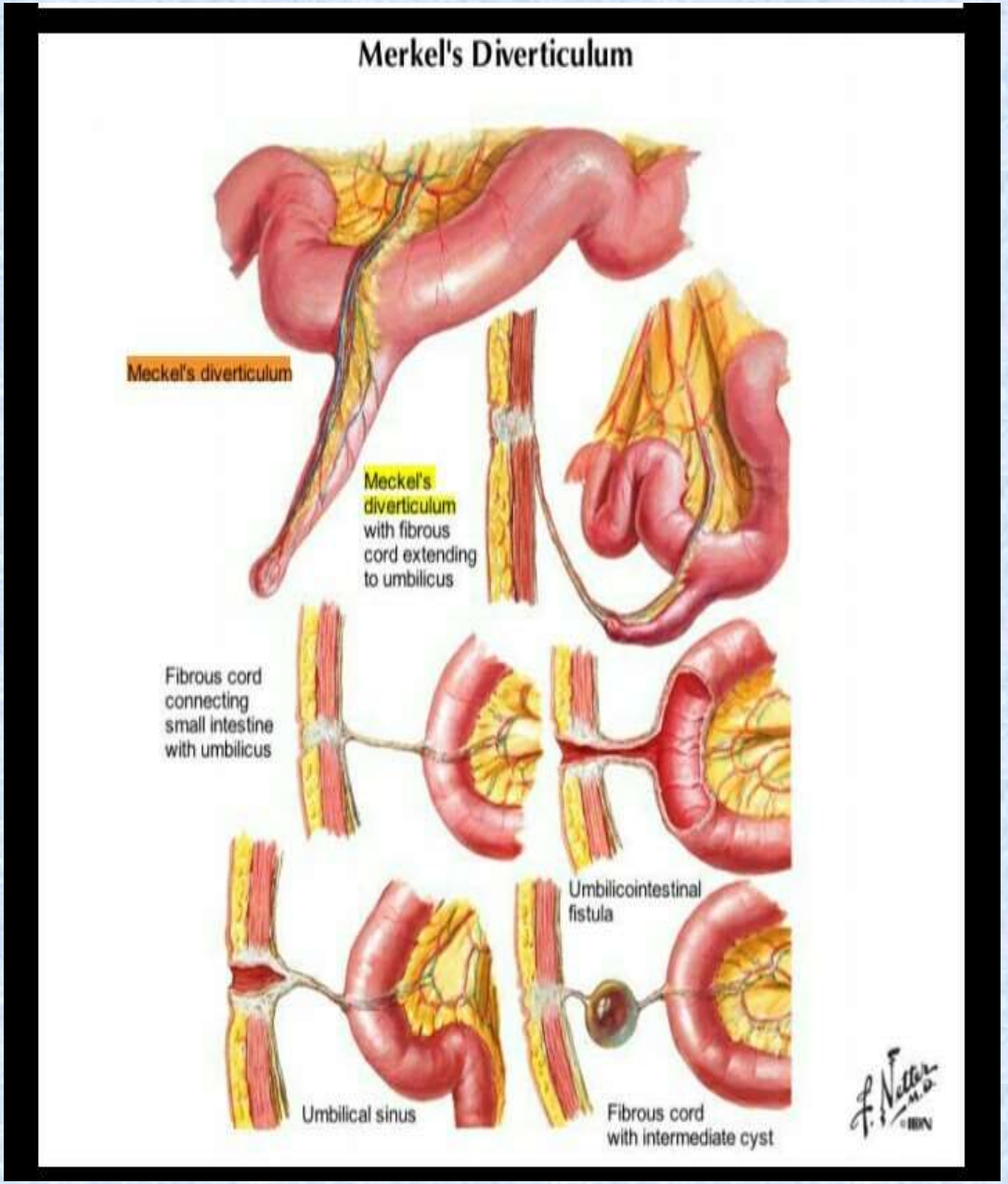
DEVELOPMENT

- ***During the eighth week of gestation,the omphalomesenteric (vitelline) duct normally undergoes obliteration.***
- ***Failure to incomplete obliteretion of vitelline duct results in some congenital abnormalities,the most common of which is Meckel's Diverticulum.***

Other abnormalities of vitellointestinal duct

- ✓ **Intestinal fistula**
- ✓ **Umbilical sinus**
- ✓ **Intra-abdominal cyst**
- ✓ **Intra-abdominal band**



- **Most common congenital abnormality of the gastrointestinal tract.**
- Contains all three layers of bowel with independent blood supply.
- If the Meckle's Diverticulum is found in an inguinal or femoral sac-**Littre's hernia**

