

Adult colo_colic Intussusception an unusual presentation of right colonic cancer: Case Report

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September 2, 2022

Abstract

Adult intussusception is uncommon diagnosis, with 1-3 cases in 1000000/year, primarily due to pathological lead point of which 70% is malignant. 61-year-old female presented with intermittent colicky abdominal pain for one month and Right iliac fossa mass. CT scan confirmed the presence of colo-colic intussusception. It requires high clinical suspicion and has fatal complications

Adult colo_colic Intussusception an unusual presentation of right colonic cancer:

Case Report

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ABSTRACT

Introduction:

Adult intussusception is an uncommon diagnosis, with one to three cases occurring in a population of 1 000 000 per year, and primarily due to underlying pathological lead point of which 70% is malignant. Lipoma is the most common benign tumour, and primary adenocarcinoma is the most common malignant one. Early diagnosis and treatment are essential to reducing poor outcomes, including ischemia, perforation and sepsis. CT imaging is a modality of choice for diagnosis with a diagnostic accuracy up to 100% and a specificity up to 71%. Surgical intervention is the definitive treatment, and the decision is taken according to the situation.

Case presentation:

A 61-year-old female presented to our surgical casualty with intermittent colicky abdominal pain for one month. After that, she started to experience abdominal swelling in the right iliac fossa. A CT scan confirmed the presence of colo-colic intussusception, cecum-ascending-transverse colon. Laparotomy was scheduled, and a right hemicolectomy was done accordingly. Diagnosis of adenocarcinoma (Dukes stage B2) was made histologically.

Conclusion:

Intussusception in adults is a challenging diagnosis requiring high clinical suspicion and has a high incidence of fatal complications. CT imaging is the lifesaving modality of choice for diagnosis.

Good patient outcomes depend on timely diagnosis and recruitment of an inter-professional team.

Keywords : colicky pain, intussusception, colon, right iliac fossa mass, case report.

Introduction:

Intussusception means telescoping of a proximal segment of the bowel (intussusceptum) into the lumen of the adjacent distal segment (intussusciens). Rarely the opposite could happen, which is known as retrograde intussusception. [2]

Intussusception is very uncommon in adult patients, with one to three cases occurring in a population of 1 000 000 per year, which puts it at the bottom of the list of differential diagnoses of abdominal pain, and more often, it may not be counted. Its aetiology differs significantly between children and adults. Adult intussusception of the colon is most likely secondary to a malignant tumour. [3]

In both small- and large-bowel intussusception, the lipoma is the most common benign tumour and adenocarcinoma as the common malignant leading point. [4]

The diagnosis is commonly surprised at laparotomy, as most patients present as an emergency with intestinal obstruction. Usually, in stable patients, the diagnosis can be challenging as symptoms, mainly intermittent abdominal pain and clinical examination and investigations are often negative, and the patient will probably be labelled with irritable bowel syndrome. [5]

This work has been reported in line with the SCARE criteria. [6]

Case presentation:

A 61-year-old female, medically free, presented to the ER of a Military hospital in Khartoum, Sudan, with severe colicky abdominal pain and right iliac fossa swelling for one month. The pain was sudden onset, severe, intermittent, and colicky in the right iliac fossa, preventing her from doing her daily activities. It was localised, not radiating to other areas, aggravated by food intake and not relieved by analgesics. On further questioning, it was revealed that there were streaks of blood in her stool. However, there was no constipation, diarrhoea, or vomiting. The patient was experiencing loss of appetite and unintentional weight loss, about 15 kg, three months before her illness. BMI: 24.2. There was no fever, night sweats, or cardiopulmonary complaints.

The patient has no history of a similar condition and had not been diagnosed with colon cancer, inflammatory bowel disease, irritable bowel disease or any recent evidence of TB infection.

She has no family history of colon cancer; however, her cousin died of breast cancer three years ago.

She was not on any medication and had no long-term drugs or allergies.

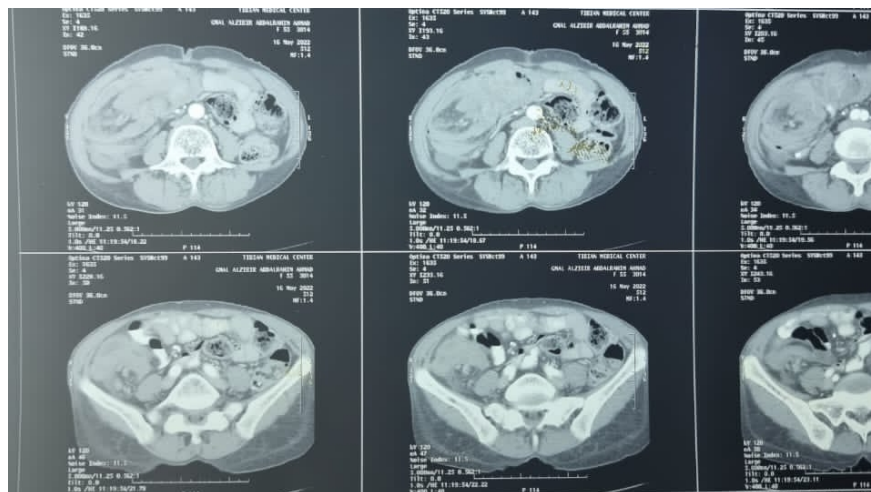
The patient is a cleaning lady in a school, married and lives with her husband and children. She is a non-smoker and non-alcoholic.

