International Surgery Journal
Basu S. Int Surg J. 2019 Jan;6(1):310-313
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20185494

Case Report

Trans-anal protrusion of intussusception (TAPI) revisited: managed successfully in a resource limited hospital setting

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Received: 10 November 2018
Accepted: 01 December 2018

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ABSTRACT

Intussusception is the most common cause of Acute bowel obstruction in infants and toddlers. However, a Trans-anal protrusion of an intussusception (TAPI) is relatively rare and is not well reported in literature. A high index of suspicion is essential as the diagnosis is purely clinical, and often confused with rectal prolapse. Most patients present late due to neglect on the part of the parents or the primary treating physician. A late presentation usually results in a poor outcome and increased morbidity and mortality. Uncommonly these children may present early, where a prompt surgical management is desirable. The author reports a single case of a Trans anal protrusion of intussusception (TAPI) in a 1-½ -year old female child who was successfully managed in the author's resource-limited teaching institution without a dedicated pediatric surgery unit.

Keywords: Anastomosis, Air enema, Emergency, Intussusception, Laparotomy, Manual reduction, Obstruction, Trans-anal, Prolapse, Resection, Stoma

INTRODUCTION

Intussusception is the most common cause of acute bowel obstruction in infants and toddlers. A prolapsed intussusception or a Trans anal Protrusion of Intussusception (TAPI) is condition where there is an invagination of an intestinal segment into the segment adjacent to it, with exteriorization of the head of the intussusception trans-anally.

Such cases are rare and ill reported. Most patients present late because their parents fail to seek urgent medical help or an improper diagnosis on the part of the primary care physicians. It is generally reported from developing countries, such as Asia and Africa where poverty and illiteracy prevail.[1,4]

A lack of resources and knowledge impedes prompt management.

CASE REPORT

A 1½ years old apparently well female child, presented to author's Emergency department with her informant mother who stated that the child suffered from an acute attack of diarrhea for two days. This diarrhea was followed by severe cramping abdominal pain that lasted for a day that made the child, pull up her legs, during the episode of pain. The pain was intermittent, severe in intensity and colicky in nature. The pain was associated with two to three bouts of non-bilious vomiting and a reddish colored mass, prolapsed through the anal opening, with some mild bleeding. The child's developmental milestones were normal, and the immunization was as per schedule.

The child was hemodynamically stable, without any features of dehydration. A prompt abdominal examination revealed an ill-defined lump occupying the

Left side of the abdomen predominantly in the lumbar region (Figure 1) and the right iliac fossa was empty. There was mild increase in temperature, no organomegaly and bowel sounds were absent.

A large reddish, fleshy, glistening mass prolapsed through the through the anus with mucus, that bled on touch. On digital rectal examination, a sulcus was felt in between the rectal wall and the protruding mass (Figure 2). All other systems were clinically normal.

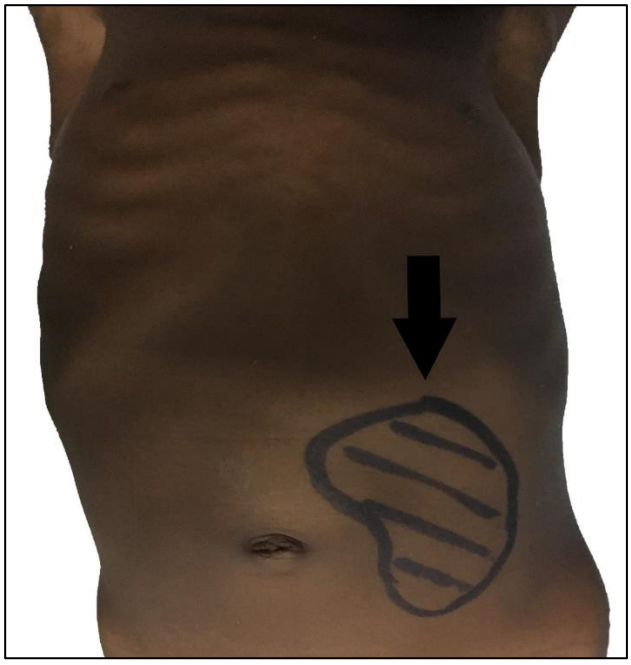

Figure 1: Ill-defined lump on the left side of the abdomen (black arrow).