EPIDEMIOLOGY

- **RULE OF 2'S**
- **2% of the general population**
- **2% prevalence ,2:1 male predominence**
- **2 ft proximal to the ileocecal valve in adults**
- **50% symptomatic under 2years**
- **About 2 inches long**
- **In adult patients is symptomatic in only about 2%**
- **Heterotropic tissue(most common)**
  Gastic mucosa
  Pancreatic acini

CLINICAL PRESENTATION

- Majority of Meckel's diverticuli are clinically silent (Asymptomatic)
- Symptoms are

a) Severe haemorrhage

b)intussuception

c) Meckel's diverticulitis

d) Chronic peptic ulceration

e)Intestinal obstruction

PATHOPHYSIOLOGY

➢ **Severe Haemorrhage**

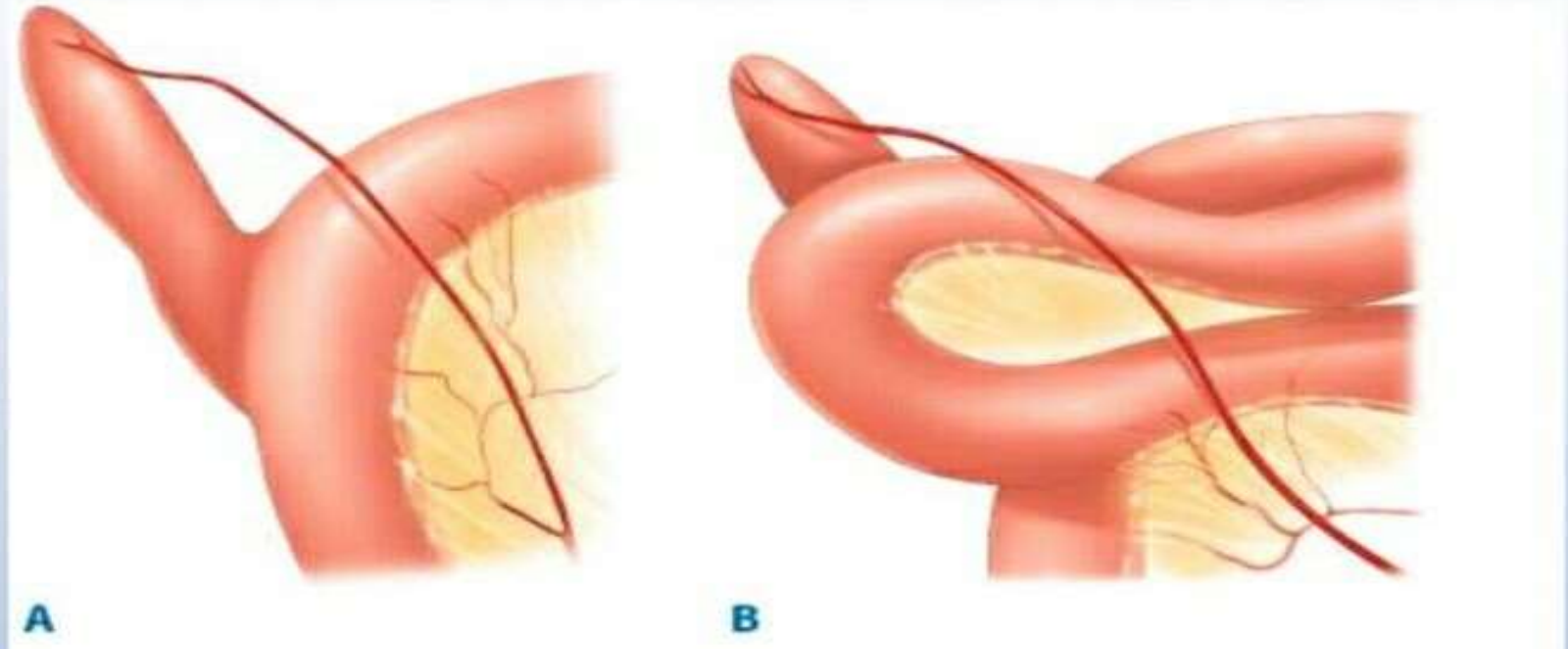
Painless per rectal bleeding,maroon colored haemorrhage may be caused by

- Ectopic gastric or pancreatic mucosa
- Secretion of gastric acid or alkaline pancreatic juice from the ectopic mucosa leads to ulceration in the adjacent ileal mucosa
- Perforation and bleeding from ulcer.

- **Meckel's Diverticulitis**
  - Peptic ulceration
  - perforation by trauma or ingested food residue
  - Luminal obstruction due to tumour , foreign body,causing stasis or bacterial infection.

