

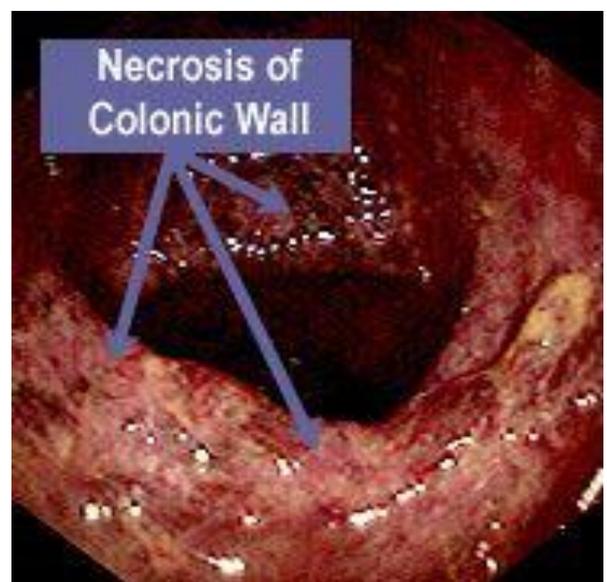
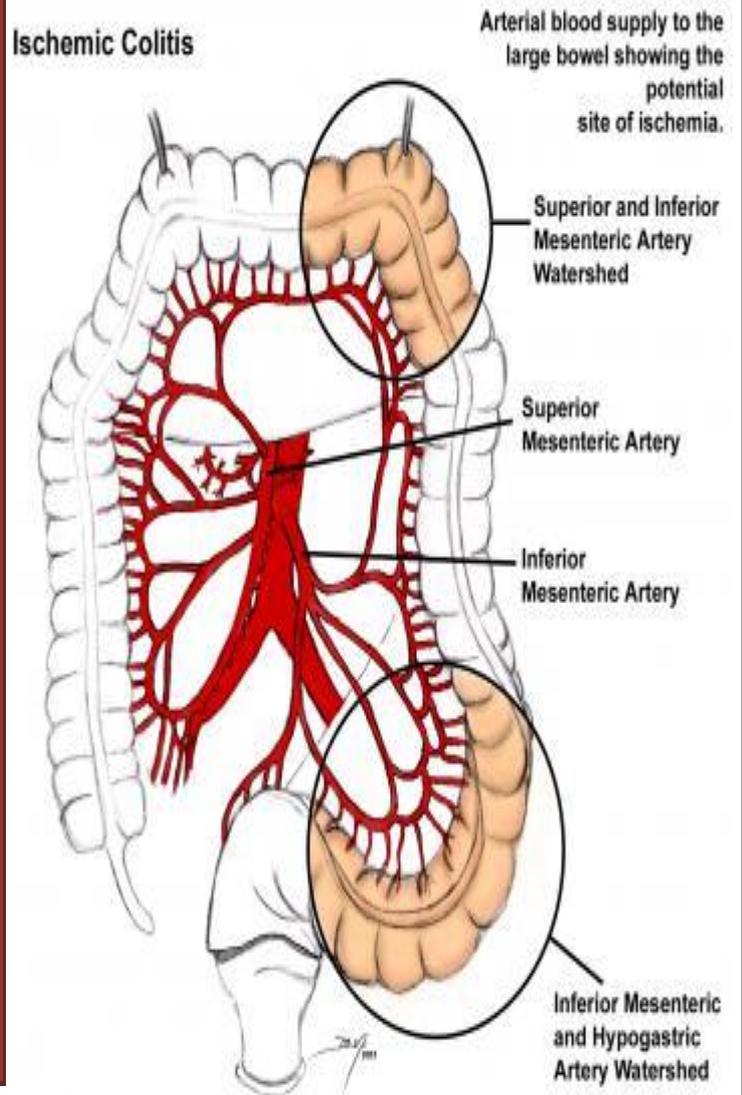
# ABDOMINAL ISCHAEMIC GUT

