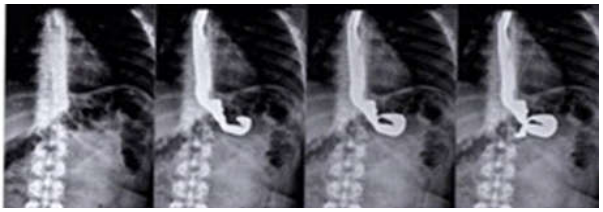

Fig. 1a,b: Gastrograffin Swallow showing torsion of the proximal part of the stomach resulting in loop formation and mild dilation of the distal esophagus and mild gastroesophageal reflux with delay of the contrast passage to duodenum due to loop formation, no significant stenosis seen

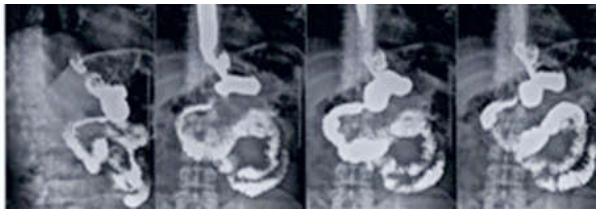

Fig. 2a: UGI endoscopy shows fundal dilatation &twisting rather than obstruction of stomach body

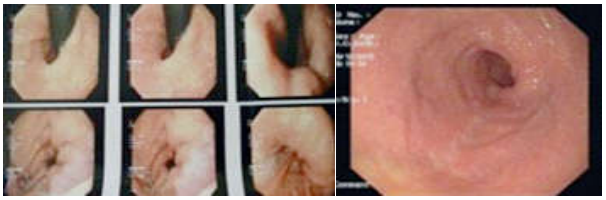

Fig. 2b: After correction of volvulusby anchorhing of the antral region

Discussion

GV can be present as an acute abdominal emergency or a chronic cause of abdominal pain. Borchardt triad for diagnosing acute GV consists of unproductive retching, epigastric pain, and inability to pass a nasogastric tube [8]. Despite the fact that an upper endoscopy may show twisting of the gastric fold, it may not be prudent to rely on such a procedure if a gastric ischemia is suspected [1]. GV may be chronic if the rotation is minimal and there is no vascular compromise. Symptoms usually consist of mild intermittent upper abdominal pain, early satiety, bloating, and belching. Ischemia might be a complication, which can lead to gastric necrosis and, if untreated, shock and death [9]. The stomach is strongly fixed proximally at the cardiac and distally by the retroperitoneal fixations of the duodenum. Supporting these 2 points, the gastrophrenic, gastrosplenic, gastrocolic, and gastrohepatic ligaments hold the stomach in place in order to prevent GV [10]. Even the agenesis of gastrocolic ligament only has been related with acute primarily GV with partial gastric necrosis [11].

During the SG creation, the gastrophrenic, gastrocolic, gastrosplenic, and the posterior gastric attachments are divided [12,13], So the probability of twisting, turning, or folding is more likely to occur. In some cases during SG, the surgeon may observe a tendency of the new tubular stomach to form a coil shape that may cause obstructive symptoms. In order to prevent this coiling/twisting, some surgeons have recommended that fixation to the greater omentum to the stomach will keep it in the correct position [14].

In our patients, the endoscopy was a very valuable tool for the establishment of GT. The intraoperative, consistent finding was organoaxial torsion, secondary to the development of adhesions between the sleeve's staple line and the surrounding structures. This was due to lack of the normal gastric attachments, therefore, enabling the torsion (or twist, turn, fold). Therefore, we recommend the treatment to be according to the patient's clinical status, such as in our case who had a long history of vomiting and athenia after the first LSG and low BMI 28.7kg/m^2.

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A Rare Cause for Intractable Hiccups in a Patient with Chronic Kidney Disease

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Abstract

Hiccups are self-limiting disorder caused due to involuntary spasms of the diaphragm and intercostal muscles leading to sudden inspiration and a characteristic sound. Hiccups are known to occur in patients with Chronic kidney disease but usually get corrected on dialysis and rectification of electrolyte imbalance. Here we describe a 60 year old male with Diabetic Nephropathy with intractable hiccups which persisted even after regular haemodialysis and electrolyte management. On Upper GI endoscopy, we found a gastric diverticulum in fundus with pus oozing from within which was confirmed to be Gastric diverticulitis. Hiccups got alleviated with antibiotic course. Incidence of Gastric Diverticulum is very rare (0.01-0.11%) on endoscopy. Presenting with hiccups is even more rare and has not been described till now. This case also highlights the importance of full inflation while performing an endoscopy.

