

Meckel's Diverticulum

Meckel's diverticulum is a true congenital diverticulum that is a vestigial remnant of the vitelline duct, commonly referred to as the yolk stalk. The mucosal lining of the outpouching often contains ectopic tissue including pancreatic and gastric mucosa. Presence of ectopic tissue can lead to ulceration of the ileal mucosa causing bleeding or perforation with hemorrhage. The outpouching can be a nidus for development of intussusceptions or a volvulus. Meckel's diverticulum typically follows the rule of 2s where the diverticulum is generally located 2 feet from the ileocecal valve, is 2 inches long, present in 2% of the population, and symptomatic by age 2. The pertechnetate T99 scan is used to detect the presence of ectopic gastric mucosa in the intestines and can be used to diagnose Meckel's.



PLAY PICMONIC

Pathophysiology

True Diverticulum

[Truth-oath-stand](#)

True diverticulum in the gastrointestinal tract is an outpouching that is lined by mucosa, communicates with the lumen, and includes all three layers of bowel wall.

Vitelline Duct

[Video-taping Duck](#)

Meckel's diverticulum occurs due to failed involution of the vitelline duct, which is the structure that connects the lumen of the developing gut to the yolk sac.

Yolk Stalk

[Yolk Bean-stalk](#)

Meckel's diverticulum occurs due to failed involution of the vitelline duct, which is the structure that connects the lumen of the developing gut to the yolk sac. The vitelline duct is also commonly referred to as the yolk stalk.

Contain Ectopic Tissue

[Egg-top](#)

The mucosal lining of Meckel's diverticulum can contain ectopic pancreatic or gastric tissue.

Pancreatic And Gastric Mucosa

[Pancreas and Stomach](#)

The mucosal lining of Meckel's diverticulum can contain ectopic pancreatic or gastric tissue. Secretion of alkaline pancreatic fluid can lead to ulceration of adjacent mucosa and lead to ulcers and presence of gastric tissue can cause peptic ulceration of adjacent small intestinal mucosa due to hydrochloric acid production and cause occult bleeding or abdominal pain.

Signs and Symptoms

Hemorrhage

Hemorrhage-hammer

Presence of ectopic pancreatic or gastric tissue can lead to ulceration in the ileal mucosa and cause pain, bleeding or perforation with frank hemorrhage.

Intussusceptions

Intestine-telescope

Intussusception is a condition in which a part of the intestine invaginates into another section, similar to how a telescope collapses. Meckel's diverticulum can be a nidus for intussusception formation.

Volvulus

Volvo Stuck in a Loop of Bowel

A volvulus is a form of bowel obstruction in which a loop of bowel has abnormally twisted on itself. Meckel's diverticulum can be a nidus for volvulus formation.

Diagnosis

2 Feet From Ileocecal Valve

2 large Feet

Meckel's diverticulum are generally present within 2 feet of the ileocecal valve. This is part of the rule of 2s.

2 Inches Long

(2) Tutu inch-worm

Meckel's diverticulum are approximately 2 inches long. This is part of the rule of 2s.

2% Population

(2) Tutu % sign on baby

Meckel's diverticulum generally occurs in 2% of the population. This is part of the rule of 2s.

First 2 Years Of Life

Baby in (2) Tutu

Meckel's diverticulum are most often symptomatic by age 2. This is part of the rule of 2s.

Pertechnetate T99

Pearl T99

This scan is used to detect the presence of gastric mucosa and can be used to diagnose Meckel's diverticulum.