International Surgery Journal
Thangamani P et al. Int Surg J. 2023 Jan;10(1):157-160
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20223610

Case Report

Caecal endometriosis causing colo-colic intussusception: a rare cause of bowel obstruction

P. Thangamani, K. Senthil Kumar, M. Sivan, S. P. Sushmitha*

Institute of General Surgery, Madras Medical College, Chennai, Tamil Nadu, India

Received: 25 October 2022
Revised: 04 December 2022
Accepted: 06 December 2022

***Correspondence:**
Dr. S. P. Sushmitha,
E-mail: doctorsushsp@gmail.com

ABSTRACT

Intussusception refers to telescoping of a segment of bowel into adjacent bowel. Only 5% occurs in adults. Causes include neoplasm and inflammatory causes. Caecal endometriosis causing colo colic intussusception is extremely rare condition. A 45-year-old menstruating female presented with complaints of diffuse abdominal pain with vomiting for 10 days. No history of menstrual abnormalities. P/A-mass of 8×5 cm was palpable in right lumbar and umbilical region with mild tenderness. Cect abdomen-colo colic intussusception involving ascending colon and right 2/3rd of transverse colon with no obvious lead point. Patient was taken up for emergency laparotomy and it revealed 1) Intussusception of caecum into ascending colon extending upto hepatic flexure, 2) Multiple black colored nodules over lateral pelvic wall, small bowel, omentum, mesentery, ascending sigmoid colon, 3) Anterior surface of rectum was found to be adherent to posterior surface of uterus and pouch of Douglas inaccessible, 4) Multiple nodes were identified within mesentery. Laparotomy proceeded and gentle manual reduction of intussusceptum was done and growth palpable within caecum, suspecting the growth to be malignant right hemicolectomy with ileocolic end to side anastomosis done. Post operative period uneventful, HPE-endometriosis caecum. Intussusception in adult is rare entity and endometrial mass in caecum acting as lead point has been infrequently reported. Clinical and radiological investigations are of little help in diagnosing endometriosis. Hence, high clinical suspicion is required in patients with previous history of endometriosis.

Keywords: Endometriosis, Intussusception, Intussusceptum, Right hemicolectomy, Ileocolic anastomosis

INTRODUCTION

Intussusception refers to the telescoping of a segment of the bowel into the adjacent bowel.[1] This clinical entity was first described in 1674 by Barbette of Amsterdam and presented in 1789 by John Hunter as "introssusception", a rare form of bowel obstruction in the adult.[9,10] It is reported in literature that the first to operate on a child with intussusception was Sir Jonathan Hutchinson in 1871.[9,11,12] Only 5% of all intussusceptions occur in adults.[2] Various causes have been identified for adult intussusception, including neoplasm and inflammatory causes. Of the inflammatory causes, bowel endometriosis is a rare entity that can cause intussusception and may present as intestinal obstruction.[15] Caecal endometriosis causing colo-colic intussusception is an extremely rare condition and here we describe one such case.

CASE REPORT

A 45-year-old menstruating female, presented to the emergency department with complaints of diffuse abdominal pain for the past 10 days, associated with nausea and vomiting. She had similar episode one month ago and was treated with analgesics and antiemetics.

There was no other history of any bowel abnormalities. She had no history of any menstrual cycle abnormalities, dysmenorrhea or menorrhagia. On examination, patient was moderately built and nourished. General examination did not reveal any abnormalities. Patient vitals were stable. Per abdomen, a mass of size 8×5 cm was palpable in the right lumbar and umbilical region. Margins ill defined. Mild tenderness over the mass. Patient underwent contrast enhanced computed tomographic imaging of the abdomen, which revealed a colo-colic intussusception involving the ascending colon and right 2/3rd of transverse colon. No obvious lead point was noted. Patient was subsequently taken up for emergency exploratory laparotomy. Laparotomy revealed, Intussusception of caecum into the ascending colon extending upto hepatic flexure, multiple scars were seen in the anti-mesenteric border of ileum involving the serosal surface at 5 cm, 15 cm and 20 cm proximal to the ileocaecal junction. There was no luminal compromise at the site of these scars. Scattered hyperpigmented nodules and small cysts were seen over lateral pelvic wall, small bowel, omentum, mesentery, ascending colon and sigmoid colon. A scar was seen over the distal portion of the sigmoid colon without any luminal compromise. Anterior surface of rectum was found to be adherent to the posterior surface of uterus and the pouch of Douglas was inaccessible. Both the ovaries could not be visualised due to dense adhesions. Multiple nodes were identified within the mesentery and biopsied. Appendix could not be identified intraoperatively and also in the post operative specimen.

