

## Case Report

# Levoscoliosis A Rare Cause of Ostomy Dysfunction

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## Abstract

Ostomy-related complications including peristomal infection, parastomal hernia, stoma stenosis, retraction or mucocutaneous separation can be debilitating to patients. Technical error, patient factor and the disease process are known risk factors for ostomy complications. We present a rare case of end ileostomy dysfunction in 70 years old lady with history of ulcerative colitis status post proctocolectomy with permanent end ileostomy in 1993. She was seen in clinic for worsening peristomal pain, constipation, difficulty pouching, back pain, and worsening scoliosis. On examination, she had severe scoliosis with curvature of the lumbar spine to the left with associated abdominal wall deformity. Ileostomy appeared retracted and narrowed at the level of the rectus muscle. CAT scan of abdomen and pelvis showed severe scoliotic curvature of spine with shifting of abdominal viscera in the direction of the stoma and narrowing of ostomy tract. Ostomy revision was offered to patient, but she declined. Levoscoliosis associated with significant abdominal wall deformity and abdominal viscera shifting is a rare cause of ostomy complications.

**Keywords:** Levoscoliosis; Scoliosis; End ileostomy; Ulcerative colitis; Ileostomy complication

## Case Presentation

Over 10,000 ostomies are created annually in the United States for the management of diseases such as inflammatory disease, diverticular disease, colorectal cancer, and emergency fecal diversion. Stoma related complications range from 37% for elective cases and 55% for emergency surgeries [1]. Ostomy-related complications include ischemia, necrosis, mucocutaneous separation, high output, stoma retraction, prolapse, stenosis, peristomal fistula, obstruction, peristomal skin complications, and parastomal hernia [2]. These complications from ostomies can negatively affect patients financially, physically, and psychologically. The etiology of ostomy complications is multifactorial including surgical error, patient factor, the disease process, and stoma-specific factors. Inflammatory bowel disease has been reported as a risk factor for stoma-related complications, with Crohn's disease having a higher complication rate than ulcerative colitis [3]. Peristomal fistula, stoma retraction and stenosis are the most common stoma-related complications in patients with IBD [3,4]. Carlstedt et al. [4] reported that surgical technique, length of concomitant ileal resection and postoperative weight gain were the likely causative factors of ileostomy stenosis and retraction in patients with IBD.

We present a unique case of a 70 year old lady with ostomy dysfunction due to worsening levoscoliosis. Patient has a history of ulcerative colitis status post proctocolectomy with permanent right lower quadrant end ileostomy in 1993. She presented to the colorectal

surgery clinic with five months history of worsening peristomal pain, difficulty pouching, back pain, and worsening lumbosacral scoliosis. Her pain was localized primarily around her ostomy in the RLQ, with radiation in a band-like pattern across her lower abdomen. The pain is worse at night and with constipation. She also endorsed difficulty pouching and peristomal skin breakdown. She described the progressive feeling of her "ileostomy being tugged and pulled" as her scoliosis worsened over the years. CAT scan of abdomen and pelvis demonstrated severe scoliotic curvature of spine with shifting of abdominal viscera towards the ostomy, fecalization of small bowel and narrowing of the ileostomy at the rectus muscle. On examination, she had obvious severe scoliosis with spine curvature towards the stoma. Abdomen was soft, nondistended, and nontender. Ileostomy was retracted, narrowed but patent. Stoma revision was offered to patient, but she declined because she felt her back pain from worsening scoliosis was more bothersome than her ostomy dysfunction.

End ileostomy carries a complication rate of up to 70%, with peristomal skin complications, parastomal hernia, stoma retraction, and stenosis or prolapse the most common complications reported. The risk factors for stoma retraction or stenosis are not well documented in the English literature. Carlstedt et al. [4] reported that surgical technique, length of concomitant ileal resection and postoperative weight gain were the likely causative factors of ileostomy stenosis and retraction in patients with IBD. While many of these complications may be inherent to the ostomy itself, length of time since creation, or technical error; patient-related factors seem to play important role as well. We have detailed a unique case of ostomy retraction, stenosis, and difficulty pouching caused by worsening scoliosis with abdominal wall deformity.

Morbidity from ostomy complications negatively affects the quality of life of patients. Scoliosis is unfortunately a progressive spine deformity condition with associated abdominal wall deformity. Severe scoliosis with lateral curvature of the spine, Cobb angle greater than 40 degree presents with severe spine deformity, worsening back pain, and shifting of abdominal viscera with resultant stoma compression

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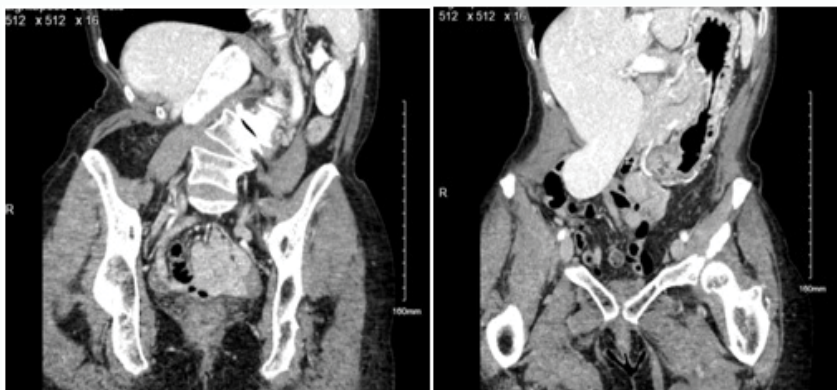
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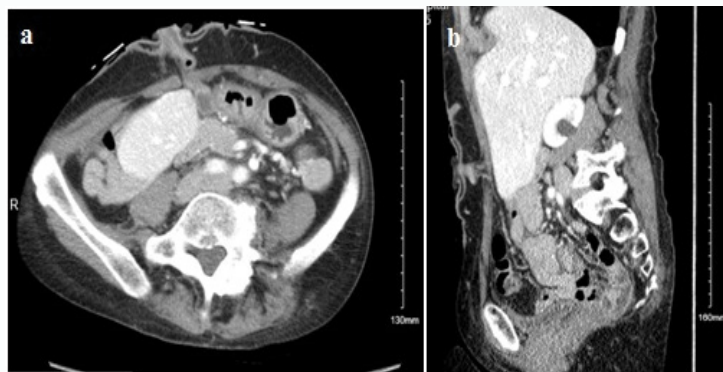
and retraction. Deformity of the abdominal wall may cause pouching difficulty. Severe scoliosis increases the risk of ostomy dysfunction, stoma revision or relocation should be offered to patients with life-altering complications or obstructing symptoms (Figure 1 and 2).

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**Figure 1:** CT abdomen and pelvis, coronal views, demonstrating severe scoliosis with shifting of abdominal viscera to the right.



**Figure 2:** CT abdomen and pelvis (A) Axial view and (B) Coronal view - severe scoliosis with shifting of abdominal viscera to the right causing mass effect on stoma.