

CHRONIC INTUSSUSCEPTION DUE TO LIPOMATOUS POLYP IN ADULT PRESENTING AS INTESTINAL PERFORATION: A CASE REPORT

ABHESINH CHAUHAN^{a1}, DEVI CHAUHAN^b, RAVI KOTECHA^c AND S. P. CHOUHAN^d

^{abcd}Department of General Surgery, Kothari Medical And Research Institute, Bangla Nagar, NH15, Gajner Road, Bikaner, India

ABSTRACT

Intussusception in adult is a rare cause of intestinal obstruction. Its incidence is 5% of all cases of intussusceptions and 1-5% of all obstruction in adults. We present a case of 60 year old gentleman presented with symptoms of colicky pain, non-bilious vomiting with duration of 20 days. Initially abdominal pain was in lower abdomen but gradually spreading all over abdomen. After series of investigation patient found to have pneumoperitoneum. Exploratory laprotomy was performed. There was transverse colocolic intussusception with multiple caecal perforation with discoloured serosal spots over the ascending colon. Therefore Right hemicolectomy was done. Histopathology report confirmed lipomatous polyp arising from the transverse colon just distal to the hepatic flexure. Usually local excision with colocolic anastomosis is sufficient. This patient had closed loop obstruction with pressure changes in caecum and ascending colon hence right hemicolectomy was done. Surgical resection is recommended to alleviate symptoms.

KEYWORDS: Intussusception, Lipomatous polyp, Pneumoperitoneum

Intussusception is more common in children and it is uncommon cause of intestinal obstruction. Intussusception is the different entity in adult compared to the children in term of etiology, diagnosis and management. Adult intussusceptions account for only 5% of all cases of intussusceptions¹ and it represents only 1% of cases of adult intestinal obstruction². Lipomas of the digestive system are non-epithelial in origin, benign in nature, fatty tumors that can be found throughout the gastrointestinal tract and often found incidentally during colonoscopy, computed tomography (CT) scan, surgery, or autopsy. Approximately 90% of colonic lipomas are located in the submucosa and the remainder of these tumors are subserosal or intramucosal in origin. The incidence of colonic lipomas ranges from 0.2% to 4.4%³. More than 70% of these tumors are located in the right hemicolon. Mean age of the presentation is around sixth decades. Colonic lipomas vary in size from several millimeters to 30 cm. Lipomas are usually well-delineated, soft, ovoid, yellowish masses. These tumors can be found single or in groups, and they can be sessile or pedunculated⁴. Cases of primary colonic liposarcoma have been reported in literature⁵. Physician and surgeon have limited experience in adult intussusceptions that leads to the occasional confusion in term of diagnosis and management of such condition. Because of the age of presentation and symptoms like chronic pain, usual target of investigation is malignancy and inflammatory diseases. In this case report, we describe an intussuscepted, transverse colonic lipoma that has caused closed loop obstruction and sealed multiple caecal perforation without any signs of peritonitis.

CASE REPORT

60 year old gentleman presented with complained of colicky pain in right lower abdomen for last 20 days, which gradually became generalized and associated with one episode of vomiting containing gastric contents. Pain was relieved after defecation and after taking medication. He denied any history of altered bowel habits or constitutional symptoms. There was no family history of similar disease.

On examination, he was afebrile and dehydrated with tachycardia. Other vitals were normal. Abdomen was distended and mild tenderness present all over abdomen, but had no signs of rigidity and peritoneal inflammation. There was no mass or organomegaly elicited. Per rectal examination was normal. Abdominal plain radiograph showed dilated small bowels and right-sided colon.

CT scan of abdomen was performed and shows free fluid in peritoneal cavity with fatty attenuation of about 42mm in diameter in transverse colon. Dilated small bowel loops with air fluid levels were seen proximal to the lesion. CT appearance was consistent with intestinal perforation probably because of closed loop obstruction due to intussusceptions and lipomatous polyp as lead point.