Intestinal Obstruction

- Volvulus of the intestine
- Entrapment of the intestine by a mesodiverticular band
- Intussusception with the diverticulum
- Strictrure secondary to chronic diverticulitis



Source: Brunicardi FC, Andersen DK, Billiar TR, Dunn DL, Hunter JG, Matthews JB, Pollock RE: *Schwartz's Principles of Surgery, 9th Edition:* http://www.accessmedicine.com

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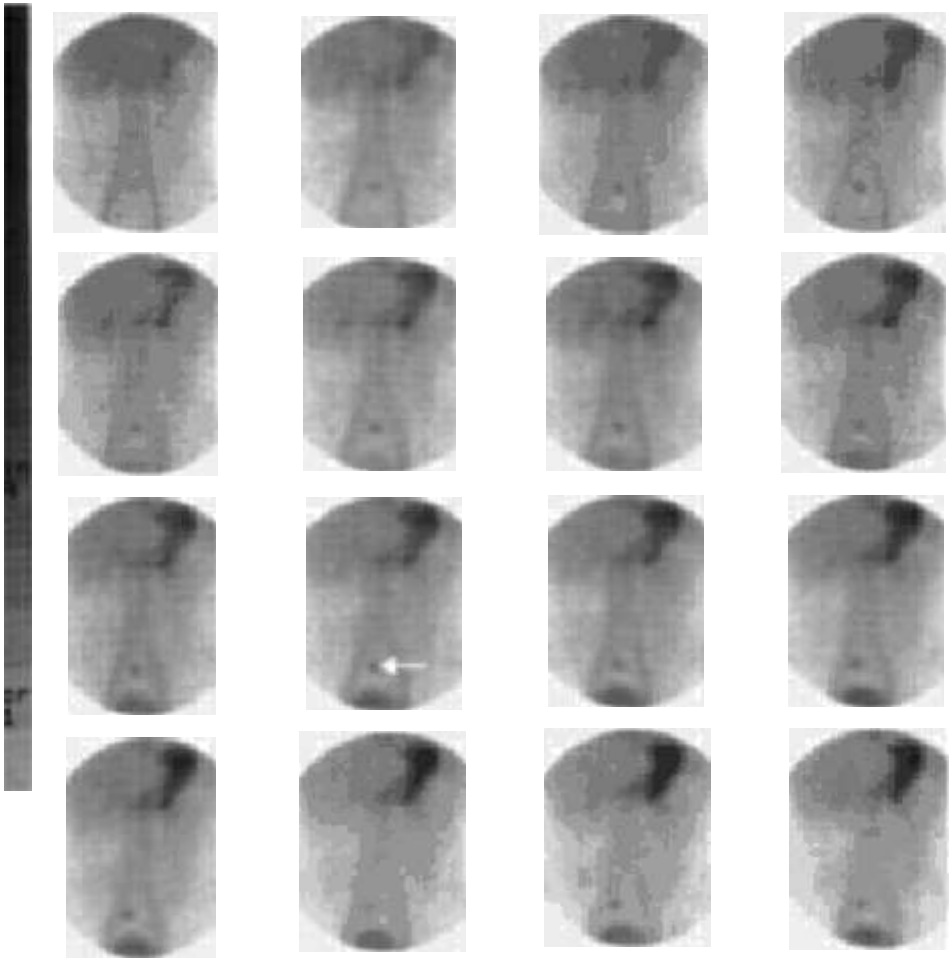
DIAGNOSIS

- Technetium-99m pertechnetate scan
- Laparoscopy
- Small bowel enema under fluroscopy
- CT scan
- Angiography



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A technetium-99m (99mTc) pertechnetate scan, also called Meckel scan.

- positive only when the diveRiculum Eontains sssociated e«opic gastric mucosa that is capable of uptake of the tracer

DIFFERENTIAL DIAGNOSIS

- ✓ Intestinal obstruction
- ✓ Hematochezia
- ✓ Appendicitis
- ✓ Intussusception
- ✓ Lower GI bleeding
- ✓ Angiodysplasia
- ✓ Malignancy
- ✓ Arteriovenous malformation

COMPLICATIONS

- Ulceration
- Hemorrhage
- Small intestinal obstruction
- Diverticulities
- Perforation

INDICATION FOR SURGERY

- Symptomatic meckel's diverticulum
  -haemorrhage
  -intestinal obstruction
  -diverticulitis
  -umbilico-ileal fistulas

INDICATION FOR SURGERY

- Incidentally discovered Meckel's Diverticulum
  - -Patients younger than 40 years
  - -Diverticula longer than 2 cm
  - -Diverticula with narrow neck
  - -Diverticula with fibrous band
  - -Suspected ectopic gastric tissue
  - -Inflammed ,thickened diverticula

MANAGEMENT

- **Treatment is surgical** .
- **Small bowel resection** – in patients with bleeding, strangulation of bowel obstruction , both the meckel's diverticulum along with the adjacent bowel segment resected.
- **Simple diverticulectomy** –in patients without any of the aforementioned complications .