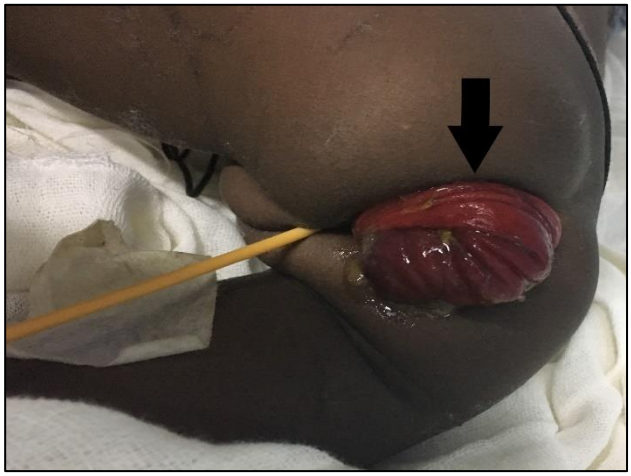

Figure 2: Trans-anal protrusion of the intussusception (black arrow).

A provisional diagnosis of prolapsed intussusception was made on clinical suspicion. Urgent blood investigations were normal. Ultrasound of the abdomen revealed a 3.5cm mass on the left side of the abdomen with a gut within a gut like appearance with a classical target sign on transverse section. Doppler study confirmed the viability of the gut. (Figure 3) straight X ray wasn't conclusive.

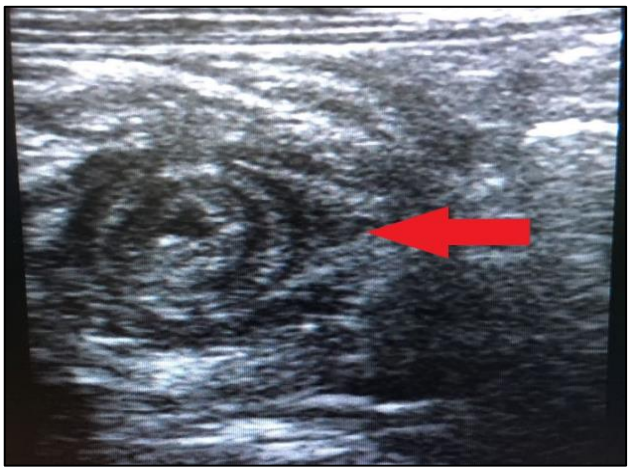

Figure 3: Ultrasound of the abdomen showing a typical Target sign (red arrow).

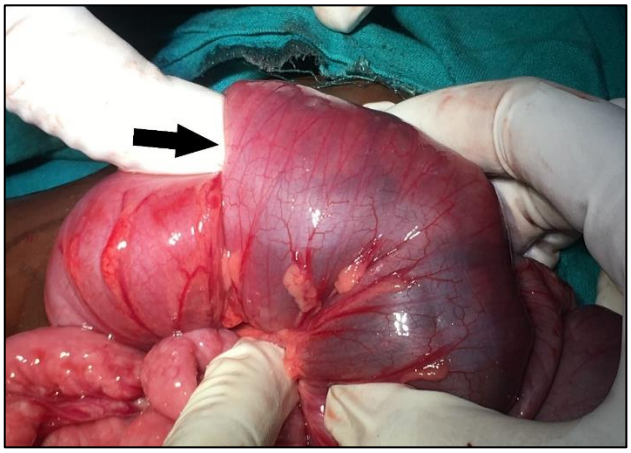

Figure 4: Colo-colic segment of intussusception (black arrow).

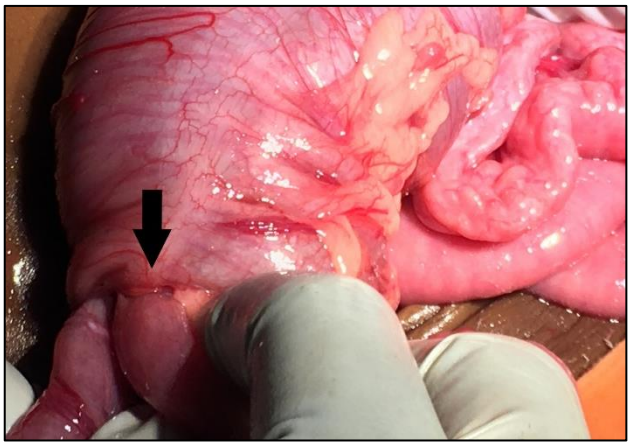

Figure 5: Ileo-colic segment of intussusception (black arrow).

After resuscitation the child was taken up for an emergency laparotomy. A supra-umbilical transverse incision was given to open the abdomen. Ileo-colic and colo-colic intussusception was found. (Figures 4, 5) The gut segment was viable, and a manual reduction was successful (Figure 6).

