A histologic surprise in case of an Ileocolic intussusception in adult - diffuse large B cell lymphoma colon

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European Journal of Medical Case Reports
Volume 4(12):445–448

https://doi.org/10.24911/ejmcr/173-1598794282

ABSTRACT

Background: Intussusception in adults is distinct from pediatric intussusception in many aspects. In contrast to intussusceptions in children, a demonstrable etiology is found in 70%-95% of the cases in the adult population, and approximately 40% of them are caused by primary or secondary malignant neoplasms. But lymphomas, as a cause of lead point in adult intussusception, are extremely rare and only less than 50 cases have been reported in the literature.

Case Presentation: We are reporting a 44-year-old male who presented with a right iliac fossa mass and clinical features of intussusception and who was operated upon. Per-operative findings were consistent with ileocecal intussusception and a radical right hemicolectomy was conducted. Histopathological examination revealed it as a case of Diffuse Large B Cell Lymphoma presenting as the lead point. This case is discussed because of the rarity of the disease and possible cure if diagnosed early and treated aggressively.

Conclusion: Ileocolic intussusception is adults is usually caused by malignancy and mostly as adenocarcinoma. Non-Hodgkin lymphoma as a lead point is extremely rare and is usually a histologic surprise. However, a radical *en mass* resection without reduction is ideal in all forms of adult colocolic and ileocolic intussusception.

Keywords: Ileocolic, intussusception, diffuse large B cell lymphoma (DLBCL).

Received: 08 September 2020 **Accepted:** 24 October 2020

Type of Article: CASE REPORT **Specialty:** General Surgery

Funding: None.

Declaration of conflicting interests: The authors declare that there is no conflict of interests regarding the publication of this case report.

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Background

Intussusception in adults is distinct from pediatric intussusception in many aspects. Adult intussusceptions always demonstrate an etiology and malignant neoplasms which account for 40% [1,2] of for intussusception.

While adenocarcinoma, particularly metastatic carcinoma, is found to be the most frequent cause in the colon, primary adenocarcinoma, gastrointestinal stromal tumors, lymphoma, and carcinoid tumors are seen in the small intestine [3].

The gastrointestinal tract is the most common extra nodal site affected by lymphoma, accounting for 5%-20% of all cases. Histopathologically, almost 90% of primary gastrointestinal lymphomas are B-cell non- Hodgkin's lymphomas (NHL), followed by T-cell NHL and Hodgkin's lymphomas. Even though small intestinal tumors account for only 2% of gastrointestinal system tumors, lymphomas account for 10%-20% and 20%-30% of all primary gastrointestinal lymphomas. The ileum is the most common site affected by small intestine lymphomas, followed by the jejunum and duodenum. While intussusception is a very rare presentation of NHL, the most common lymphoma causing intussusception is diffuse large B-cell NHL [4,5].

We are reporting a rare case of Ileocolic intussusception in a 44-year-old man caused by Diffuse large B-cell lymphoma (DLBCL).

Case Presentation

A 44-year-old male patient with no significant past medical history presented with complaints of colicky abdominal pain with melena, loss of appetite and loss of weight. The patient was admitted with abdominal pain, distension and vomiting, and was found to have a right-sided abdominal mass of size 10 × 8 cm which was firm, nontender, mobile and intra-abdominal. He was evaluated with contrast enhanced computerised tomography (CECT) abdomen and clinical diagnosis of ileocolic intussusception due to neoplastic growth in the caecum was established.

CECT abdomen and pelvis revealed circumferential thickening of caecum and proximal ascending colon for 5 cm with telescoping of the distal ileum and ileocaecal junction junction into proximal caecum suggestive of ileocaecal intussusception (Figure 1) with large-sized adjacent mesenteric lymph nodes.

He was optimized in view of obstruction and was operated on and per operatively showed an ileocecal

intussusception with prominent Lymph nodes (Figure 2). He underwent radical right hemicolectomy for intestinal obstruction based on the above-mentioned findings.

Macroscopic evaluation revealed a large polypoid lesion in the ileocecal junction with intussusception (Figure 3) and the histopathological evaluation and immuno histo chemistry revealed it as a case of DLBCL (Figure 4). The patient had an uneventful recovery and was discharged and is on follow-up.

Discussion

Intussusception is defined as the telescoping of a proximal bowel into the lumen of the adjacent segment. It is a rare cause of acute abdomen in adults and 75% of the cases are due to a malignant tumor in the small bowel or colon. Adult intussusception occurs more frequently in the small bowel (50%-88%) than in the large bowel (12%-50%) [6]. The common cause of intussusception occurring in the small intestine in adult is adenocarcinoma in up to 30% of the cases.

Colon adenocarcinoma is the most important cause of malignant large bowel intussusception. Lymphomas are also reported as tumoral masses inducing intestinal invagination rarely and up to 13% of colonic intussusception cases remain unexplained. However, in the literature review, Primary gastrointestinal lymphomas are rated second in terms of those leading to intussusception [7].