On physical examination, the patient looks ill, conscious, vitally stable, not pale nor jaundiced and has no signs of dehydration.

Abdominal examination revealed a right iliac fossa mass, oval in shape, 12×10 cm, irregular surface, normal skin over it and no scars. The mass has an average temperature, tender, hard in consistency, well-defined edges, mobile, not compressible or reducible, and not pulsatile. All hernia orifices are intact, and no lymph node enlargement. However, the rest of the abdominal examination was unremarkable, and the DRE was normal.

The patient has low serum sodium, potassium, total bilirubin and albumin levels. Serum CEA tumour marker was within normal ranges.

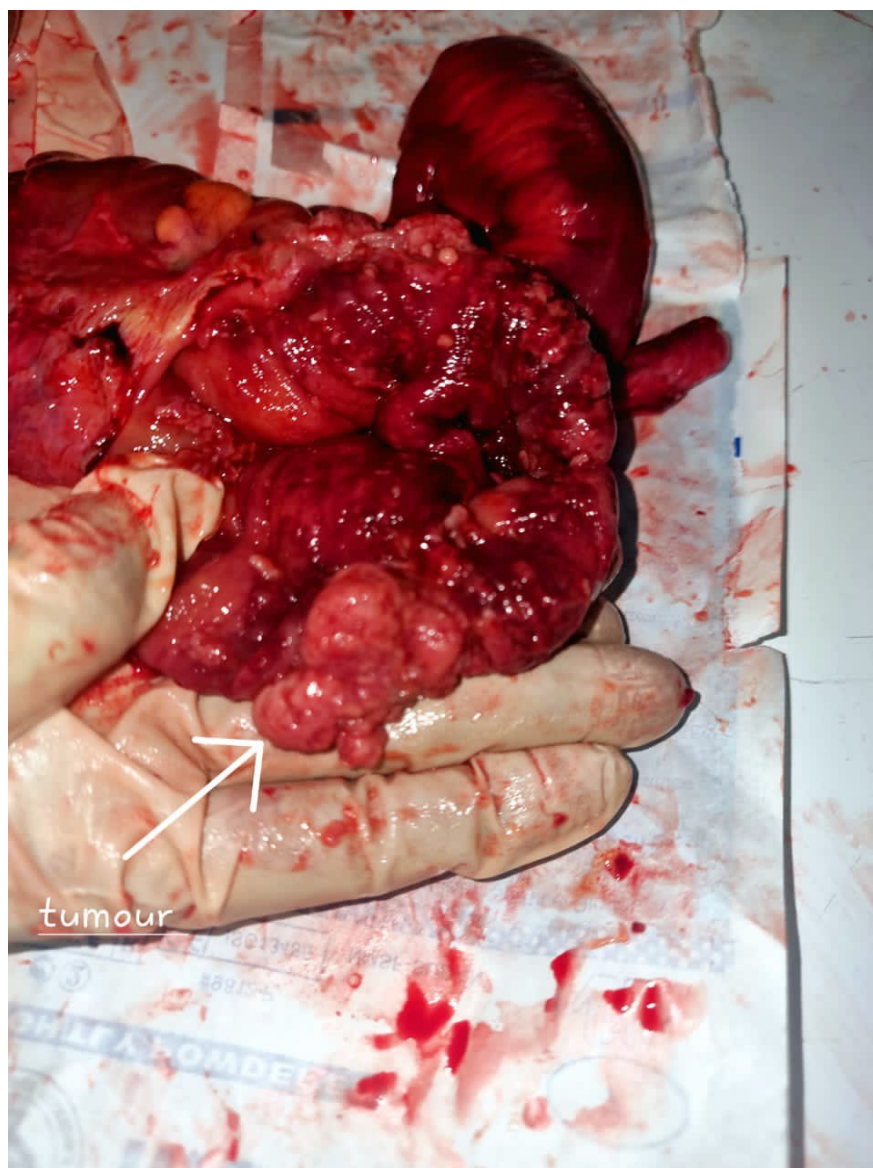
Abdominal ultrasound was ordered and revealed the presence of colonic mass and multiple gall stones, but it was otherwise not remarkable.



On the CT abdomen, a segment of bowel loop was seen invaginated into its proximal segment with bowel wall thickening in the ascending colon extending to the transverse colon which confirmed the diagnosis of colo-colic intussusception. Also, multiple gall stones were elicited by the CT scan (Fig 1).

Chest x-ray and echocardiography were normal.

An elective laparotomy was scheduled two days after the presentation. The patient was kept NPO with full fluid maintenance, antibiotic, PPI, and prophylactic anticoagulant. An incision abdomen was opened through a midline, and a large mass was found, including the terminal ileum, the ileocecal valve, the appendix, the cecum and the ascending colon, which were invaginated in the transverse colon. Adhesions were found between the abdominal wall and the mass and were released. As colonic milking was unsuccessful, it was decided to go for the right hemicolectomy and end-to-end anastomosis (Fig 2). Cut section of the cecum showed fungating mass of 6×5×3 cm (Fig 3).