Keywords: Hiccups; Chronic Kidney Disease; Diabetic Nephropathy; Endoscopy; Gastric Diverticulum.

Introduction

Hiccups, or singultus, are involuntary spasms of the diaphragm and intercostal muscles causing sudden inspiration and a characteristic sound. Hiccup is usually a self-limited disorder. However, when it is prolonged beyond 48 hours, it is considered persistent whereas episodes longer than 2 months are called intractable hiccups [1].

In this case we describe a patient with chronic kidney disease due to Diabetic Nephropathy presenting with intractable hiccups of 3 months duration and fever of 1 week duration with no localising signs. Endoscopy done on him showed a gastric diverticulum in fundus with pus coming out from it. It was missed on a previous endoscopy. Imaging showed it to be Gastric Diverticulitis which was probably irritating the diaphragm and was the reason for his hiccups. Incidence of Gastric Diverticulum is very rare (0.01-0.11%) on endoscopy [1,2].

We report this case to highlight the importance of full inflation while performing a routine endoscopy and also the rarity of Gastric diverticulum presenting with hiccups.

Case Report

A 60 year old male Mr. C, known patient of long standing Diabetes mellitus, Hypertension with Chronic kidney disease-stage-V on maintainence Haemodialysis presented with hiccups for a duration of 3 months for which he received multiple medication and he reported now with fever for 1 week. There were no clinically localising signs for fever. Abdominal examination was unremarkable. He was admitted and started on appropriate antibiotics after cultures. Blood counts were mildly elevated. Blood sugar was in normal range, Serum Electrolytes were within normal range. Chest radiograph and ECG were normal. Ultrasound abdomen showed renal parenchymal changes. Fever subsided with

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medication but hiccups persisted even after haemodialysis and correction of fluid status. Proton pump inhibitors, antacids, prokinetics and baclofen were given but the hiccups persisted. Endoscopy was done which showed a diverticulum like opening in gastric fundus with pus discharge from it. A CT abdomen was done which showed a saccular outpouching from posterior wall of gastric fundus which was filled with air and opacified with iodinated contrast lying in close proximity to the diaphragm. This could explain the intractable hiccups in patient.

Incidence of Gastric diverticulum is rare and presenting with hiccups is even more rare. In this patient, hiccups got alleviated over time with medication-antibiotics and Antisecretory therapy.

He is planned for surgery at a later date.

Gastric diverticulum is a very rare cause for persistent hiccups and has not been described till date.

