Computed Tomography Target Sign: A Case of Mistaken Intussusception

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Abstract A 57-year-old male presented with a complete small bowel obstruction. Computed tomography confirmed an obvious transition point in the distal ileum, as well as an adjacent small bowel target sign. At exploratory laparotomy, the CT target sign had been caused by an obstructing phytobezoar cast ejected from a Meckel's diverticulum.

Keywords Meckel's diverticulum · Target sign

A previously healthy 57-year-old male presented with a complete small bowel obstruction. His vomiting was non-bilious in nature. Physical exam revealed significant abdominal tenderness and distention. Computed tomography (CT) confirmed a small bowel obstruction with an obvious transition point in the distal ileum. This finding was also associated with an adjacent small bowel target sign (Fig. 1). At exploratory laparotomy, a large phytobezoar was noted to be obstructing the ileocecal valve. It was consistent in size and shape with the intra-luminal dimensions of the meckel's diverticulum (Fig. 2). In spite of our suspected diagnosis, no intussusception was present. After reducing the phytobezoar back into the diverticulum, a small bowel resection with a functional end to end stapled anastomosis was performed.

Fig. 1 Small bowel target sign

Fig. 2 Meckel's diverticulum with phytobezoar

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The patient was discharged from the hospital one week postoperatively and continues to do well.

A target sign is classically defined as a CT image associated with thickening of the intestinal wall in which a lower attenuated middle layer is surrounded on each side by layers of higher attenuation [1]. The diagnosis of a small bowel target sign most commonly correlates with intussusception. Although CT target signs have also previously been described in patients with Crohn's Disease [2], chronic radiation enteritis and graft versus host disease [1], this is the first report of a small bowel target sign caused by an

obstructing foreign body (phytobezoar) cast ejected from a Meckel's diverticulum.

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