Patient underwent exploratory laprotomy. Intraoperative findings showed dilated small bowel loops and right colon. Transverse Colocolic intussusceptions due to intraluminal growth was found with small perforation at apex of intussusceptions with multiple caecal perforation. Ascending colon had discolored serosal spots. We proceeded with right hemicolectomy and ileocolic end to end anastomosis

was done using hand sewn single layer interrupted 2-0 silk sutures.

Gross specimen dissected showed a large polyp in transverse colon distal to the hepatic flexure of about 5 x2 cm with perforation at apex point of intussusceptions. Ascending colon was congested. Histopathological report confirmed lipomatous polyp arising from the transverse colon with no malignant changes.

Patient has uneventful postoperative hospital stay and was discharged well 10 days after surgery.



Figure 1: CT scan of abdomen showing large colonic polyp of about 4 x3.7 cm



Figure 2 & 3: gross surgical specimen showing large pedunculated lipoma with multiple caecal perforation with normal adjacent colonic mucosa.

DISCUSSION

Intussusception occurs when the proximal segment of an intestine (the intussusceptum) telescopes into the lumen of the adjacent distal segment of an intestine (the intussusciptens)⁶. Intussusception is classified according to its anatomical location in enteric, ileocaecal, ileocolic and colocolic. Most intussusceptions in adults are due to a lead point, which is an identifiable pathological abnormality⁷.

Adult intussusception is rare cause of intestinal obstruction and presents with variety of symptoms, most often consist with intestinal obstruction. Acute intestinal obstruction is not common and most patient present with subacute, chronic or intermittent symptoms. Classical clinical triad of abdominal pain, palpable sausage shaped mass and heme positive stool is rarely present². The mean age of presentation is around 50–60 years old. Male to female ratio is 1:1.3¹.

Colonic lipomas are rare benign tumors of the gastrointestinal tract and are classified as a type of benign non-epithelial tumor and its incidence is 0.2 to 4.4³. Colonic lipoma is usually solitary and common being the ascending colon and cecum, followed by the transverse colon, descending colon, sigmoid colon and rectum⁸. In majority, colonic lipomas are asymptomatic and do not require treatment, however, a small number may cause symptoms when the lesion is large,

particularly those with a diameter >2 cm⁹. Colonic intussusception is also a rare complication of colonic lipoma¹⁰. Their most common signs and symptoms include abdominal pain, bleeding per rectum, and alterations in bowel movements¹¹. They may also occur with such dramatic presentations as massive hemorrhage, intussusception, or even perforation, for which emergency operation is required. Ninety percent of colonic lipomas are localized to the submucosa and are rarely found in other layers of the bowel wall¹¹.

Several imaging modalities have been used to diagnose the intussusceptions. Takeuchi et al. report that computed tomography (CT) scan proved the most accurate modality to diagnose the intussusceptions followed by ultrasound. CT scan has a yield of 52% as compared to a yield of 32% for ultrasonography^{1,2}. Gastrointestinal contrast study is useful with a yield of 41% but usually not indicated in most cases of complete intestinal obstruction¹. Khan et al. quoted a diagnostic accuracy of CT scan of around 80% in diagnosing intussusception. Based on these results, Takeuchi et al. report that CT scan may be the first examination in a patient who presented with abdominal masses and nonspecific abdominal pain where intussusception is a possibility². The classical finding of a CT scan includes a target lesion or sign which represents the outer intussusciens and the inner intussusceptum, which is clearly visualized due to edematous bowels, otherwise also known as “double ring” or “coiled spring” appearance^{1,2}. As up to 90% of adult intussusceptions are due to underlying lesions, CT scan is more superior to ultrasonography in detecting such lesions¹.

Although, treatment for adult intussusception is slightly controversial, it is well agreed by most authors that surgical intervention is unavoidable^{1,2,6,12}. In most cases surgical segmental resection is the most appropriate treatment. In cases where bowel wall is inflamed, ischaemic, or friable, it is advisable not to attempt manual reduction but to proceed directly with resection as it is associated with increased risk of spillage or undetected mucosal necrosis leading to delayed perforation¹². Chronic intussusception may be difficult to reduce due to cross-scarring between intussusceptum and intussusciens¹. However, another view holds that reduction of intussusception as much as safely possible followed by appropriate resection preserves bowel length in order to avoid short gut syndrome in case of intussusceptions involving small bowel¹.