## Pathoanatomy

- The large bowel is supplied by both the superior mesenteric artery (SMA) and inferior mesenteric artery (IMA).
- The rectum is supplied by both the IMA & internal iliac (or hypogastric) arteries.
- SMA supplies most of the small & large bowel including the proximal two thirds of the transverse colon
- IMA supplies the distal third of the transverse and all of the descending colon to the sigmoid colon
- Internal iliacs supply the rectum
- These blood supplies overlap, with many collaterals; however there are two major **'watershed' areas**, most distal to the supplying arteries, which are most vulnerable to ischaemia
- These are Griffiths' point at the **splenic flexure**, and Sudeck's point at the **recto-sigmoid flexure**

## Pathophysiology

- Ischaemic colitis (or ischaemic gut) is an inflammation with or without necrosis of the bowel wall due to ischaemia
- Ischaemia may result from systemic haemodynamic instability and hypotension, or due to thromboembolism
- The mesenteric arteries supplying the colon are particularly responsive to vasopressors, both innate and iatrogenic
- So ischaemia may result directly from hypotension, or it may be caused by homeostatic or artificial attempts to raise blood pressure, to preserve cerebral perfusion



## Signs & Symptoms

- Ischaemic colitis progresses in three phases:
- **Hyperactive phase**  
Main symptoms are pain & bloody diarrhoea  
Bowel sounds may be increased
- **Paralytic phase**  
Pain becomes generalised, ileus develops  
Bloody diarrhoea stops  
Abdomen distends & becomes tender to palpation, but usually remains soft  
Bowel sounds are markedly reduced or absent
- **Shocked phase**  
Colonic tissues become necrotic & leaky  
Patients become haemodynamically unstable with a worsening metabolic (lactic) acidosis



## Investigation

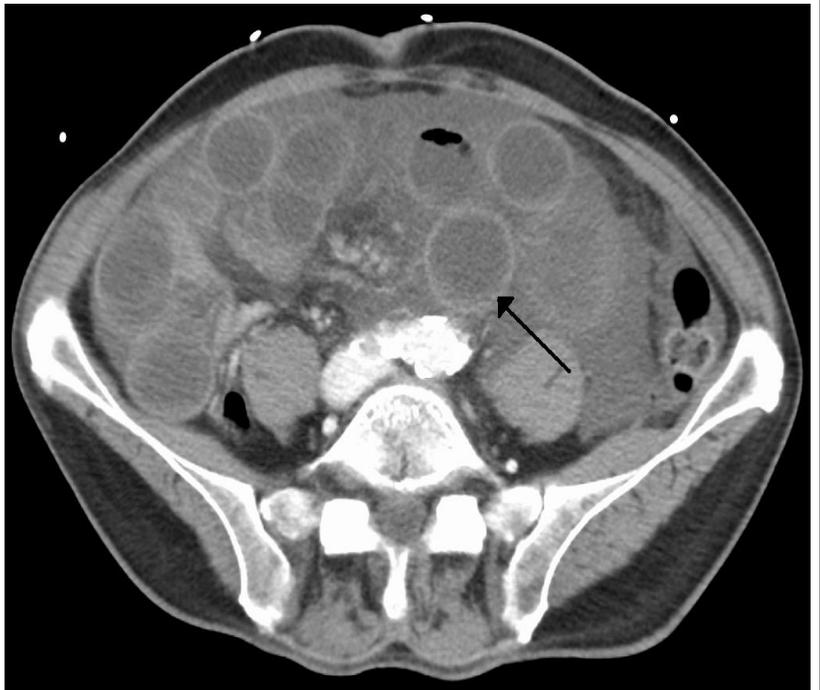
Ischaemic gut is largely a diagnosis of exclusion. The elderly are particularly susceptible and it should be suspected in elderly patients with pain out with examination findings

No single investigation is diagnostic but usually patients have:

- Markedly elevated WCC & CRP
- Metabolic acidosis
- High lactate

CT of abdomen & pelvis may show thickened bowel wall (arrow) and fat stranding

CT should be discussed with a senior/surgical registrar & need to consider nephrotoxic risk of contrast if the patient has an AKI



## Management

- Largely supportive
- IV fluids & IV intraabdominal antibiotics
- Analgesia
- Refer to general surgeons +/- ICU
- They may consider laparotomy & colectomy