

Small-Bowel Feces Sign in Small Bowel Obstruction

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The small-bowel feces sign is a finding found at CT of the abdomen. It is defined by the presence of fecal-like material mixed with gas bubbles in the dilated lumen of the small intestine, usually seen prior to the point of obstruction⁽¹⁾. It is the result of delayed small-bowel transit time. Therefore, the water has more time to get absorption from the incompletely digested food. This particulate content, when mixed with air bubbles, which is believed to be partially produced by bacterial overgrowth, gives the fecal-like appearance, so

called “small-bowel feces sign”⁽²⁾. Since the sign is usually seen immediately proximal to the level of obstruction, it may be helpful to locate the site and cause of obstruction (Figure 1-2).

Small-bowel feces sign is not specific for SBO, and could be found in other conditions, such as cystic fibrosis, infectious or metabolic bowel disease, rapid jejunostomy tube feeding, and bezoar⁽²⁻⁴⁾ (Figure 3). The sign itself is considered a secondary finding for small bowel obstruction (SBO). Therefore, the sign

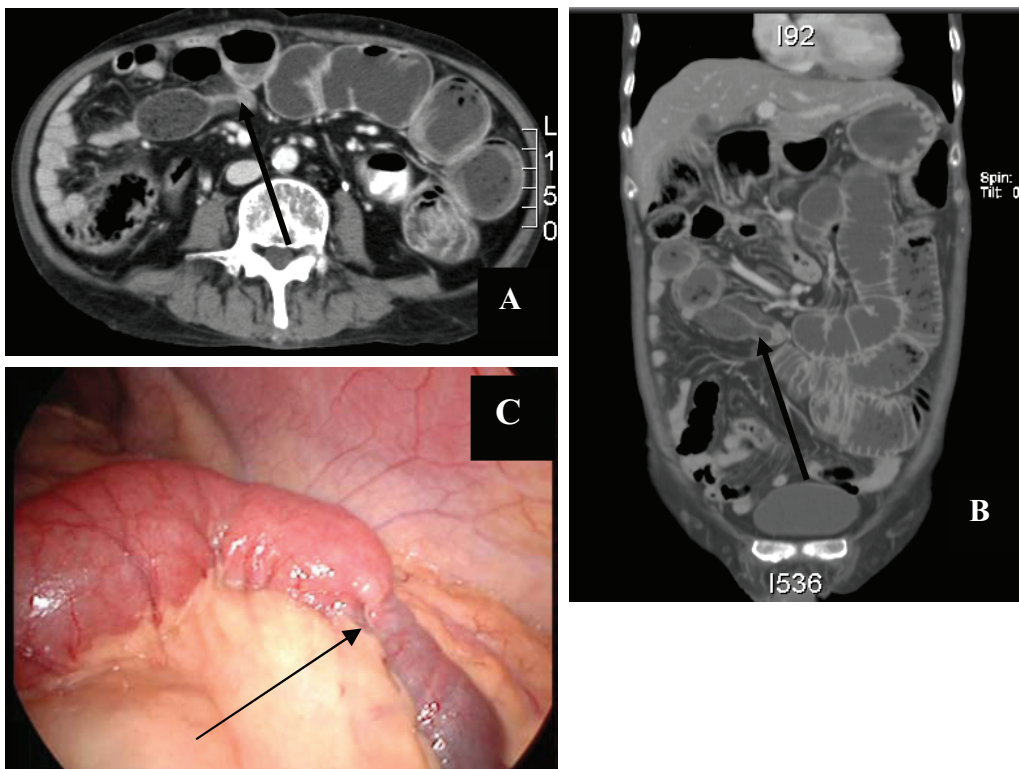


Figure 1. Small-bowel feces sign caused by a benign stricture.

CT scan, axial (A) and coronal (B) views show a transitional point of obstruction (arrow) with dilated proximal small bowel containing fecal-like material. Laparoscopic view (C) shows a corresponding transitional point (arrow), which is believed to be a benign stricture.

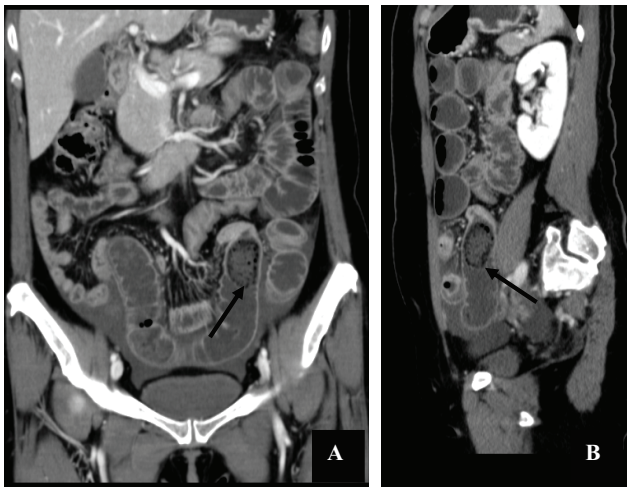


Figure 2. Small-bowel feces sign caused by adhesion. CT scan, coronal (A) and sagittal (B) views show fecal-like material (arrows) within the dilated small bowel, just proximal to the site of obstruction.

has to use in conjunction with the primary sign of SBO. The primary sign of SBO is that of a transitional zone where there is a difference between the calibers of the proximal and distal small bowel loops, of which the proximal small bowel loops are distended and distal loops are collapsed⁽⁵⁾. The sensitivity of small bowel feces sign varies, ranging from low percentage of 7-8%⁽⁶⁾ to high percentage of 60-80%^(2,7) of cases. However, when found, it tends to signify moderate to high grade small-bowel obstruction⁽⁷⁾.

In conclusion, when small-bowel feces sign is present in patients with SBO, it often presents in moderate to high grade obstruction. It is usually located at the point of transition, thus facilitating identification of the cause of obstruction, which will guide the appropriate management.

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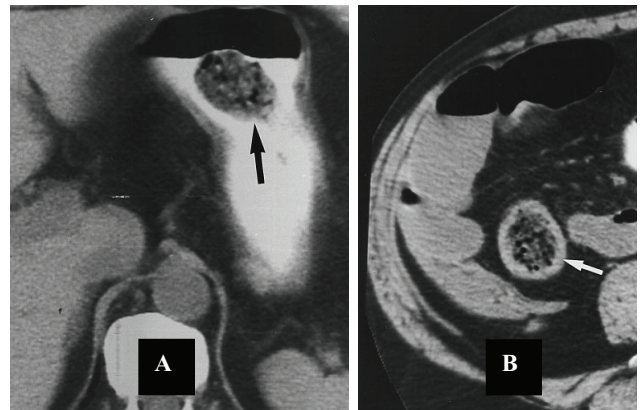


Figure 3. Bezoar mimics small-bowel feces sign.

- A: CT shows gastric bezoar, which contains mottled air mixed with semisolid content,
B: CT 6 months later, the bezoar migrates to the ileum giving the CT finding similar to small-bowel feces sign.

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