CLINICAL VIGNETTE

An Interesting Case of Cecal Bascule Causing Intestinal Obstruction

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Introduction

Cecal bascule is an uncommon type of cecal volvulus. It occurs in a large and mobile cecum that folds up over itself resulting in a closed obstruction to the cecal pole and appendix. Abdominal radiographs of cecal bascules usually demonstrates a distended air-filled cecum located centrally within the abdomen. Occasionally, the appendix is distended and air-filled. As the terminal ileum is usually not involved in the volvulus, the small bowel is not obstructed.

We present a case of a 50-year-old woman who presented with acute abdominal pain and was found to have a cecal bascule with partial small bowel obstruction.

Case Presentation

A 50-year-old Caucasian woman came in to the emergency room with umbilical and right-sided abdominal pain for 4-5 days. She described right lower quadrant pain that was sharp, intermittent, and worsened with food intake with no relieving factors.

She had chronic abdominal pain for years, which had been worsening over the few months prior to presentation. She also had vomiting, subjective fever without chills, and diarrhea for one day prior to presentation.

Her past medical history was significant for chronic back pain, bipolar disorder, constipation, hypothyroidism, and diverticulosis. Her past surgeries included cholecystectomy, hysterectomy, InterStim bladder device placement, and abdominoplasty.

Her admission vital signs included temperature 37.6^{o}C, heart rate 77 bpm, blood pressure 98/58 mmHg, respiratory rate 15 per minute, and oxygen saturation 99% on room air. On physical examination, she was in significant distress from the abdominal pain. Her abdomen was tender to palpation diffusely with voluntary guarding and normo-active bowel sounds.

Initial blood work revealed white blood cell count of 5000 cells per microliter, Hemoglobin 13.6 g/dL, Creatinine 0.8 ml/min/1.3 m2, AST 40, ALT 34, Total bilirubin 0.4, alkaline phosphatase 130, albumin 4.2, and lipase 40.

CT scan of the abdomen and pelvis with intravenous contrast showed a cecal bascule, causing mild partial distal small bowel obstruction. The cecum had flipped into left side of abdomen and folded anteriorly over the ascending colon (Figure 1). This resulted in partial distal small bowel obstruction with stasis of small intestinal contents in the distal ileum, and ileal loops measured 2.3 cm transversely.

Discussion

Cecal bascule is a rare anatomical variant of cecal volvulus accounting for about 10 to 20 percent of the cases. The incidence of cecal bascule is reported to range from 2.8 to 7.1 per million people per year and is responsible for 1 to 1.5 percent of all adult intestinal obstructions.[1-2] The ages at presentation are presumed to be affected by dietary and cultural influences and their effects on intestinal motility, resulting in variable peak ages of presentation. For example in India, the average reported age is 33 years as compared with 53 years in Western countries.

It can present as chronic abdominal pain, abdominal distension, cecal dilatation, and bowel obstruction.

There are three types of cecal volvuli:[1-4]

> Type I – Cecal volvulus develops from clockwise axial torsion or twisting of the cecum around its mesentery, including the ascending colon and terminal ileum;
>
> Type II – Loop volvulus develops from a counterclockwise axial torsion of the cecum around its mesentery, including the ascending colon and terminal ileum; and
>
> Type III – Cecal bascule involves the upward folding of the cecum rather than axial twisting.

Type I and II are the most common accounting for 80 percent of cecal volvuli, while cecal bascule accounts for 20 percent. Cecal volvuls typically occurs in patients who have increased cecal mobility, whether congenital or acquired anatomical abnormalities, such as surgical adhesions. Some clinical settings associated with cecal volvulus include pregnancy, colonic atony, colonoscopy, Hirschsprung's disease, and mobile cecum syndrome.

The clinical presentation can vary ranging from insidious, intermittent episodes of abdominal pain to an acute abdominal catastrophe. Computed tomography (CT) of the abdomen and pelvis confirms the diagnosis of cecal volvulus in approximately 90 percent of patients,[5-7] the remainder are diagnosed at the time of an exploratory operative procedure. History and physical examination alone cannot confirm the diagnosis. Plain abdominal radiographs can diagnose a large intestine obstruction but are insufficient to confirm the diagnosis of cecal volvulus in most patients. The optimal management for patients with a cecal volvulus is operative. The utility of endoscopic decompression is considered limited with an estimated success rate about 30%.[8-10]

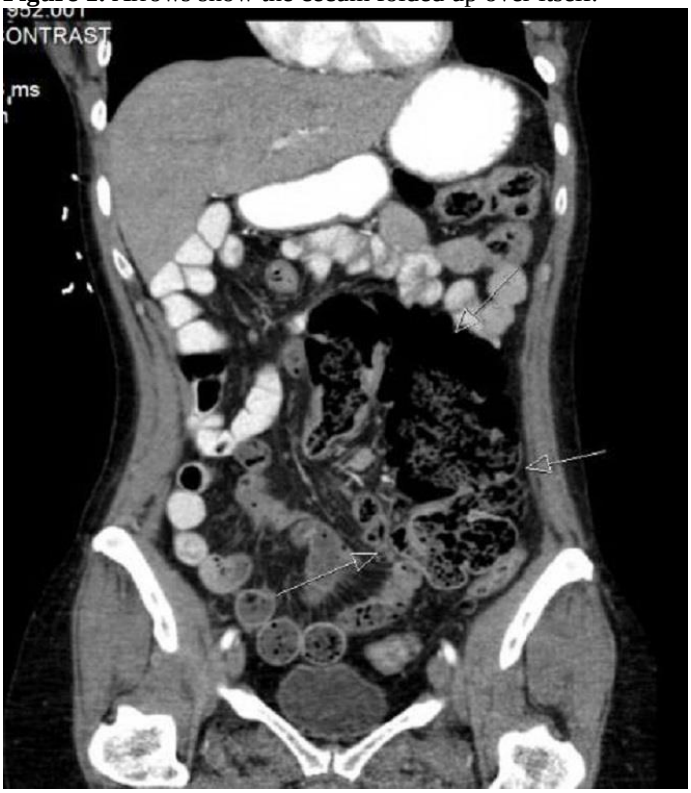
Our patient had an exploratory laparotomy and right hemi-colectomy without major complications.

Conclusion

In summary, cecal bascule is defined as a type 3 cecal volvulus. It is an extremely rare diagnosis that should be considered in patients presenting with cecal dilatation. A CT scan usually confirms the diagnosis and surgical therapy is considered most appropriate and definitive treatment for cecal bascule.

Figures

Figure 1. Arrows show the cecum folded up over itself.



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