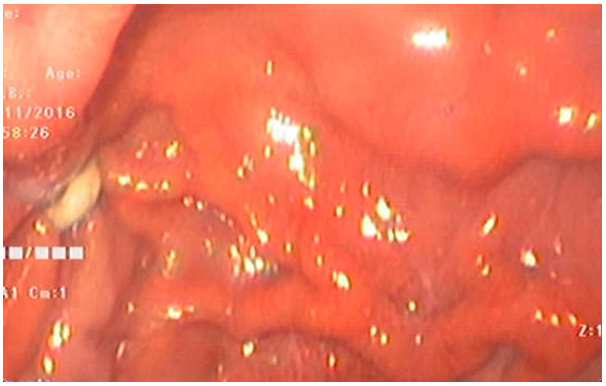

Fig. 1: Fundus on endoscopy, pus noted draining from a diverticulum

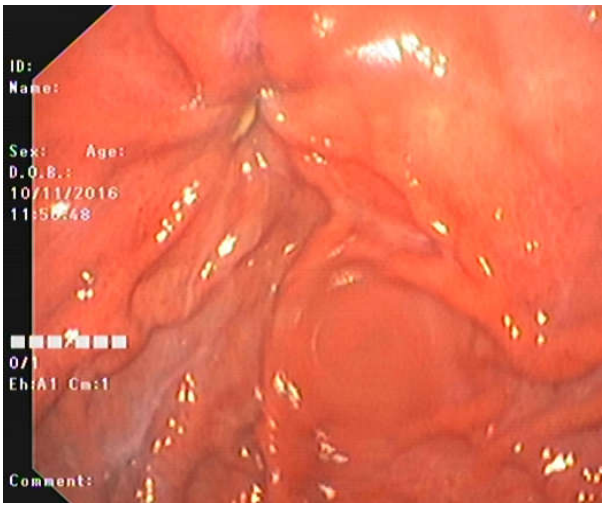

Fig. 2: Pus from the diverticular opening

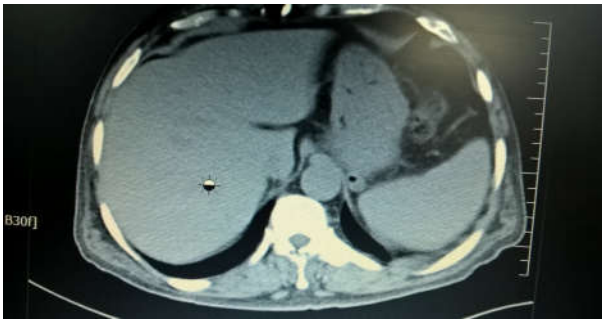

Fig. 3: CT Abdomen showing saccular outpouching with air focus in gastric diverticulum, proximity to diaphragm

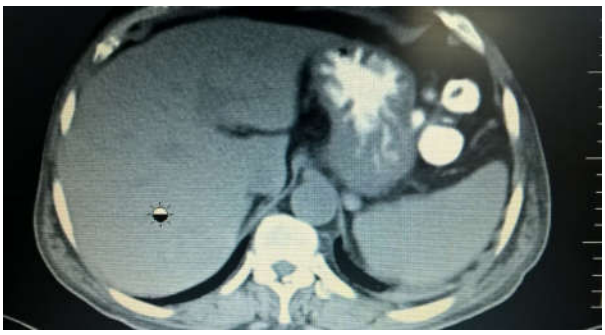

Fig. 4: CT abdomen showing enhancement and contrast in diverticulum

Discussion

Hiccups are a common phenomenon in paients with chronic kidney disease. In this patient we describe an unusual cause of hiccups, a gastric diverticulum in fundus causing it. The overall incidence of gastric diverticulum is rare and it was actually missed on a previous endoscopy, found on repeat endoscopy. Another point to stress here is about full inflation while performing an endoscopy.

Literature Review

Pathophysiology of Hiccups

A reflex arc involving peripheral phrenic, vagal and sympathetic pathways and central midbrain modulation is likely responsible for the phenomenon of hiccup. Accordingly, any irritant like physical or chemical factors, inflammation, neoplasia invading the arc leads to hiccups. Renal failure can lead to uremia, electrolyte disturbances, gastritis and stress ulcers which can also lead to hiccups. In this patient the infected gastric diverticulum probably was irritating the diaphragm and causing hiccups.

Gastric diverticula is outpouching of the gastric wall and is the rarest form of gastrointestinal diverticula, with a reported prevalence of 0.01–0.11%

[1-3]. And 0.02% on autopsy studies [4]. It occurs equally in men and women, most commonly in the fifth and sixth decades of life [2]. Gastric diverticula can be congenital [4] (true), typically located on the posterior side of the cardia and containing all wall layers [1,4,8] or acquired (false), forming in association with weakened gastric wall musculature and without involvement of the muscularis propria [2,7]. Seventy-five percent of true gastric diverticula were located in the posterior wall of the fundus of the stomach, 2 cm below the oesophagastric junction and 3 cm from the lesser curve. False gastric diverticula are less common, are associated with peptic ulcer and regional inflammatory conditions [7]. They are usually asymptomatic. Symptomatic patients may present with a variety of clinical manifestations, including epigastric or lower chest pain, nausea, non-bilious emesis, dyspepsia [4,7], weight loss, iron deficiency anemia, bowel obstruction, bleeding, or even gastric perforation. Fetor ex ore (halitosis) on belching because of food retention was described in few reports [4]. Diverticulitis appears to be extremely rare as the mouth of the diverticulum is relatively wide [6].

Gastric diverticula have been reported radiologically as air- or contrast-filled suprarenal masses and have been mistakenly reported as necrotic adrenal masses on CT imaging [5]. They may not be appreciated on barium contrast studies without lateral views. It is stated that the GD is best identified during UGI study using a right, anterior oblique view with the patient in a supine, slightly left lateral decubitus and Trendelenburg position. In a large review, Palmer reported that 14 of 262 (5%) GDs are missed during UGI study. Juxtacardiac diverticula are best appreciated on retroflexed view during endoscopy [5].

Management

Pharmacotherapy of Hiccups include Proton pump inhibitors, chlorpromazine, baclofen, gabapentin, serotonergic agonists, prokinetics and lidocaine [1]. There is no need to treat incidentally-discovered proximal Gastric diverticula. Symptomatic patients may be treated conservatively with H_2-receptor blockers or PPIs. As distal gastric diverticula have been associated with malignancy, surgical management with amputation, segmental resection, or invagination is advised [5].

