

Peer Review File

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Reviewer A

Comment 1: The authors present a case report of a three-year-old who presented with a bowel obstruction after consuming kinetic sand. Importantly, this patient had a history of ASD and pica which puts her at an outlier in terms of her increased risk for ingestion of a variety of objects that could endanger her (and a significantly higher risk than the general pediatric population).

Reply 1: We agree that the described patient is at increased risk of ingesting nondigestible objects due to her underlying diagnosis of pica. We would like to highlight though that the scent and appearance of this product would be appealing to any child, especially toddlers, known to put foreign objects in their mouth. We are clarifying these circumstances in the manuscript.

Changes in the text: We have modified the ending of the Discussion:

“Compared to the general pediatric population, our patient is at higher risk for ingesting of indigestible objects due to her history of pica. However, in our opinion, the realistic appearance and scent of this product puts also neurodevelopmentally unchallenged children at risk for ingestion. Ultimately, the management of intussusception in this case was in alignment with the typical standard of care despite ingestion of a foreign body as a lead point. Intussusception secondary to kinetic sand ingestion can be safely managed with hydrostatic enema, and bowel rest. Gastric decompression via oro- or nasogastric tube should be considered in cases with ongoing emesis.” (Page 8, Lines 182-189)

Comment 2: I have questions regarding the clinical management of this patient. Multiple ileal-ileal intussusceptions were identified, but typically those intussusceptions are incidental, self-limited, and require no intervention (with the exception of after a large retroperitoneal dissection) and are not of the same ilk as a classic ileo-colic intussusception.

Reply 2: Thank you for bringing this to our attention. We agree that this should be clarified and further discussed. Ileo-ileal intussusceptions in an otherwise healthy child without previous operations are a frequent finding on US or CT scan and are self-limiting. They typically do not warrant surgical intervention. The decision to proceed with radiographic reduction in this particular patient was made after evidence of ileo-colic intussusception on the initial US and CT scan upon arrival. We clarify that the outcome of reduction of these ileo-ileal intussusceptions is consistent with spontaneous resolution of intussusception prior to procedure in alignment with typical clinical course.

Changes in the text:

Discussion paragraph 1.

“Our patient was found to have ileo-ileal intussusceptions in addition to an ileo-colonic intussusception. Ileo-ileal intussusceptions in healthy children are common incidental findings on imaging and are typically self-resolving. However, ileo-colonic and colo-colonic intussusceptions are more concerning and typically require intervention.” (Page 6, Line 139-142)

Comment 3: Moreover, the treatment that was stated was a contrast enema, but the typical treatment for an intussusception would have been a pneumatic reduction enema, which is not described here. In fact, the enema seems to have shown that the obstruction was self-limited and had resolved itself. While that represents an interesting finding, I think it's an observation that should not be overlooked.

Reply 3: We acknowledge that pneumatic enemas are the standard treatment for intussusception in many institutions. However, hydrostatic enemas are also an established method for reduction of ileo-colic intussusception. In our institution, our protocol applies hydrostatic reduction with diluted barium. We will mention both methods and discuss in the Discussion section.

Changes in the text: We have edited the Discussion section as follows:

“Accepted treatment options of ileo-colonic intussusceptions are retrograde hydrostatic or pneumatic enema under fluoroscopic control. Studies have shown that both are adequate interventions for reduction. The advantage of hydrostatic enemas with contrast is the ability to both diagnose and visualize the reduction post-intervention. Our institution’s protocol outlines use of hydrostatic enema with diluted barium for pediatric patients with ileo-colonic intussusception.” (Page 7, Line 147-152)

Comment 4: The authors seem to suggest that increased warning labels should be provided to the public for safety. My interpretation of this case would be that increased provider awareness of this condition as self-limited after a period of bowel rest and observation alone seems a more appropriate conclusion to draw.

Reply 4: This is an excellent point for the conclusion. In the context of our patient with history of pica, a better conclusion for providers would be that nonoperative management can lead to spontaneous reduction. After researching the product, it was shocking to see the similarities to real food given the added scent and realistic appearance. While we would like to increase provider awareness, we would like to suggest an ingestion warning for the public. We have modified the text to focus our take-home points on nonoperative management.

Changes in the text: We have edited the Discussion and Conclusions sections as follows: “Compared to the general pediatric population, our patient is at higher risk for ingesting of indigestible objects due to her history of pica. However, in our opinion, the realistic appearance and scent of this product puts also neurodevelopmentally unchallenged children at risk for

ingestion. Ultimately, the management of intussusception in this case was in alignment with the typical standard of care despite ingestion of a foreign body as a lead point. Intussusception secondary to kinetic sand ingestion can be safely managed with hydrostatic enema, and bowel rest. Gastric decompression via oro- or nasogastric tube should be considered in cases with ongoing emesis.” (Page 8, Lines 182-189)

Conclusions:

“Ingestion of kinetic play sand can lead to bowel obstruction with ileo-colonic intussusception.” (Page 9, Line 192)

“This report serves to raise awareness of potential dangers of kinetic sand ingestion and emphasize that standard management of intussusception via reduction enema is also effective in this clinical scenario.” (Page 9, Lines 200-202)

Reviewer B

Comment 1: In Figure 2, please indicate the meaning of the white arrows in the legend.

Reply: We have made the appropriate changes for it.

Comment 2: It seems there is no timeline in your manuscript. Please check item 7 in your filled reporting checklist.

Reply: We have added the timeline as a figure and cited it in the text. We also updated the CARE checklist accordingly.