Our patient presents with intestinal obstruction secondary to colocolic intussusception, with

preoperative CT scan showing free fluid in peritoneal cavity with fatty attenuation of about 42mm in diameter in transverse colon with dilated small bowel loops with air fluid levels were seen proximal to the lesion. CT appearance was consistent with intestinal perforation probably because of closed loop obstruction due to intussusceptions and lipomatous polyp as lead point. However, intraoperatively, Transverse Colocolic intussusceptions due to intraluminal growth was found with small perforation at apex of intussusceptions with multiple caecal perforation and ascending colon had discolored serosal spots, decision was made to proceed with a right hemicolectomy without manual reduction. End-to-end ileocolic anastomosis on healthy bowel reduces the risk of anastomotic leak.

CONCLUSION

Adult intussusception remains a rare cause of persistent or intermittent chronic abdominal pain. Intussusception in adults is a different entity from children and it warrants a different approach in management. It is not common cause of intestinal obstruction in adult but need high suspicion of index especially when patients present with subacute or intermittent symptoms. Preoperative CT scan is needed for diagnosis purpose and preoperative planning. Most authors advocate segmental resection without attempt of manual reduction, as there is high risk of anastomotic complications of the manipulated friable and edematous bowel tissue involved.

REFERENCES

- Rathore M.A., Andrabi S.I. and Mansha M., 2006. “Adult Intussusception – A Surgical Dilemma,” *J. Ayub Med. Coll. Abbottabad*, **18**.
- Takeuchi K., Tsuzuki Y., Ando T., Sekihara M., Hara T., Kori T. and Kuwano, 2003. “The Diagnosis and Treatment of Adult Intussusception,” *Journal of Clinical Gastroenterology*, **36**(1):18–21.
- Vecchio R., Ferrara M., Mosca F., Ignoto A. and Latteri F., 1996. Lipomas of the large bowel. *Eur. J. Surg.*, **162**:915–919.
- Zhang H., Cong J.C., Chen C.S., Qiao L. and Liu E.Q., 2005. Submucous colon lipoma: a case report and review of the literature. *World J. Gastroenterol*, **11**:3167–3169.
- Choi Y.Y., Kim Y.J. and Jin S.Y., 2010. Primary liposarcoma of the ascending colon: a rare case of mixed type presenting as hemoperitoneum

- combined with other type of retroperitoneal liposarcoma. *BMC Cancer*, **10**:239.
- Azar T. and Berger D. L., 1997. "Adult Intussusception," *Annals of Surgery*, **226** (2):134-8.
- Wilson A., Elias G. and Dupiton R., 2013. Adult colocolic intussusception and literature review. *Case Rep Gastroenterol*, **7**(3):381-7.
- Rogy M.A., Mirza D., Berlakovich G., Winkelbauer F. and Rauhs R., 1991. Submucous large-bowel lipomas--presentation and management. An 18-year study. *R. Eur. J. Surg.*, **157**(1):51-5.
- Kim C.Y., Bandres D., Tio T.L., Benjamin S.B. and Al-Kawas F.H., 2002. Endoscopic removal of large colonic lipomas. *Gastrointest Endosco. Jun.*, **55**(7):929-31.
- Roger S.O. Jr, Lee M.C. and Ashley S.W., 2002. Giant colonic lipoma as lead point of intermittent colocolic intussusception. *S. Surgery*, **131**(6):687-8.
- Mnif L., Amouri A., Masmoudi M.A., et al., 2009. Giant lipoma of deep transverse colon: a case report and review of literature. *Tunis Med.*, **87**: 398-402.
- Khan M. N., Agrawal A. and Strauss P., 2008. "Ileocolic Intussusception – A Rare Cause of Acute Intestinal Obstruction in Adults; Case Report and Literature Review," *World Journal of Emergency Surgery*, **3**:26.