

Review Article

Intussusception: with specific lead point

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Abstract: Intussusception is a pathology in which telescoping of a proximal segment of bowel (intussusceptum) occurs into lumen of the distal segment (intussusciens). The bowel may simply telescope on itself (non pathological lead point) which consists of more than 90% or a specific pathological lead point is more commonly found in children older than 3 years in less than 10%. The aim of the study is to review the incidence and prevalence of pathological lead points causing intussusception. A retrospective study was conducted at our centre from April 2015 to April 2016, all the intussusception patients presenting as pathological lead point were considered in the study. A total of 131 intussusception patients were operated, out of which 7(5.1%) patients were operated with pathological lead points, 3 cases presented with meckels diverticulum (42.8%) 1 patient with non-Hodgkins lymphoma (14.2%), 3 patients with duplication cyst (42.8%). In our study also we found meckels diverticulum to be major cause of pathological lead point in intussusception. It is important to be aware of Pathological lead point causing intussusception seen in small percentage of patients with typical age group which can be managed with surgical excision giving good results.

Keywords: Intussusception, Pathological lead point

INTRODUCTION

Intussusception is a pathology in which telescoping of a proximal segment of bowel (intussusceptum) occurs into lumen of the distal segment (intussusciens). The incidence of intussusception is 1.5-4 cases per 1000 live births, with a male-to-female ratio of 3:2 [1, 2]. It often occurs around 1 year of age, with a peak incidence between 4 and 7 months [3]. One large Swiss study found an overall incidence of 38, 31 and 26 cases per 100,000 live births in the first, second and third year of life respectively. [4] The bowel may simply telescope on itself (non pathological lead point) which consists of more than 90% or a specific pathological lead point is more commonly found in children older than 3 years [5] in less than 10%. The triad of symptoms are acute abdominal pain, vomiting and bloody stools, rarely they may present with non-specific symptoms. If intussusception occurs in older children or recurrent intussusception, a presence of pathological lead point may be considered. Ultrasonography is the established standard for diagnosis of intussusception and has a high sensitivity and specificity [8].

AIM

To review the incidence and prevalence of pathological lead points causing intussusception

MATERIALS AND METHODS

A retrospective study was conducted at our centre from April 2015 to April 2016. All the intussusception patients presenting as pathological lead point were considered in the study, age at presentation, presenting symptoms, variety of pathological lead point, operative procedure executed and outcome was all recorded.

CASE DESCRIPTION

1. A 2 year previously healthy patient presented to the emergency with the history of pain abdomen, vomiting and bleeding per rectum. Child was lethargy, dehydrated with distension of the abdomen; a mass was palpable in the right hypochondrium. Ultrasonography revealed intussusception and patient was posted for surgery after stabilisation. On exploration, multiple enlarged mesenteric lymph nodes with ileo-colic intussusception were noted. After reduction, a palpable mass of about 4*6cm was noted in the caecum and involving some part of ascending colon as a possible lead point. Resection of the mass with ileo-

ascending anastomosis with lymph node biopsy was done. Postoperative period was uneventful and child was discharged on 7th day.

Pathological finding were suggestive of non-Hodgkins lymphoma.

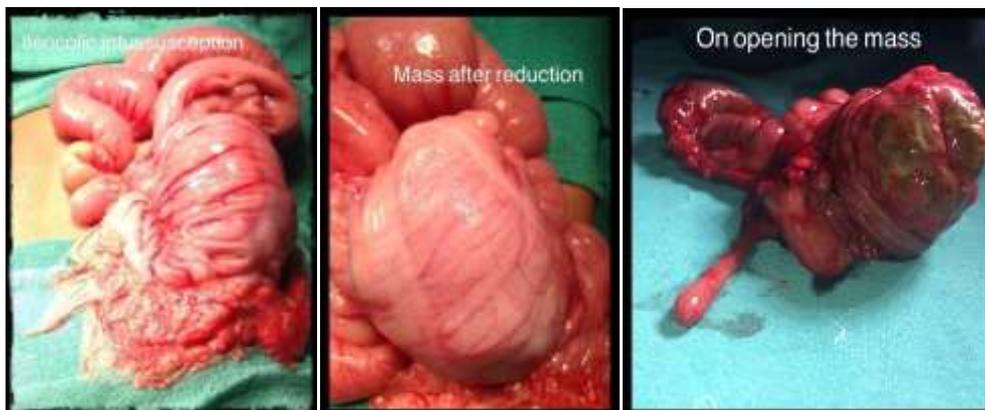


Fig-1: a: Intussusception involving the ileum, caecum and ascending colon, B: After reduction mass noted involving the caecum, c: on cut opening the specimen showing circumferential greenish thickened mass

