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CASE REPORT

Collage of Intestinal Pathologies: A Case Report of Concomitant Findings

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ABSTRACT

Background: Intussusception in adults is a rare condition that presents as a medical emergency. It is caused by the invagination of one bowel segment into another, which further leads to obstruction, ischemia, and perforation. Very often, it presents as a diagnostic and therapeutic challenge. Intussusception in adults needs thorough evaluation due to its vague presentation. It is usually associated with underlying pathology. We present a case of intussusception in a 67-year-old female with intestinal lipoma at the lead point in association with mucinous adenocarcinoma and tubular adenoma. It is unusual for distinct intestinal pathologies to co-exist. Therefore, dealing with such cases requires high suspicion of associated pathologies for proper, complete diagnosis and treatment.

Keywords: Intussusception, Adenocarcinoma colon, Lipoma, Tubular adenoma.

INTRODUCTION

Intussusception is a vital surgical and medical crisis. Telescoping of one bowel segment into another is known as intussusception[1]. It is frequent in children under three years of age, accounting for 80–90% of small bowel obstructions. Whereas, it is relatively uncommon cause of intestinal obstruction in adults with an incidence of 1%. Intussusception in adults can present with or without signs of acute intestinal obstruction, including hematochezia, constipation, bloating and abdominal pain[2]. It is primarily caused by tumors, either benign or malignant. Intestinal lipomas are rare. They are asymptomatic and most commonly incidental finding. Intestinal Lipoma can cause obstruction or haemorrhage. Moreover, lipomas can be leadpoint for intussusception[3,4]. Very few cases with coexisting intestinal pathologies have been documented in the literature till date. Therefore we present an extremely rare case of lipoma causing ileo-ileal intussusception with coexisting colonic adenocarcinoma and tubular adenoma.

CASE REPORT

A 67 year old female presented to the surgical OPD, with history of colicky abdominal pain, chronic constipation, loss of appetite not associated with fever. The pain aggravated by food intake. On examination, the abdomen was soft, mildly distended with tenderness in right iliac fossa. No palpable mass was identified. Auscultation revealed sluggish bowel sounds. Complete hemogram showed microcytic hypochromic anemia with neutrophilia. CT scan with oral contrast showed post hysterectomy status, bowel in bowel appearance with bowel wall thickening in distal ileal bowel loops suggestive of ileo- ileal intussusception with mass at lead point. It also showed short segment of large bowel wall thickening with possible differentials of infective colitis or carcinoma colon. The patient underwent exploratory laparotomy.

Gross examination revealed a specimen of total colectomy with caecum and terminal ileum measuring 175cm in length. An ileo-ileal intussusception was noted at proximal end. Lead point showed yellowish polypoidal mass measuring 3.2x3x2.7cm completely obstructing the lumen. Cut section of polypoidal mass was homogenous yellow. A tiny polyp measuring 1.4 x1.2 cm and a grey white ulcero-proliferative growth measuring 5.5x5 cm were noted at distal end and splenic flexure respectively. Histopathological examination of the yellowish polypoidal mass at the lead point showed sheets of mature adipocytes in submucosa. Sections from ulcero-proliferative growth showed an infiltrating malignant tumor arranged in

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sheets, nests and singles with mucin pools and signet ring cells, infiltrating muscularis propria without invasion into serosa. Incidental tiny polyp showed features of tubular adenoma with low grade dysplasia. Adjacent lymph nodes showed reactive hyperplasia, surgical margins were free of tumor deposits. A final diagnosis of ileo-ileal intussusception with lipoma at lead point, incidental tubular adenoma and co-existing poorly differentiated adenocarcinoma was made. Patient was discharged after an uneventful recovery and is currently on chemotherapy.

IMAGE 1 – Gross specimen of total colectomy with caecum and terminal ileum. (1A) showing a polypoidal mass at lead point with yellow cut surface (1B). Cut surface of colon shows ulceroproliferative growth (1C) and tiny polyp (1D). External surface shows area of intussusception(1E).