Histopathological assessment confirmed the diagnosis of well differentiated grade one adenocarcinoma with perforated muscularis mucosa only, Dukes stage B2. No evidence of lymph-vascular invasion. And all the examined lymph nodes were free of neoplasm.

No complications were encountered post-operatively. The patient was discharged home after five days and seen after two weeks in the clinic in a good condition. No evidence of synchronous colorectal cancer was observed by colonoscopy. Oncological follow up was launched immediately and planned for chemotherapy.

Discussion:

Intussusception happens when the proximal segment of the bowel telescope into the adjacent loop, causing obstruction and affecting the blood supply, which could lead to intestinal obstruction, ischemia, perforation and sepsis. Intussusception has a variety of types according to the involved segments. [6]

It is more common to be a pediatric presentation than in adults, found in less than 1 in 1300 abdominal operations. [7]

In adults, its aetiology is always related to neoplasm as a lead point in nearly 90% of cases. Approximately 60 to 80% of intussusceptions in the large bowel are caused by malignant tumors. [3] So if it is predicted by imaging, the suspicion of tumours is the top priority, as in our case.

Other risk factors that lead to an intussusception may include:

- Mass (benign or malignant)
- Anatomical changes
- Post-surgical adhesions
- Endometriosis
- Idiopathic
- Fibroids
- Gastrostomy tube
- Jejunostomy tube. [8]

In a previous study the lesions were found to be varied from 3.5 cm to 8.5 cm in diameter. [9] Inflammatory diseases of colon or appendix can also play a leading point for intussusception.

Symptoms are sometimes vague, including colicky abdominal pain, which can be intermittent or constant, vomiting (can be bilious), bloating, and bloody stool. [10]

Inpatient presented with non-emergency nonspecific abdominal pain CT scan appears to be the most sensitive diagnostic tool for picking intussusception with a diagnostic accuracy of 58%–100% and a specificity of 57–71%. [11]

The CT findings one can illustrate will be a mass-like lesion, including the inner intussusceptum, an eccentric fat density mass that represents the intussuscepted mesenteric fat, and the outer intussusciens, and this appears as a “target” or a “sausage” mass according to imaging plane.

Additionally, a CT scan can aid in identifying the pathological lead points, and its extension also could help in anticipating the vascular status of the bowel. In some circumstances, a CT scan can predict the possibility of self-resolution of the condition. [6]

In our case, the abdominal CT scan picks up the colo-colic intussusception and the colonic mass extension that sharply changes the forward workup of the patient.

Ultrasound is also a helpful tool but less sensitive than CT scans. The characteristic features that could be revealed by ultrasound include target and doughnut signs in transverse view and pseudo-kidney signs in longitudinal view. [12]

The ultra-sonographic findings at the first presentation of our patient raised the colonic mass suspension, so an immediate CT scan was ordered. However, it did not elicit the presence of intussusception.

Surgical interventions are the mainstay of management of adult intussusception as it carries a very high incidence of underlying malignancy. After supportive emergency management, preoperative preparation of the patient for resection according to the appropriate oncological assessment is the plan. [12]

Intraoperatively, the location, size, and cause of the intussusception and the viability of the bowel determine the appropriate decision for the surgical procedure. [13]

As the management is purely surgical in adults, there is still controversy about the trail of reduction intraoperatively before resection. There is a debate between two opposing schools. One supports intraoperative reduction as it may minimise unnecessary bowel resection. Another school is fighting intussusception reduction as the risk of dissemination of the malignant cells during the procedure. [14]

Adult intussusception carries a poor prognostic picture due to the delay in diagnosis of its nonspecific presentation and the prevalence of underlying malignancy. This return the complications of vascular supply to be jeopardised and sepsis to manifest earlier with a high mortality rate, especially in developing settings such as Sudan. [12]

Conclusion:

Intussusception in adults is a challenging diagnosis requiring high clinical suspicion and has a high incidence of fatal complications. CT imaging is the lifesaving modality of choice for diagnosis.

Good patient outcomes depend on timely diagnosis and recruitment of an interprofessional team.

ACKNOWLEDGEMENTS:

N/n

AUTHORS CONTRIBUTION:

- Mohamed Ali: Study concept and Design and Supervision.
- Noon Mohamed: Data curation, Writing-Original draft Editing and case preparation.

- Ahmed Ahmed: Case preparation. Writing_ Original draft and Editing.
- Mohamed Basher: Writing _Reviewing and Editing.
- Samya Mohamed: Case preparation and Editing.
- Osama Elgemaabi: Supervision.

FUNDING:

No specific funding was obtained for this report.

CONFLICT OF INTEREST:

The authors declare no conflict of interest regarding the publication of this paper.

ETHICAL APPROVAL:

Ethical approval was obtained from the Military hospital ethical committee.

INFORMED CONSENT:

Informed written consent was obtained to publish this case report and accompanying images.

RESEARCH REGISTRATION:

N/n

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