

A Rare And Interesting Case Of Double Intussusception

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Citation

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Abstract

Intussusception is a rare cause of intestinal obstruction in adults. Ninety percent of these patients have a pathologic lead point. Here we present a case of double intussusception in a 46-year-old lady. She presented with features of acute intestinal obstruction with a preceding history of recurrent constipation, mass per rectum on defecation and severe mucus discharge per rectum. Laparotomy revealed a double intussusception with a prograde ileo-ceco-colo-colic intussusception due to a submucous lipoma in the caecum and a retrograde sigmoido-descending intussusception which revealed itself after reducing the prograde intussusception. Purely retrograde intussusceptions are extremely rare and only 26 such cases have been reported so far in the literature. Retrograde intussusception with an antegrade component due to a submucous lipoma which had completed its course into the rectum has not been reported so far.

INTRODUCTION

Intussusception is an invagination of one segment (intussusceptum) of intestine into another (intussusciens). Gross' series of 102 cases revealed only 0.2 percent with retrograde intussusception. In 1955, Akehurst published a study consisting of 103 cases of retrograde intussusception over a period of 300 years. Only 12 of those were exclusively retrograde, the remaining being associated with an antegrade component⁶. The occurrence of retrograde intussusception has been attributed to the phenomenon of antiperistalsis. D'Arcy Power (1899), Knaggs (1900) and Buckley (1919) have all described double intussusception.³

CASE REPORT

A 46-year-old lady presented with chief complaints of abdominal pain for the last month which increased in severity since the last two days. It was associated with multiple episodes of bilious vomiting. She also had severe mucous diarrhoea and lower abdominal distension. She gave history of constipation on and off for the last month. She had also noticed a mass protruding per rectum during passage of stools which used to reduce spontaneously. There was history of loss of appetite and significant loss of weight.

There was no history of fever or bleeding per rectum. There was no history of menstrual abnormalities. She had no previous abdominal surgery. There was no significant family history.

On examination, the patient was uncomfortable, tachycardic and tachypneic with a blood pressure of 110/70 mmHg. Pallor was present. The lower abdomen was distended with visible peristalsis from left to right. Tenderness was pronounced in the lower abdomen with guarding and rebound tenderness. No mass was felt. Bowel sounds were minimal.

On per rectal examination, a firm, regular, pedunculated mass was felt along the anterior wall of the rectum. Its base could not be felt and it did not bleed on touch.

Proctoscopy revealed a mass stretching out the bowel wall. A differential diagnosis of rectal polyp or complete intussusception leading to intestinal obstruction was considered.

Blood investigations revealed leucocytosis and hypokalemia. Erect abdomen roentgenogram showed distended large bowel and caecum. There was no air under the diaphragm. Ultrasonography confirmed the above findings but could not visualize the primary pathology due to the distended bowel loops. Due to unavoidable circumstances which included financial constraints a CT scan could not be done.

The patient underwent a laparotomy through a lower midline incision. The mass felt per-rectally was that of an intussusception which, on reduction, was found to be ileo-ceco-colo-colic with the lead point in the caecum (lipoma). Another interesting finding was that of a retrograde

sigmoids-descending intussusception which could not be reduced.

Figure 1

Legend 1: Intra-operative picture showing the intussusception with distended bowel proximally and gangrenous bowel distally.



A subtotal colectomy with ileo-sigmoid anastomosis had to be performed in view of the non-viable caecum and ascending colonic segments. The abdomen was closed using mass closure technique over a pelvic drain.

Post-operatively, the patient made a satisfactory recovery.

Histopathological examination of the resected specimen showed subserous mature adipose tissue suggestive of lipoma with gangrenous colonic segments. There was no evidence of malignancy in the specimen. The patient was discharged on the 14th post-operative day.

Figure 2

Legend 2: Resected specimen of the subserous lipoma which caused the intussusception before it was sent for histopathology.



DISCUSSION

Intussusception as a cause for intestinal obstruction in adults is rare. It accounts for about 5 percent of total intussusceptions and 1 percent of intestinal obstruction¹; 90 percent of such cases occur due to a lead point². The occurrence of a retrograde intussusception is rarer still. Only 28 cases of pure retrograde intussusception have been reported⁵. Akehurst's series of 103 cases revealed most of them to be associated with an antegrade component⁶. The reason why most intussusceptions occur in the antegrade direction is obvious from the normal direction of peristalsis. Various hypotheses have been put forward regarding retrograde intussusceptions especially those occurring in the sigmoid colon. The concept of antiperistalsis put forward by Best and Taylor (1955) remains the most likely explanation. This phenomenon has been known to occur normally beyond the duodenal cap and for a variable distance above the ileo-caecal valve⁷. Samson-Wright (1952) mentioned the occasional occurrence of feeble retrograde waves arising near the hepatic flexure under normal conditions and powerful retrograde movements in the colon in the presence of an obstruction⁷. Joseph and Desai identified two possible mechanisms. The first being weak antiperistaltic activity in the left colon and the second, that the normal or exaggerated antegrade peristaltic waves make the proximal bowel slide over the distal bowel^{3,4}. The occurrence of weak antiperistaltic activity in the left colon explains the predilection for the sigmoid⁴. The above mechanisms also explain the frequent coexistence of prograde and retrograde intussusception.

Lipomata occur in all parts of the gastrointestinal tract but they are most common in the colon; 40 percent of them occur in the caecum⁸. A lipoma as the lead point of an intussusception has been reported 34 times previously⁹. A preoperative diagnosis of lipoma is rarely made; usually malignancy is suspected as the cause of the obstruction and a resection is justified in the view of non-viability of tissues or suspicion of malignancy⁸. Especially in colonic intussusceptions, a resection without reduction is recommended in view of the theoretical risk of dissemination of malignant cells¹.

CONCLUSION

A fair conclusion from this case would be to keep intussusception in mind as a possible cause of intestinal obstruction in adults, especially with the above presenting complaints. A pre-operative CT scan might have been helpful in early diagnosis and may have prevented massive resection of the bowel. As D'Arcy Power has noted in 1886, it is always prudent to look for multiple intussuscepted segments even after one such mass is reduced.

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References

1. Azar T, Berger D. Adult intussusception. *Ann Surg* 1997; 226:134-8.
2. Haas EM, Etter EL, Ellis S, Taylor VT. Adult intussusception. *American Journal of Surgery* 2003; 186:75-6.
3. Hession MA. Double retrograde intussusception of a Meckel's diverticulum. *British Medical Journal* 1966; i: 1212-13.
4. Joseph T, Desai AL. Retrograde intussusception of sigmoid colon. *Journal of the Royal Society of Medicine* 2004; 97:127-128.
5. Baba M, Higaki N, Ishida M, Kawasaki H. A case of retrograde intussusception due to semipedunculated polypiform adenocarcinoma in tubular adenoma of the sigmoid colon in an adult. *Japanese Journal of Gastroenterological Surgery* 2001; 34:282-6.
6. Akehurst AC. Retrograde intussusception; a report of a case and a review of 103 cases in the literature. *British Journal of Surgery* 1955; 43:207-213.
7. Strange SL. Retrograde Intussusception of the colon. *Proceedings of the Royal Society of Medicine* 1956; 49:579-582.
8. Ginzburg L, Weingarten M, Fischer MG. Submucous lipoma of the colon. *Ann Surg* 1958; 148:767-772.
9. Eglinton T, Bagshaw P, Bayliss S. Colo-colonic intussusception secondary to a colonic lipoma diagnosed with preoperative CT scan. *Journal of the New Zealand Medical Association* 2005, Vol 118, No 1214.

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