Colocolic Intussusception in an Adult due to Pedunculated Lipoma


Abstract
Intussusception is common in children but rare in adults. The commonest site of it is colonic in adults and the cause is supposed to be malignant. In adults, very rarely it is due to benign cause. Benign cause is seen in small bowel. Computed Tomography (CT) is used to diagnose cause and site of intussusception. We present a case of colocolic intussusception due to pedunculated lipoma which was diagnosed on CT. Patient underwent a sigmoid colon resection and end to end anastomosis. Postoperative course was uneventful.

Introduction
Intussusception in adult is rare. It is estimated to account for only 5% of all intussusceptions and causes only 1% of all bowel obstructions. About 90% of intussusceptions in adults are caused by a definite underlying disorder such as a neoplasm or by a postoperative condition. However, neoplasm is the most common cause and is found in approximately 65% of adult cases. Malignant tumours are more common than benign tumours in the colon, although the reverse is true in the small bowel. The growing use of computed tomography (CT) for abdominal imaging has led to increased detection of transient intussusceptions with no underlying disease. Consequently, determining the clinical significance of intussusception detected with CT poses a fresh diagnostic challenge. We present a similar case of colocolic intussusception due to benign neoplasm i.e. pedunculated lipoma which was detected on CT.

Case Report
We present a case of 53 year old male who presented with vague abdominal pain since two months and per rectal bleeding since two months. Bleeding stopped ten days back on its own. Patient underwent colonoscopy which revealed a mass in the descending colon occluding the lumen and hence, scope could not be negotiated. A biopsy was taken and it showed inflammatory bowel disease with fibrosis. Patient was given antiinflammatory and antibiotics and was sent back. Patient presented in emergency with nausea, vomiting, severe abdominal pain and distension after eight days of initial presentation in emergency. On clinical examination patient had distended abdomen and was mildly dehydrated, had no palpable lump, there was no guarding or rigidity. On per rectal examination the stools were absent. White blood cell (WBC) were 8400/ cumm, Haemoglobin was 11.1 gm%. Rest of the blood investigations were normal. On the same day, Computed tomography (CT) scan was done. It showed colocolic intussusception in descending colon and sigmoid colon and at the leading edge of the intussusceptum there was a lobulated fat containing lesion representing a lipoma (Fig.1). Patient underwent an exploratory laparotomy and operative findings were colocolic intussusception between descending colon and sigmoid colon (Fig.2). Sigmoid colon was resected and end to end anastomosis was done. The cut open specimen showed a pedunculated lipoma at the leading edge of intussusceptum (Fig.3) i.e. sigmoid colon. Histopathology showed a polypoidal tumour arising from the mucosa with granulation.

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tissue and the stroma of it made of adipose tissue suggestive of lipomatous polyp. The postoperative period was uneventful. After six months of follow up patient is fine and has no bowel symptoms till date.

Discussion

Intussusception in adults and old age is rare and if it is colocolic then it is supposed to be due to underlying malignancy. Benign lesion is cause of intussusception in small bowel. More than one-half of large bowel intussusceptions are associated with malignant lesions, including primary tumours (adenocarcinoma, lymphoma) and metastatic disease. Benign lesions include neoplasms such as lipoma and adenomatous polyp, GIST and other benign condition such as endometriosis and previous anastomosis. Idiopathic intussusception occurs less commonly than in small bowel which accounts to be about 10%. Intussusception is the invagination of a bowel loop (intussusceptum) with its mesenteric fold into the lumen of a contiguous portion of bowel (intussuscipiens) as a result of peristalsis. It is generally believed that masses in the bowel or lumen act as an irritant and provoke abnormal peristaltic movement, which may lead to the telescoping of one bowel segment over the adjacent segment. Intraluminal polypoid lesions have a greater tendency to cause invagination of the bowel as peristalsis drags the lesion forward. Although the exact mechanism precipitating intussusception, especially intussusception without a lead point, is not well understood, this condition has been ascribed to dysrhythmic contractions.

