Cecal bascule
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Section: Abdominal imaging
Area of Interest: Abdomen
Procedure: Diagnostic procedure
Procedure: Intraoperative
Imaging Technique: CT
Imaging Technique: Catheter venography
Imaging Technique: Conventional radiography
Imaging Technique: CT-High Resolution
Special Focus: Acute Obstruction / Occlusion Volvulus
Case Type: Clinical Cases
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Patient: 74 years, female

Clinical History:
A 74-year-old lady was admitted for emergency joint replacement after traumatic hip fracture. The procedure was performed without any complications. After 4-6 days of progressive constipation, nausea, vomiting and increasing abdominal distention an abdominal X-ray demonstrates dilated, air-filled caecum in the left upper quadrant. A CT examination was performed.

Imaging Findings:
Contrast-enhanced CT showed a severe dilation of the caecum, reaching 11 cm width and 30 cm length, with air and faeces within it, but no mesenteric or vascular torsion. CT did not show any signs of ischaemia, and the small bowel was of a normal calibre. These findings were subsequently confirmed by surgical procedure, in which a complete right hemi-colectomy with ileocolic anastomosis was performed.

Discussion:
Caeal bascule is an extremely rare type of intestinal obstruction, that occurs when a mobile caecum folds upward over the ascending colon across bands that may be congenital, post-operative, or inflammatory, obstructing it through a valvular mechanism. [1, 2]
It accounts only for approximately 0.2% of all intestinal obstructions. [3]
Caeal bascule is classified as type 3 caecal volvulus, different from types 1 and 2, where an axial rotation around the mesenteric axis, including the ascending colon and terminal ileum is involved (type 1 being clockwise and type 2 counter-clockwise). Caeal bascule doesn't involve any kind of rotation. Therefore, types 1 and 2 have a higher risk of complications, since the mesenteric torsion can lead to vascular compromise, gangrene, and perforation.

The chance of developing any kind of caecal volvulus is increased during periods of simultaneous medical conditions. 12-28% of the reported cases of acute caecal volvulus involved patients hospitalized for another illness. [4]
Only about 10% of all caecal volvulus cases are caecal bascules. [5] Some authors do not include caecal bascule as a type of volvulus, since there is no torsion, and the risk of vascular
Multi-detector CT of the abdomen is the diagnostic imaging modality of choice, since it can not only show the folded caecum, but also demonstrates any findings suggestive of ischaemia, such as wall thickening, poor mural enhancement or infiltration of the adjacent fat. Reformation of coronal images may be helpful to identify the obstruction site. [7]
Regardless of the cause of caecal distention, a caecal diameter greater than 10-12 cm should be interpreted as a sign of severity, indicating risk of imminent perforation. [1]
Optimal patient management includes metabolic support and early diagnosis, but the definitive therapy for most cases of caecal bascule is surgery. [5]

**Differential Diagnosis List:** Acute caecal volvulus, type caecal bascule., Caecal volvulus (Types 1 and 2), Sigmoid volvulus, Bowel obstruction, Ogilvie syndrome

**Final Diagnosis:** Acute caecal volvulus, type caecal bascule.

**References:**

López E; Barber, C; Florí, L; Mazón M; Martínez, M J; Ripollès, T (2008) Vólvulo de ciego: manifestaciones radiológicas. National congress of the spanish society of radiology (SERAM). Online poster ID e-Poster: 1550
Figure 1

Description: The plain abdominal radiograph shows dilated, air-filled caecum that reaches the left upper quadrant of the abdomen. Origin: Department of Radiology. Clínica Universidad de Navarra, Navarra, Spain.
Description: CT topogram corroborates the plain film findings, clearly showing the dilated caecum in its entirety. Origin: Department of Radiology. Clínica Universidad de Navarra, Navarra, Spain.
Description: Abdominal CT shows the dilation and abnormal placement of the folded caecum, which reaches a maximum of 11 cm width. Origin: Department of Radiology. Clínica Universidad de Navarra, Navarra, Spain.
Description: The coronal reformation gives further anatomical information about the relationship of the caecum with the rest of abdominal structures. Origin: Department of Radiology. Clínica Universidad de Navarra, Navarra, Spain.
*Description:* The sagittal reformation displays the anterior folding of the caecum. *Origin:* Department of Radiology. Clínica Universidad de Navarra, Navarra, Spain.
Description: MPR images shed some light on the precise site where the pathological folding of the caecum occurs. Origin: Department of Radiology. Clínica Universidad de Navarra, Navarra, Spain.
**Description:** The removed surgical specimen shows the enlarged caecum. **Origin:** Department of General surgery, Clinica Universidad de Navarra, Navarra, Spain