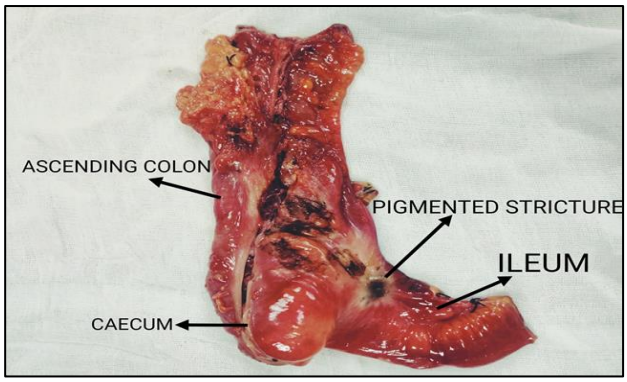

Figure 1: Right hemicolectomy specimen with pigmented strictures.

Since the bowel wall was found to be healthy, gentle manual reduction of the intussusceptum was done and a growth was palpable within the caecum. Since most of the mass lesions involving the caecum, causing intussusception are malignant, right Hemicolectomy was performed with ileocolic end to side anastomosis. Postoperatively patient recovered well. Pathological examination of the specimen revealed a submucosal single pedunculated grey brown polyp measuring 2.5×2.3×2 cm close to the ileocaecal valve. Cut surface of the polyp revealed colonic mucosa with extensive areas of surface ulceration and submucosa showed fibrosis with congested blood vessels. Muscularis propria showed cystic spaces lined by endometrial glands with tall columnar cells surrounded by stromal cells. Hemorrhage was seen within the lumen of the glands.

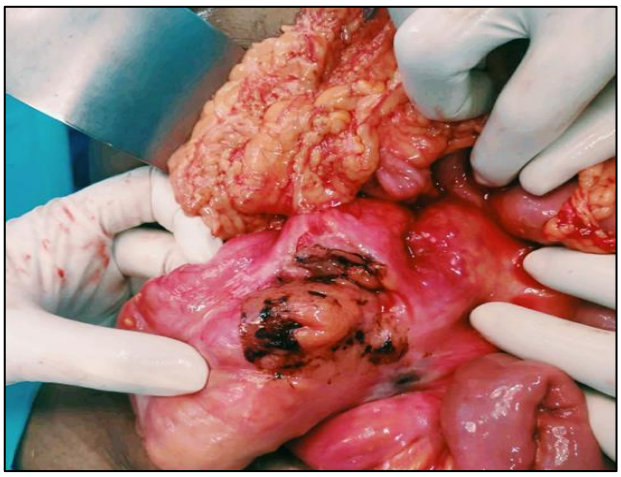

Figure 2: Pigmentation over the caecal wall.

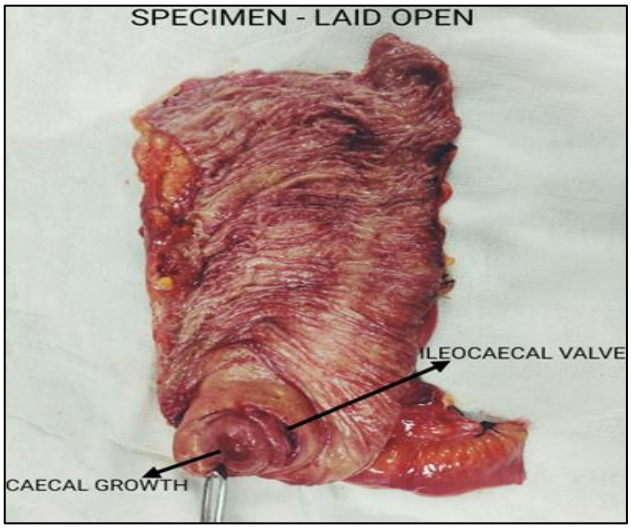

Figure 3: Caecal growth.