Intussusceptions are classified according to location (enteroenteric, ileocolic, ileocaecal, etc.).
or colocolic) and cause (benign, malignant, or idiopathic). Intussusception in an adult can be further classified on the basis of whether a lead point is present.\textsuperscript{1,2}

Intussusception without a lead point tends to be transient. Although an intussusception with a lead point tends to be persistent or recurrent, it can also be transient. Transient nonobstructing intussusception without a lead point is known to occur in both adults and children and occurs more frequently than was previously reported. Transient intussusception of the small bowel has been reported in adults with coeliac disease and Crohn’s disease but is most frequently detected incidentally and is presumed to be innocuous. An intussusception without a lead point does not generally cause proximal bowel obstruction.

Intussusception with a lead point may manifest with atypical clinical findings. Often, there is a prior history of episodic crampy abdominal pain, nausea, and vomiting, symptoms that suggest partial intestinal obstruction. As in our patient, he presented with clinical features of chronic abdominal pain and per rectal bleeding which was minimal and it stopped ten days before presentation. As the first choice of investigation we had sent patient for colonoscopy and it showed a protuberant mass in descending colon and luminal narrowing. But biopsy taken turned to be negative for malignancy. So he was treated for an inflammatory lesion.

Symptoms are usually of long duration (several weeks to several months), although the patient may occasionally present with an acute abdomen.\textsuperscript{1,2} Our patient presented with acute abdomen after 15 days, in the form of distension, vomiting, constipation and mild dehydration. Intussusception with a lead point can also manifest with symptoms related to a neoplastic process, including constipation, weight loss, melena, or a palpable abdominal mass at physical examination, rather than specific symptoms related to the intussusception itself.\textsuperscript{1,2} Our patient’s abdomen was distended but no lump was palpable. Sometimes the patient presents with classic triad in adults, abdominal pain, vomiting and bleeding per rectum making diagnosis difficult. Intussusception without a lead point may manifest as vague abdominal pain; however, most cases are discovered incidentally at CT performed for other reasons. CT done in our patient was suggestive of a lobulated fat lesion at the leading edge of intussusceptum with target sign, suggestive of colocolic intussusception and lead point being a lipoma.

As such malignant lesion is common cause of colocolic intussusception in adult but in benign cause lipomas are most common lesion. Next to adenomatous polyps, these mesenchymal tumours are the most common benign tumours of the colon. They are usually small, and occur most often on the right side, particularly in the caecum.\textsuperscript{4} They are most common in elderly women. Lipomas of the colon are within the submucosa in 90% of cases, are usually solitary, and may be sessile or pedunculated.\textsuperscript{5,6} They are almost always asymptomatic, and sometimes found incidentally on colonoscopy done for other reasons. Only when they are of a reasonable size do they become manifest following rectorrhagia, abdominal pain or the obstruction of the colon by the mass or intestinal intussusception caused by the progression of the pedunculated lipoma. Sometimes it presents with frank blood loss due to ulceration over its surface. This difficult diagnosis may be aided by colonoscopy with biopsy and dual contrast opaque enema. Barium reflux in the lumen of the space between the intussusceptum and
Intussusception allows the coiled spring to be visualized. On barium study, the filling defect produced by lipoma is circular, ovoid or pear-shaped, abruptly margined and with intact mucosal surface. The lesion mostly has a broad base but sometimes a pedunculated mass is depicted. A specific radiographic feature of colonic lipoma is that, due to its deformable and pliable nature, the lesion changes in shape on varying degrees of distension of the colon during filling, as well as with palpation and with change of position of the patient.