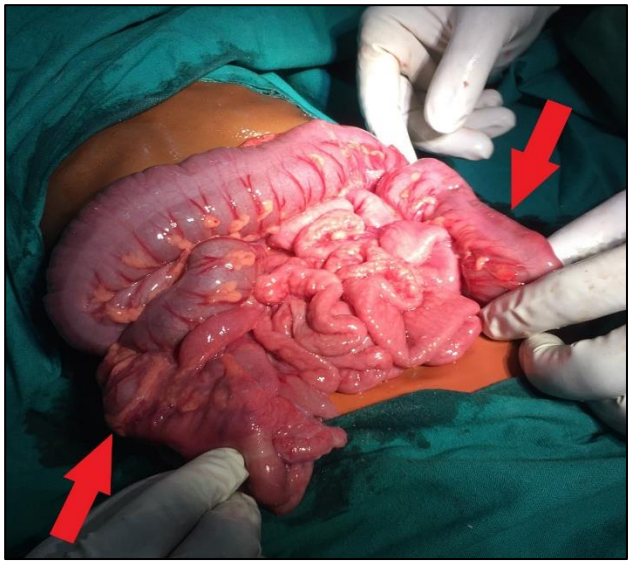

Figure 6: Post reduction-completely peritonealised ascending and descending colon due to non-fixation and long persistent mesenteries (red arrows).

Post operatively the patient did well, she was discharged after two days and has attended author's outpatient department for subsequent follow ups. She is presently in good health.

DISCUSSION

Trans-anal protrusion of Intussusception (TAPI) is a rare clinical entity. Although there are limited sources available in literature, these cases are usually reported from the developing world like Asian and African countries. The incidence may go up to 16%. Patients generally present before one year (average 5months) as suggested by Ramachandran P et al.[1] The entity has been reported in females as in present case, which is different from intussusception per se because it is prevalent more in males. Patients present clinically with a triad of symptoms: prolapse, rectal bleeding and a left iliac mass. However, the cardinal symptoms of abdominal pain and vomiting may be absent.

A high index of suspicion and history is suggestive, in patients presenting with rectal bleeding.[1,2] During clinical examination a sulcus is felt between the rectal wall and the protruding mass.[3] Hence, a thorough clinical examination to differentiate a Trans anal Protrusion of Intussusception (TAPI) from a rectal prolapse is essential.

The ultrasound is a standard adjunct to clinical examination where a doughnut or target sign is evident on transverse views and a pseudo kidney sign on a longitudinal view.[4] Most patients present late and are grossly dehydrated and may require urgent surgery after prompt stabilization. Delay in presentation due to neglect on the part of the parents or primary care physicians is the prime cause of increased morbidity and mortality around 25-40%. A stoma or resection and anastomosis may be required, as suggested by Ray et al, Mutua I et al, and Ameh et al.[5-7] Ibrahim IA, could co-relate the length of the mesentery and duration of symptoms to the viability of the affected segment of gut.[8] Obiora EU et al, Ngom G et al, and Sivit CJ, proposed a possible explanation of the course of the disease.[9-11] They state that the normally retroperitoneal Ascending and descending colon are free and get peritonealised due to a long mesentery. Another theory of a preceding episode of diarrhea substantiates the epidemiological distribution of this presentation. The incidence of such an event is a common in Africa or India, where intestinal hyperperistalsis may result in a Trans anal protrusion of the intussusception (TAPI).[1]

As in present case, a few patients who seek early help, are clinically and hemodynamically stable, without dehydration a manual reduction is sufficient on laparotomy. Air enema may be considered as an alternative to surgery, as suggested by Ramachandran P et al.[1]

CONCLUSION

The studied patient would probably be a lucky child who presented early with prolapsed intussusception. Since the child was hemodynamically stable a manual reduction was successful with a good prognosis, in our resource limited hospital. Since this condition is rarely reported, future studies would be necessary for this clinical entity.

ACKNOWLEDGEMENTS

The author would like to thank the Department of General Surgery of Bankura Sammilani Medical College and Hospital for their help and support. And also like to thank the Department of Pediatric Surgery of Institute of Post graduate Medical Education and Research (IPGMER), Kolkata for providing the critical insights to the design of this manuscript. He would like to thank the Association of Surgeons of India (West Bengal, State Chapter) and the delegates at SASICME, Mid-term conference for their appreciation for this award-winning case poster.

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

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Cite this article as: Basu S. Trans-anal protrusion of intussusception (TAPI) revisited: managed successfully in a resource limited hospital setting. Int Surg J 2019;6:310-3.