Diverticulectomy is required in settings of perforation or malignancy and has been suggested in the presence of bleeding refractory to endoscopic therapy or diverticular size >4 cm [4].

Endoscopic management of cases of gastric diverticulum that presented with active upper GI bleed can be done by injection and endoclip placement [6].

Surgical management Surgical resection is recommended when the diverticulum is large, symptomatic or complicated by bleeding, perforation or malignancy. Both open and laparoscopic resection yield good results.

Conclusion

Hiccups are a common symptom in patients with chronic kidney disease. Evaluation could reveal treatable cause of it.

In this patient, there was a gastric diverticulum which got infected and presented with fever as well as intractable hiccups. It was suspected on endoscopy and confirmed on CT abdomen.

He was managed conservatively with antibiotics and is planned for surgery if the problem recurred. Two points to be highlighted here is the rare presentation of gastric diverticulum and reiterating the importance of full inflation while peforming an endoscopy .

Acknowledgements

We thank our Anaesthetist Dr. Murari N.K., for giving sedation to patient while performing Endoscopy. We thank our Radiologist, Dr. Anil Kumar and Dr. Anjani Kumar for reporting the CT abdomen and finally our endoscopy staff Mrs. Geetha, Mrs. Jhansi and Mrs. Nagamani for their support during Endoscopy.

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A Case of Ileal Adenocarcinoma Presenting as Acute Abdomen

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Abstract

Primary adenocarcinoma of small intestine is a rare malignancy constitute <1% of whole abdominal malignancies.Adenocarcinoma of small intestine will rarely produce symptoms until the disease is advanced. Preoperative diagnosis is difficult due to inaccessibility for guided biopsies.Themost frequent presentations are abdominal pain, nausea, vomiting, and weight loss. They may also present with haemorrhage, obstructive symptoms or perforation peritonitis.The low incidence and lack of pathognomonic symptoms make an accurate diagnosis small bowel carcinoma a challenge to the surgeons. In this paper we are reporting a case of ileal adenocarcinoma in a patient who presented withacute abdomen and perforation peritonitis. We are presenting it because of the rarity of the condition.

Keywords: Adenocarcinoma; Carcinoid; Lymphoma; Sarcomas or Gastrointestinal Stromal Tumours (GIST); Laparotomy; Segmental Resection; Chemotherapy; Radiotherapy.

Introduction

Primary adenocarcinoma of small intestine is a rare malignancy constitute <1% of whole abdominal malignancies. Adenocarcinoma of small intestine will rarely produce symptoms until the disease is advanced. Preoperative diagnosis is difficult due to inaccessibility for guided biopsies. The most frequent presentations are abdominal pain, nausea, vomiting, and weight loss. They may also present with haemorrhage, obstructive symptoms or perforation peritonitis.

The low incidence and lack of pathognomonic symptoms make an accurate diagnosis small bowel carcinoma a challenge to the surgeons. Adenocarcinoma of the ileum is a rare disease which has variable presentations and thus poses a challenge to our diagnostic skills.

Surgery remains the mainstay of treatment of small bowel adenocarcinoma. The role of Chemotherapy and radiotherapy is applicable only in advanced malignancy as a palliative care and its use is controversial.

Case Report

A 55 year old female presented to the emergency with chief complaints of pain abdomen, obstipation and abdominal distension for 3 days. On examination Pulse -100/min, BP- 80/60 mmHg with signs of dehydration. Abdominal examination showed distended abdomen with diffuse tenderness and free fluid. Liver dullness was obliterated, and Bowel sounds were absent.

An X-ray abdomen erect posture was performed which revealed free air under the diaphragm. USG showed free fluid in the peritoneal cavity with air and vague mass in the umbilical region.

With the diagnosis of Peritonitis secondary to

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perforation & an emergency laparotomy was performed.The intra-operative findings were:

- A growth was present in the terminal ileum, 10cms proximal to the ileocaecal junction, measuring 10x7cms.