Intussusception is well diagnosed on CT, which shows a pathognomonic bowel-within-bowel configuration with or without contained fat and mesenteric vessels. Intussusception appears as a sausage-shaped mass when the CT beam is parallel to its longitudinal axis but as a targetlike mass when the beam is perpendicular to the longitudinal axis. CT plays also a very important role in the visualization of the rarer subserosal forms of lipoma, which because of their exocolic location are usually not visualized on barium study. Sonography can make the diagnosis of an intussusception in an adult when the characteristic sign of a targetlike lesion or bull’s eye lesion is shown, similar to the CT findings. The central echogenic area is produced by the mucosa of the intussusception, which is surrounded by a hypoechoic ring representing the walls of both the intussusceptum and the intussuscipiens. Lipomas are often discovered incidentally at endoscopic or radiologic examination and can easily be diagnosed with CT due to their typical fat attenuation. Lipoma of the colon of less than 2 cm may be electively removed endoscopically, those greater than 2 cm are excised by laparotomy or laparoscopy. In emergency cases, it is advisable to perform a more or less extensive resection of the colon depending on the size of the tumour. However there is much debate whether resection should be performed with or without reduction. But in colocolic intussusception resection is performed before as the commonest cause is malignancy. In small bowel intussusception reduction is performed provided there are no inflammatory signs or bowel ischaemia. In our patient the intraoperative findings were colocolic intussusception and sigmoid colon was intussusceptum and descending colon was intussuscipiens. We decided to go for resection of the colon and end to end anastomosis. Cut open specimen was showing a pedunculated lipoma. Histopathology confirmed the diagnosis of pedunculated lipoma. Post-operative event was uneventful. The patient is following up since six months without any bowel symptoms.

Conclusion

Physicians should be aware that adjacent organs should also be evaluated in chronic abdominal pain in any quadrant as one of the differential diagnosis is intussusception. Abdominal CT can be helpful in distinguishing between lead point intussusception and non-lead point intussusception and has the potential to reduce the prevalence of unnecessary surgery. Usually lead point intussusceptions require surgery rather than non-lead point. CT is diagnostic for these cases. Colonic intussusception should be resected first before reducing as commonest cause is malignant and reverse is done in small bowel.

References

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TUBERCULOUS LYMPHADENITIS
It remains both diagnostic and therapeutic challenge because it mimics other pathologic processes and yields inconsistent physical and laboratory findings. Treatment monitoring is more complex due to peculiar behaviour of TB lymph nodes. Situation has become worse due to sharp increase in the incidence of atypical mycobacteria, poorly controlled HIV epidemic and rise of drug-resistant TP lymphadenitis. Tuberculous adenitis is best treated as a systemic disease with antituberculosis medication. Surgical therapy along with antituberculosis medication can be beneficial in selected patients.

Tuberculous lymphadenitis most frequently involves the cervical lymph nodes (Fig. 1) followed in frequency by mediastinal, axillary mesenteric, hepatic portal, perhepatic and inguinal lymph nodes. There is a history of tuberculous contact in 21.8% and tuberculous infection in 16.1% of the cases. Fistula formation was seen in nearly 10% of the mycobacterial cervical lymphadenitis.

Tuberculous mediastinal lymphadenitis is more common in children. Cardiac tamponade has also been reported due to mediastinal lymph node tuberculosis.

Smears can be obtained either from a draining sinus or by FNA. Ziehl-Neelsen staining of the smears may reveal mycobacteria in the fresh specimens. Combination of FNA with culture or a Mantoux test further increases the diagnostic yield in mycobacterial cervical lymphadenitis.

Culture of mycobacterium is diagnostic for mycobacterial cervical lymphadenitis. However, a negative culture result should not exclude the diagnosis of mycobacterial cervical lymphadenitis. The presence of 10-100 bacilli per cubic millimeter of the specimen is enough for a positive culture result.

The presence of few dead or live microorganisms is enough for PCR positivity. The PCR can be applied on the materials obtained by FNA or biopsy, and can reduce the necessity for open biopsy. Its sensitivity ranges between 43 and 84%, and its specificity between 75 and 100%. PCR can be applied when smears and cultures are negative. The PCR should only be reserved for problem cases in resource limited countries.

The usefulness of corticosteroids in the treatment is not well established and controversial.


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