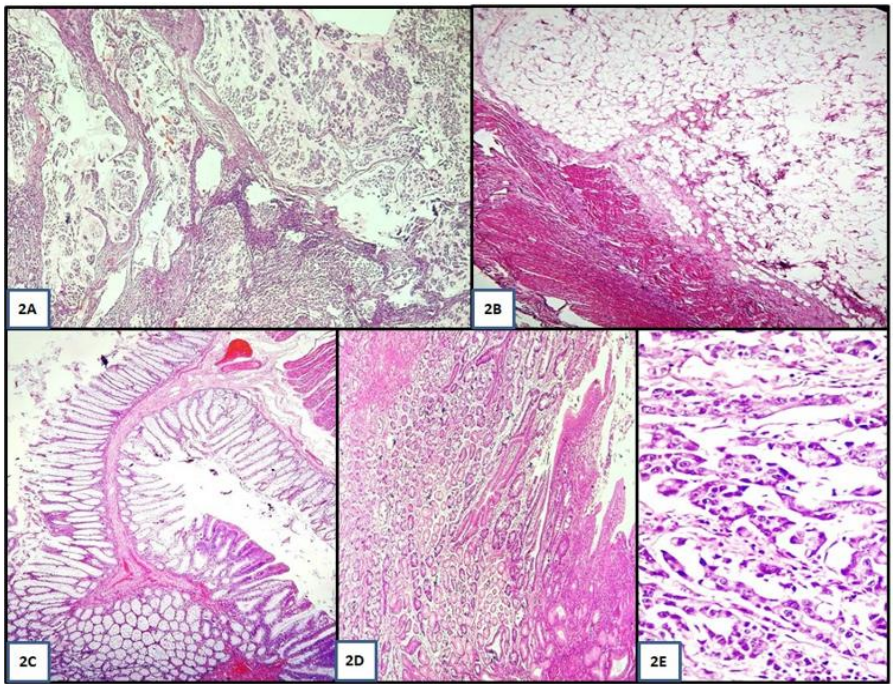

IMAGE 2 – Microphotograph of adenocarcinoma (2A and 2D), intestinal lipoma (2B), tubular adenoma (2C), H&E, 100x. Microphotograph of adenocarcinoma (2E), H&E,400x.

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DISCUSSION

Intestinal intussusception is a surgical emergency, most often affecting infants and young children. It is very uncommon in adults. It can be categorized based on the location into ileo-ileal, ileo-caecal, colo-colic and ileo-colic[5]. Unlike pediatric cases, an underlying pathology often can act as lead point in causing intussusception. Causes include diverticulum, cancer, adenomatous polyp, lymphoma, and lipoma[1] . Hence dealing with adult intussusception needs a high index of suspicion.

Intussusception causes venous and lymphatic congestion at the lead point, which results in intestinal edema and impairs the forward movement of peristalsis, ultimately resulting in intestinal obstruction. It can culminate in ischemia, perforation and peritonitis. In adults, differentiating between small bowel and colonic intussusception is important. This is because, 63% of small bowel intussusception cases are attributable to a benign underlying lesions, whereas 58% of colonic intussusception cases are likely to have a malignant etiology[6]. In our case, lipoma of the terminal ileum was the lead point for the intussusception.

Gastrointestinal lipomas are mesenchymal derived benign intestinal tumors. They constitute only 2.6% of the gastrointestinal non-malignant tumors, which renders them relatively rare. Although lipomas are typically solitary, but they may develop in various locations throughout the gastrointestinal tract. Only 20–25% of lipomas have been found in the small intestine, with the majority occurring in the large intestine, particularly in the right colon and the caecum. Intestinal lipomas can be classified into three pathological types: intermuscular, subserosal, and submucosal. In 90% of cases, the tumors originate from the submucosa. Submucosal lipomas usually appear as sessile pedunculated, or polypoid lesions[7].

The clinical diagnosis of intussusception in adults is sometimes difficult and delayed because of its rarity, vague and evasive presentations. A range of imaging techniques have been employed to aid in the diagnosis. Nevertheless, it usually takes a surgical intervention to establish the diagnosis. CT abdomen appears to be the preferred radiological investigation of choice which has resulted in early detection[3]. The clinical manifestations of intestinal lipomas determine the course of treatment. Surgery is indicated in cases of obstruction, hemorrhage and possible malignancy[6] . Unlike in children, adult intussusception does not respond well to nonoperative reduction with barium or air since there is always an underlying pathological lead point or predisposing condition. Therefore, the optimal course of treatment for adult intussusception is limited surgical resection. Other alternatives include laparoscopic resection of lipomatous polyps and laparoscopic removal of benign small intestine tumors causing intussusception. The prognosis for intussusception is favorable, but the type of underlying pathology causing the intussusception is the main prognostic factor[5].

A similar case of 51-year-old female patient with small intestinal lipoma that resulted in intussusception was documented by Qiang Hu *et al*[8] . Another case of multiple submucosal lipomas of the small intestine in a 54-year-old man was reported by Kritika Tiwari *et al*[9] . Pradhan M *et al.* also reported a case of lipoma in small intestine in 45 year old female[10] . Aya N. Farfour*et al.* reported a case of lipoma in ascending colon without obstruction in a 56 year old female[11] .

CONCLUSION

Intestinal lipomas can induce symptoms of intestinal obstruction, however intestinal intussusception in adults is a rare condition. Thus, when establishing a differential diagnosis in cases of acute abdomen caused due to intestinal obstruction, these tumors should be taken into clinical consideration. Various diagnostic modalities, such as CT or MRI, can be used in diagnosing them due to their fat content. Asymptomatic lipomas do not need any intervention, whereas symptomatic submucosal lipomas require surgical intervention.

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