2. A 9 year old child presented with history of lump in the upper abdomen, vomiting (non bilious), examination revealed soft abdomen with a lump of about 3*4cm in the epigastric region, movable. Ultrasonography showed ileo-colic intussusception. On exploration, ileo-colic intussusception was reduced and

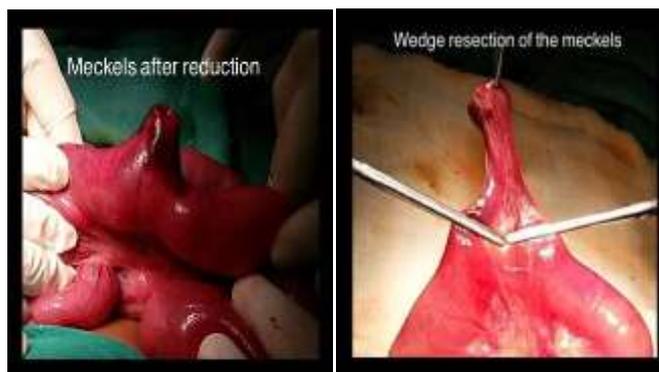
a lump was noted, excision of the lump and ileo-ascending anastomosis was done. Postoperative period was uneventful and patient was discharged on day 6. Histopathological examination was suggestive of duplication cyst of caecum



Fig-2: Mass involving whole of the caecum

3. A 4 month old male child presented with the history of abdominal distension, bilious vomiting and bleeding per rectum. On examination patient was lethargic and dehydrated, abdomen was distended, and on per rectal examination bleeding was present. Ultrasonography was done which showed intussusception. Patient was posted for surgery after

stabilisation of the patient. Abdomen was explored and ileo-colic intussusception was reduced, a meckels diverticulum was noted at about 20cm from ileo-caecal junction. Wedge resection of the meckels diverticulum was done. Postoperative period was uneventful and patient was discharged on 5th day.



**Fig-3: a: Meckels diverticulum after reduction of the intussusception
b: wedge resection performed**

These are the number of intussusception cases with a specific lead point.

	Age	Sex	Lead point	Procedure	Biopsy
1	4months	Male	Meckels	Wedge resection	Meckels
2	6months	Male	Meckels	Wedge resection	Meckels
3	12year	Male	Meckels	Ileo-ileal resection anastomosis	Meckels
4	2 year	Male	Mass involving caecum and ascending colon	Resection of mass and Ileo-ascending anastomosis	Non- Hodgkins lymphoma
5	5months	Female	Caecal mass	Excision of mass with ileo-ascending anastomosis	Duplication cyst
6	9year	Male	Caecal mass	Excision of mass with ileo-ascending anastomosis	Duplication cyst
7	12year	Female	Caecal mass	Excision of mass with ileo-ascending anastomosis	Duplication cyst

RESULTS

A total of 131 intussusception patients were operated from april2015 to april2016, out of which 7(5.1%) patients were operated with pathological lead points.3 cases presented with meckels diverticulum (42.8%), in 2 cases wedge resection and 1 case ileo-ileal anastomosis was done. 1 patient with non-Hodgkins lymphoma (14.2%), 3 patients with duplication cyst (42.8%), in all these cases resection of the mass with ileo-ascending anastomosis was done All patients has uneventful postoperative period.

DISCUSSION

Intussusception is a common cause of intestinal obstruction in children with the greatest incidence seen in 3-9 months of age [8]. In small percentage of patients a specific lead point is the cause of intussusception, most common being meckels diverticulum followed by lymphomas, intestinal duplication and polyps. In our study also we found meckels diverticulum and duplication cyst being the major cause of lead points in intussusception followed by non-Hodgkins lymphoma seen in 1 patient. The treatment of choice being surgical excision as done in our patients with excellent results.

CONCLUSION

It is important to be aware of Pathological lead point causing intussusception seen in small percentage

of patients with typical age group which can be managed with surgical excision giving good results.

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