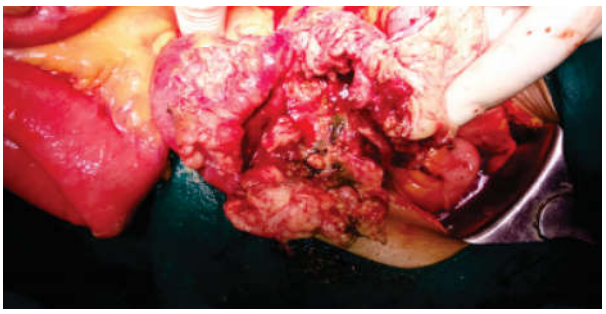

Fig. 1: Peroperative finding of perforation

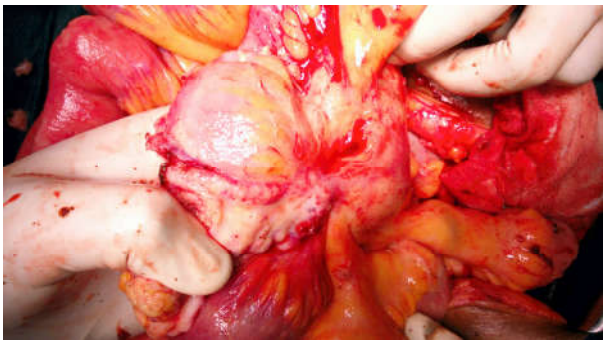

Fig. 2: Peroperative finding of the tumour

- A single large perforation was present on the anti-mesenteric border, within the growth.
- Matted mesenteric lymph node mass measuring 7x5cms present in the mesentery of the terminal ileum.

Bowel resection with an end-to-end anastomosis was performed. The resected bowel, along with the lymph nodes, was sent for histopathological examination.

Histopathology of the specimen showed adenocarcinoma with cell of origin from ileum. iHistochemistry proved the cell of origin from the ileum.

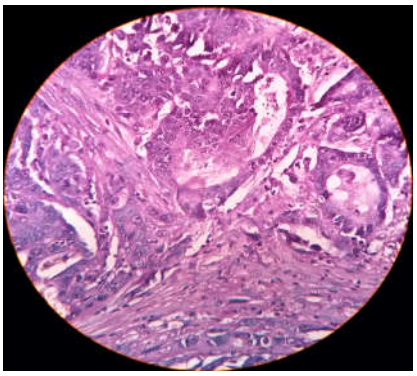

Fig. 3: Histological picture of the tumour

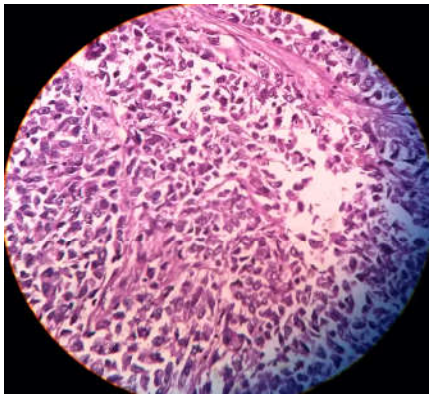

Fig. 4: High magnification of Histology

Discussion

Primary adenocarcinomas of the small intestine are rare. Though small intestine form 75% of the length of the gastrointestinal (GI) tract and 90% of its absorptive surface, malignant tumours of the small bowel comprise less than 2% of all gastrointestinal malignancies [1,2]. Historically, adenocarcinoma was the most common histological small bowel cancer subtype, now most common is carcinoid.

The different pathologic types of small bowel malignant tumours include adenocarcinomas, carcinoid, lymphoma, and sarcomas or gastrointestinal stromal tumours (GIST). Different subtypes have predilection to different regions of the small intestine. Adenocarcinomas tend to involve mainly the duodenum, while carcinoids more commonly develop in the ileum.

Symptoms of small bowel adenocarcinoma are nonspecific and frequently do not occur until advanced disease is present & preoperative diagnosis is rare. The most frequent presenting signs and symptoms include abdominal pain, nausea, vomiting, and weight loss. They may also present with haemorrhage, obstructive symptoms or perforation peritonitis [3,4,5].

Surgery remains the mainstay of treatment of small bowel adenocarcinoma. Segmental resection with 5-cm margins and complete nodal extirpation of the segment have been advocated curative surgical approach [2].

The recurrence pattern for small bowel adenocarcinoma is mainly systemic.

The role of adjuvant and neoadjuvant chemotherapy and radiotherapy consists primarily of case reports or small case series. Its benefit remains largely unknown.Chemotherapy and radiation therapy are reserved for palliation ofmetastatic

disease. Given the low prevalence of this disease, few clinicaltrials of chemotherapy have been conducted and despite a variety ofchemotherapeutic agents used to treat adenocarcinoma of the small bowel,no standard chemotherapy regimen exists for this disease [6].

Conclusion

In conclusion small bowel adenocarcinomas are difficult to diagnose because of the nonspecific symptoms. They also have a poor prognosis because most patients present with advanced disease. Primary malignant small bowel tumours may present as atypical, but highly lethal, abdominal emergencies. Treatment of such condition is emergency resection, anastomosis and adjvant chemo or radiotherapy. This case is presented because of the rarity of the disease.

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