## CASE FOUR

**Short case number: 3_8_4**
**Category: Gastrointestinal & Hepatobiliary Systems**
**Discipline: Surgery**
**Setting: Emergency Department**
**Topic: Obstruction of the large intestine [SDL]**

### Case

**Harper Taylor, aged 68 yrs, presents with abdominal distension and pain that is cramping in nature. He has been feeling nauseated for 2 days and has vomited bile stained foul smelling liquid for 24 hours. He appears pale and unwell and has marked halitosis.**

### Questions

1. What further history & examination would you undertake?
2. An abdominal series X-ray demonstrate massive colonic distension. What are the likely causes for the obstruction?
3. How does colonic obstruction typically present?
4. Outline the management of colonic obstruction.
5. What is volvulus of the large intestine & what risk factors have been identified for this condition?
6. How does volvulus present clinically?
7. What are the X-ray features of colonic obstruction?

**Suggested reading:**


1. Henry MM, Thompson JN, editors. Clinical Surgery. 3rd edition. Edinburgh: Saunders; 2012. Chapter 24.
2. Garden OJ, Bradbury AW, Forsythe JLR, Parks RW, editors. Davidson's Principles and Practice of Surgery. 6th edition. Philadelphia: Churchill Livingstone Elsevier; 2012. Chapter 16.

## ANSWERS

1. **What further history & examination would you undertake?**
   - routine GIT history
   - GIT examination
   - 10% to 15% of intestinal obstruction in adults is the result of obstruction of the large bowel. The most common anatomic site of obstruction is the sigmoid colon

2. **An abdominal series X-ray demonstrate massive colonic distension. What are the likely causes for the obstruction?**
   Mechanical causes:
   - adenocarcinoma (80-85%)
   - scarring a/w diverticular disease (5-10%)
   - volvulus (5%-10%)

   Functional causes:
   - pseudoobstruction

3. **How does colonic obstruction typically present?**
   - cramping abdominal pain
   - nausea & vomiting (*late sign*)
   - obstipation – no passage of flatus or stool for >12 hours
   - abdominal distension
   - ?palpable mass (bowel)
   - tympany
   - high pitched metallic rushes & gurgles

4. **Outline the management of colonic obstruction. (depends on whether partial (some lumen persists on CT) or complete)**
   - partial – possible treatment includes:
     - nasogastric decompression
     - intravenous fluidswith correction of electrolyte abnormalities
     - decompression – sigmoidoscopy (rigid or flexible) and placement of rectal tube
     - placement of stent- this may allow more time for definitive surgery to be performed at a later date.
   - emergency laparotomy is undertaken for acute large bowel obstruction with caecal distension beyond 12 cm severe tenderness, evidence of peritonitis, or generalized sepsis
   - Competent or incompetent ileocaecal valve ?- Competent- ICV and mechanical obstruction in colon creates a closed loop

5. **What is volvulus of the large intestine & what risk factors have been identified for this condition?**
   - volvulus is rotation of a segment of the intestine on the axis formed by the mesentery
   - most common sites of occurrence in the large bowel are the sigmoid (80%) and caecum colon (20%)

**6. How does volvulus present clinically?**

- abdominal pain
- vomiting
- obstipation
- abdominal distension (often massive)
- tympany
- high-pitched tinkling sounds & rushes
- tachypnoea

**7. What are the X-ray features of colonic obstruction?**

- radiologic findings (plain films) show distended proximal colon, air-fluid levels, and no distal rectal air

**8. Treatment of volvulus**

- sigmoidoscopy with rectal tube insertion to decompress sigmoid volvulus is the recommended initial treatment for that location
- emergency operation is performed promptly if strangulation or perforation is suspected or if attempts to decompress the bowel are unsuccessful
- emergency surgery involves resection without anastomosis and the construction of an end colostomy; surgery for recurrent sigmoid volvulus is usually sigmoid colectomy
- caecal volvulus is always treated surgically ; in a frail patient with caecopexy (suturing the caecum to the parietal peritoneum) or with right hemicolectomy with ileocolic anastomosis if the caecum is gangrenous or patient thought able to safely tolerate right hemicolectomy.