According to the World Health Organization classification NHL lymphomas fall into one of the six categories: extranodal marginal zone mucosa-associated lymphoma tissue (mucosa associated lymph tissue lymphoma), follicular lymphoma, mantle cell lymphoma, diffuse large B-cell lymphoma, and Burkitt's lymphoma [8] .There are less than 50 Cases of DLBCL presenting as ileocolic intussusception even though in children the has been documented cases of Burkitt's lymphoma presenting as ileo colic intussusception [9].

In the Surgical treatment of adult intussusception in the large bowel and ileocolic region, it is more likely that

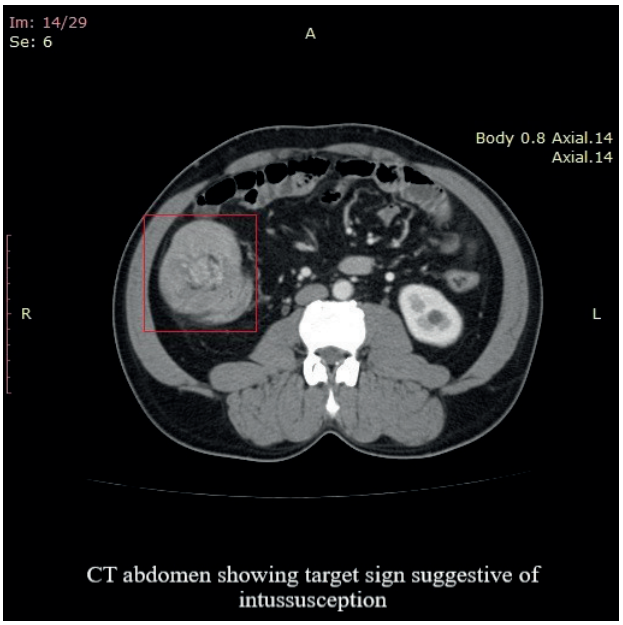

Figure 1. *CT scan with ileocaecal intussusception.*

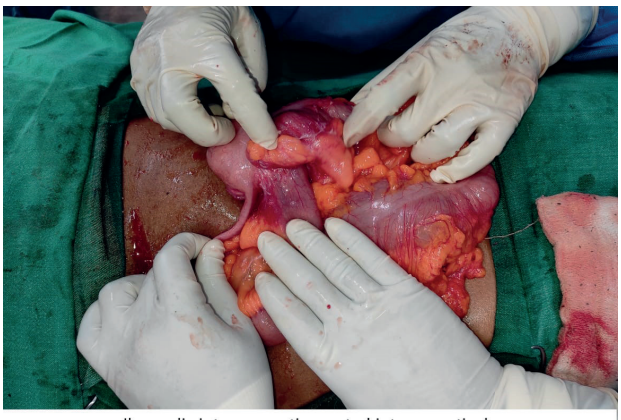

Figure 2. *Ileocecal intussusception with prominent lymph nodes.*

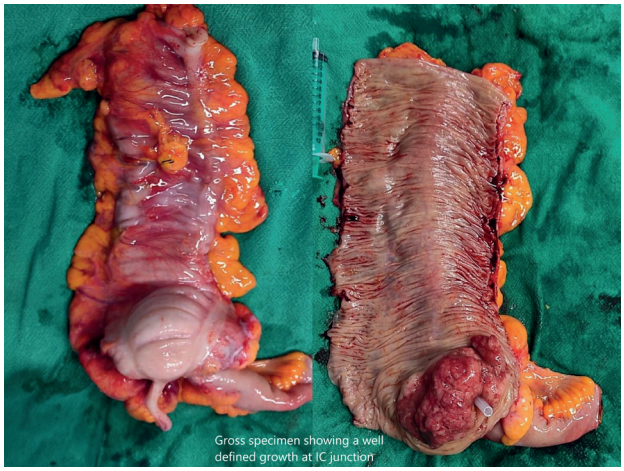

Figure 3. *Large polypoid lesion in the ileocecal junction with intussusception.*

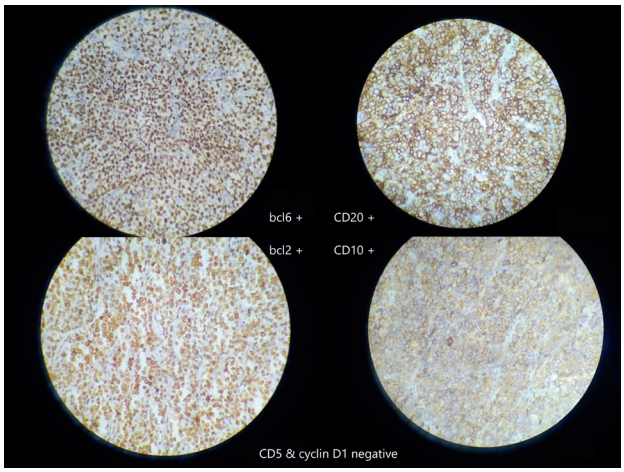

Figure 4. *Immunohistochemistry BC6,CD20,bc2,CD10 positive and Cyclin D1 negative.*

