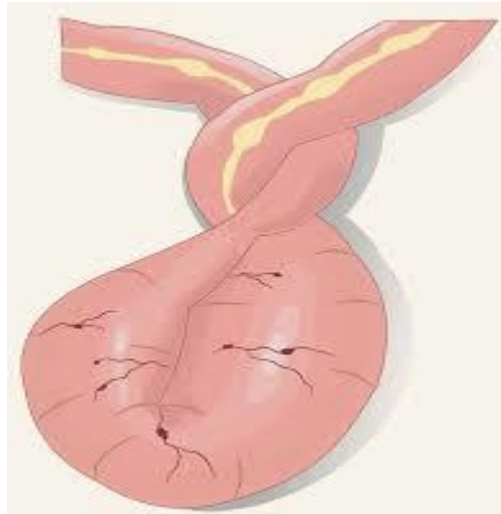


# Volvulus



- A volvulus is a twisting or axial rotation of a portion of bowel about its mesentery.
- The rotation causes obstruction to the lumen ( $>180^\circ$  torsion) and if tight enough also causes vascular occlusion in the mesentery ( $>360^\circ$  torsion).
- Bacterial fermentation adds to the distension and increasing intraluminal pressure impairs capillary perfusion.



- Sigmoid volvulus- 65%
- Caecum- 30%
- Mesenteric veins become obstructed as a result of the mechanical twisting and thrombosis results and contributes to the ischaemia



# Incidence

- Common in Asian countries
- Most common in old males
- Common in patients with chronic constipation and laxative abuse



# Volvuli



```
graph TD; A[Volvuli] --> B[Primary]; A --> C[Secondary]
```

A diagram showing the classification of Volvuli. At the top, a green box contains the word 'Volvuli'. Two blue arrows point downwards from this box to two yellow boxes below it. The left yellow box contains the word 'Primary' and the right yellow box contains the word 'Secondary'.

Primary

Secondary



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# Primary volvulus

- Occurs secondary to congenital malrotation of the gut, abnormal mesenteric attachments or congenital bands.
- Examples include volvulus neonatorum, caecal volvulus and sigmoid volvulus.



# Secondary volvulus

- The more common variety.
- Due to rotation of a segment of bowel around an acquired adhesion or stoma.



# Volvulus neonatorum

- This occurs secondary to intestinal malrotation (and is potentially catastrophic).





# Sigmoid volvulus

- This is uncommon in Europe and the USA but more common in Eastern Europe and Africa.
- Rotation nearly always occurs in the anticlockwise direction.



# clinical features

- In large bowel obstruction, distension is early and pronounced.
- Pain is less severe and vomiting and dehydration are later features.
- The colon proximal to the obstruction is distended on abdominal radiography.
- The small bowel will be dilated if the ileocaecal valve is incompetent.
- RIF pain
- Absolute constipation
- Abdominal distension



# Predisposing factors

- High-residue diet and constipation
- Chronic psychotropic drug use
- Adhesions
- Peridiverticulitis
- Over loaded redundant pelvic colon
- Long pelvic mesocolon



# Presentation

```
graph TD; A[Presentation] --> B[Fulminant]; A --> C[Indolent]; B --> D["Sudden onset, severe pain, early vomiting, rapidly deteriorating clinical course;"]; C --> E["Insidious onset, slow progressive course, less pain, late vomiting."];
```

Fulminant

Sudden onset,  
severe pain, early  
vomiting, rapidly  
deteriorating  
clinical course;

Indolent

Insidious onset,  
slow progressive  
course, less pain,  
late vomiting.



# Compound volvulus

- This is a rare condition also known as ileosigmoid knotting.
- The long pelvic mesocolon allows the ileum to twist around the sigmoid colon, resulting in gangrene of either or both segments of bowel.
- The patient presents with acute intestinal obstruction, but distension is comparatively mild.



# Investigations

- Plain X-Ray- omega sign
- Contrast enema
- CT scan



# Treatment

- IV fluids
- Catheterization
- Antibiotics
- Sigmoidoscopy
- Resection and anastomosis