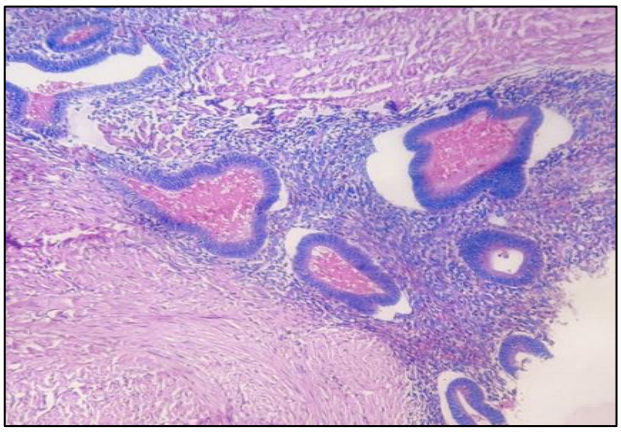

Figure 4: Endometrial glands within-muscularis propria.

DISCUSSION

Intussusception is a rare cause of bowel obstruction in adults accounting for only 2% of cases. Adult intussusception varies widely from the paediatric cases.[26] The classical triad of abdominal mass, tenderness and hemoglobin positive stools is rarely found in adults.[9] Intussusception can be of 4 types-enteroenteric, colocolic, ileocolic and ileocaecal.[20,21] In adults, the cause of intussusception is identified in 90% of these cases.[13,14] The most common causes include malignancy, Meckel's diverticulum, polyps, colonic diverticulum and submucosal lipomas that serve as the leading points.[16] It is also reported that 80% of large bowel lesions causing intussusception were found to be malignant.[4,22] Out of the inflammatory causes, endometriosis of the bowel, acting as a lead point causing intussusception and bowel obstruction is a rare entity. Endometriosis is an oestrogen dependent inflammatory condition. Its incidence is about 15% in fertile females.[3] The most accepted cause of endometriosis is retrograde menstrual flow through the Fallopian tubes and spillage onto the ovary and the peritoneum. The most frequent locations of endometriosis are the pelvic viscera and peritoneum. Other than the ovaries and pouch of Douglas, it may rarely involve the rectosigmoid, appendix, small bowel, ascending colon, lung, kidney and pancreas.[1] Endometriotic tissue involving the bowel occur in the sigmoid colon and the rectum frequently (90%).[3] It presents with cyclical abdominal pain, nausea, vomiting, early satiety, bloating, constipation, obstipation, back pain and abdominal distension.[17] The bowel endometriosis is difficult to be identified clinically. It may be suspected on the basis of the clinical history of treatment for endometriosis in the past.[3,6] Symptoms are non-specific in adults and hence diagnosis is missed or delayed and is only established intraoperatively.[18,19] Multi-slice computed tomography enteroclysis identifies 94.8% of bowel endometriotic nodules.[5] Magnetic resonance imaging has a higher sensitivity (77-93%) in the detection of bowel endometriosis.[6] CA-125 is the principal serum marker used in the diagnosis and assessing disease progression. It arrived low sensitivity (20-50%) but high specificity ((80%) in most women. Serial CA 125 is used to predict recurrence after treatment.[17] Surgical treatment is indicated in cases with pain, bleeding, and intestinal obstruction.[8] Laparotomy is the treatment of choice for adult intussusception. Hydrostatic reduction is not recommended due to high incidence of malignancy in colonic intussusception.[23] Treatment includes laparotomy and resection of the involved segment. The goal of surgical treatment is to excise or coagulate all visible endometriotic lesions and associated adhesions. Peritoneal endometriosis can be treated with surgical excision using bipolar cauterisation or laser therapy (CO_2, potassium-titany-phosphate laser, argon laser). Postoperatively patients can be treated with low dose oral combination contraceptive pills for 6-12 months is effective. It causes decidualisation of endometrial tissue, necrobiosis, absorption of endometrial tissue and results in amenorrhea.[17]