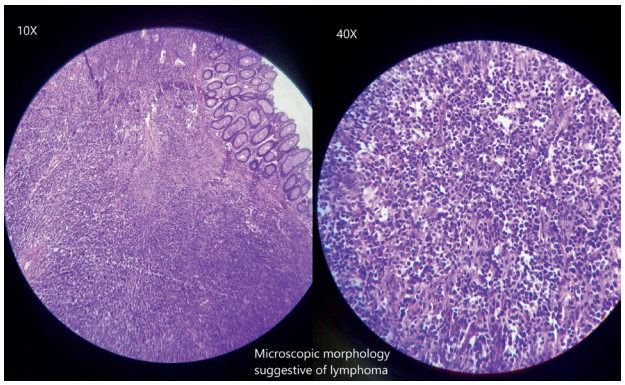

Figure 5. *Histoplathoogy showing diffuse large b cell lymphoma.*

the intussusception will have a malignant etiology (up to 68%), and a resection without reduction is recommended. Surgical procedures performed about oncological principles are sufficient, while others support that addition of chemotherapy to surgery increases survival. Generally, chemotherapy is recommended along with surgery in cases with poor prognostic factors [10].

Conclusion

Ileocolic intussusception in adults is usually caused by malignancy and mostly as Adenocarcinoma. Non-Hodgkin lymphoma as a lead point is extremely rare and is usually a histologic surprise. However, a radical en mass resection without reduction is ideal in all forms of Adult colo colic and ileocolic intussusception.

What is new?

While intussusception is a very rare presentation of NHL, the most common lymphoma causing intussusception is diffuse large B-cell. In this rare case, ileocolic intussusception in a 44-year-old man was caused by diffuse large B-cell lymphoma (DLBCL). Less than 50 cases have been reported in the literature of ileocolic intussusception due to lymphoma.

List of Abbreviations

CECT	Contrast enhanced CT
DLBCL	Diffuse large B cell lymphoma
IHC	Immunohistochemistry
MALT	Mucosa associated lymphoid tissue
NHL	Non-Hodgkins lymphoma

Consent for publication

Written informed consent was taken from the patient.

Ethical approval

Ethical approval is not required at our institution for publishing an anonymous case report.

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References

1. Lerner A, Soto J, Rosen Je. Chemotherapy as treatment for colo-colonic intussusception associated with acquired immune deficiency syndrome related lymphoma. Surgery. 2011;149:726–7. https://doi.org/10.1016/j.surg.2009.10.019
2. Gupta RK, Agrawal CS, Yadav R, Bajracharya A, Sah PL. Intussusception in adults: institutional review. Int J Surg. 2011;9:91–5. https://doi.org/10.1016/j.ijsu.2010.10.003
3. Salemis NS, Tsiambas E, Liatsos C, Karameris A, Tsohataridis E. Small bowel intussusception due to a primary non-Hodgkin's lymphoma. An unusual presentation and clinical course. J Gastrointest Cancer. 2010;41:233–7. https://doi.org/10.1007/s12029-010-9152-1
4. Majdoub Hassani KI, EL Bouhaddouti H, Ousadden A, Ankouz A, Boubou M, Tizniti S, et al. Non-Hodgkin's lymphoma revealed by an ileocolic intussusception in a Moroccan patient: a case report. Pan Afr Med J. 2010;4:11. https://doi.org/10.4314/pamj.v4i1.53599
5. 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;15:3303–8. https://doi.org/10.3748/wjg.15.3303
6. Ahn Jh, Choi Sc, Lee Kj, Jung Ys. A clinical overview of a retrospective study about adult intussusceptions: focusing on discrepancies among previous studies. Dig Dis Sci. 2009;54:2643—9. https://doi.org/10.1007/s10620-008-0635-x
7. Huang CS, Chen CF, Chung MT, Lin HC. Adult intussusception caused by malignant lymphoma. J Soc Colon Rectal Surg. 2009;20:100–102.
8. Ghimire P, Wu Gy, Zhu L. Primary gastrointestinal lymphoma. World J Gastroenterol. 2011;17:697–707. https://doi.org/10.3748/wjg.v17.i6.697
9. Hoxha FT, Hashani SI, Krasniqi AS, Kurshumliu FI, Komoni DS, Hasimja SM, et al. Intussusceptions as acute abdomen caused by Burkitt lymphoma: a case report. Cases J. 2009;2:9322. https://doi.org/10.1186/1757-1626-2-9322
10. Yakan S, Caliskan C, Makay O, Denecli AG, Korkut MA. Intussusception in adults: clinical characteristics, diagnosis and operative strategies. World J Gastroenterol. 2009;15:1985–9. https://doi.org/10.3748/wjg.15.1985

Summary of the case

1	**Patient (gender, age)**	Male, 46
2	**Final diagnosis**	Ileocaecal intussusuption, DLBCL
3	**Symptoms**	Abdominal pain, mass RIF
4	**Medications**	Initial stabilization and surgery
5	**Clinical procedure**	Laparotomy and right hemicolectomy
6	**Specialty**	General surgery