CONCLUSION

Intussusception in adult is a rare entity and endometrial mass in the caecum acting as the lead point has been infrequently reported. Clinical and radiographic investigations are of little help in diagnosing bowel endometriosis. Hence, high clinical suspicion is required especially in patients with previous history of endometriosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Rivkine E, Marciano L, Polliand C, Valenti A, Ziol M, Barrat C et al. Ileocolic intussusception due to a cecal endometriosis: case report and review of literature. Diagn Pathol. 2012;7:62.
2. Zubaidi A, Al-Saif F, Silverman R. Adult intussusception: a retrospective review. Dis Colon Rectum. 2006;49:1546-51.
3. Rodriguez-Lopez M, Bailon-Cuadrado M, Tejero-Pintor FJ, Choolani E, Fernandez-Perez G, Tapia-Herrero A. Ileocecal intussusception extending to left colon due to endometriosis. Ann R Coll Surg Engl. 2018;100(3):e62-3.
4. Eisen LK, Cunningham JD, Aufses AH Jr. Intussusception in Adults: Institutional Review. J Am Coll Surg. 1999;188(4):390-5.
5. Biscaldi E, Ferrero S, Fulcheri E, Ragni N, Remorgida V, Rollandi GA. Multislice CT enteroclysis in the diagnosis of bowel endometriosis. Eur Radiol. 2007;17:211-9.
6. Takeuchi H, Kuwatsuru R, Kitade M, Sakurai A, Kikuchi I, Shimanuki H et al. A novel technique using magnetic resonance imaging jelly for evaluation of rectovaginal endometriosis. Fertil Steril. 2005;83:442-7.
7. Bedaiwy MA, Falcone T: Laboratory testing for endometriosis. Clin Chim Acta. 2004;340:41-56.
8. Orbuch IK, Reich H, Orbuch M, Orbuch L. Laparoscopic treatment of recurrent small bowel obstruction secondary to ileal endometriosis. J Minim Invasive Gynecol. 2007;14:113-5.
9. Lianos G, Xeropotamos N, Bali C, Baltogiannis G, Ignatiadou E. Adult bowel intussusception: presentation, location, etiology, diagnosis and treatment. G Chir. 2013;34(9-10):280-3.
10. Hunter J. On introsusception (read Aug 18, 1789). In: Palmer JF, ed. The works of John Hunter, FRS London. London: Longman, Rees, Orme, Brown, Green, Longman. 1837;587-93.
11. Marinis A, Yiallourou A, Samanides L, Dafnios N, Anastasopoulos G, Vassiliou I et al. Intussusception

of the bowel in adults: A review. World J Gastroenterol. 2009;15(4):407-11.
12. Hutchinson J. A successful case of abdominal section for intus- susception. Proc R Med Chir Soc. 1873;7:195-8.
13. Weilbaecher D, Bolin JA, Hearn D, Ogden W, 2nd. Intussusception in adults. Review of 160 cases. Am J Surg. 1971;121:531-5.
14. Akcay MN, Polat M, Cadirci M, Gencer B. Tumor-induced ileo-ileal invagination in adults. Am Surg. 1994;60:980-1.
15. Tan KY, Tan SM, Tan AG, Chen CY, Chng HC, Hoe MN. Adult intussusception: experience in Singapore. ANZ J Surg. 2003;73:1044-7.
16. Haas EM, Etter EL, Ellis S, Taylor TV. Adult intussusception. Am J Surg. 2003;186:75-6.
17. Berel JS. Berek and Novak's gynaecology, 16th edition. Wolters Kluwer India Pvt. Ltd. 2019.
18. Wang N, Cui XY, Liu Y, Long J, Xu YH, Guo RX et al. Adult intussusception: A retrospective review of 41 cases. World J Gastroenterol. 2009;15(26):3303-8.
19. Yeo CJ. Shackelford's surgery of the alimentary tract 8th edition, Elsevier. 2018.
20. Stubenord WT, Thorblamarson B. Intussusception in adults. Ann Surg. 1970;172:306-10.
21. Nagorney DM, Sarr MG, McIlrath DC. Surgical management of intussusception in the adult. Ann Surg. 1981;193:230-6.
22. Eisen LK, Cunningham JD, Aufses AH Jr. Intussusception in adults: institutional review. J Am Coll Surg. 1999;188:390-5.
23. Barbiera F, Cusma S, Di Giacomo D. Adult intestinal intussusception: surgery-CT correlation. Radiol Med. 2001;102:37-42.

Cite this article as: Thangamani P, Kumar KS, Sivan M, Sushmitha SP. Caecal endometriosis causing colo-colic intussusception: a rare cause of bowel obstruction. Int Surg J 2023;10:157-60.