

Meckel's diverticulum

Meckel's diverticulum (MD) is the most common congenital anomaly of the GIT, occurring in about 2-3% of the population. It is located 20-60 cm (up to 2 feet) from the Bauhin valve on the antimesenteric side of the ileum. It is a remnant of embryonic tissue *ductus omphaloentericus*, part of which is closer to the intestine and has been preserved as an intestinal outgrowth. It usually does not cause any problems and is asymptomatic throughout life. It can be manifested by bleeding into the small intestine of various extents (40%), intestinal obstruction (30 %) or inflammation in the form of diverticulitis (20%).

Pathogenesis

This is a consequence of the imperfect obliteration of the *ductus omphaloentericus*, which connected the fetal yolk sac with the primitive intestine. He is obliterated in the fifth to seventh weeks of gestation.

The presence of all three layers of the intestinal wall of the MD makes it a true diverticulum.

Heterotopic tissue is present in approximately 50%. These are most often:

- gastric mucosa - can be colonized by *Helicobacter pylori*, which then causes inflammation in the diverticulum,
- pancreatic tissue,
- a combination of both.

Complication

All diseases affecting the small intestine can also manifest in MD.

The main complications are:

- bleeding - the source is an ulcer, angiodysplasia, atypical mucosa, tumor, inflammation,
- intestinal obstruction - invagination, volvulus, part of hernia, torsion of diverticulum,
- perforation - due to inflammation, entrapment, tumor, ulcer,
- inflammation - Crohn's disease,
- tumor (carcinoid, sarcoma, GIST) - less common,
- mutual combinations,
- in childhood, the most common complication is bleeding around the age of 5 and intestinal obstruction,
- in adulthood it is intestinal obstruction.

Diagnostics

Especially in adulthood, it is difficult. Meckel's diverticulum must be considered in the case of otherwise unexplained intestinal obstruction, gastrointestinal bleeding, unclear inflammatory symptoms, nausea, vomiting. Complicated MD easily mimics gastroenteritis, bleeding into the GIT ulcer disease.

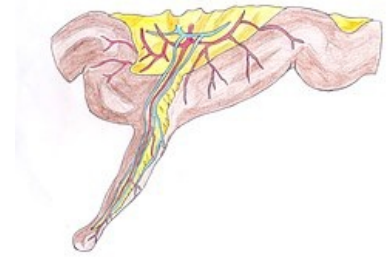
- X-ray - may show enteroliths or calcified MD wall
- Sono - displays mainly cancer
- Arteriography - reveals the source of bleeding
- Enteroclysis - imaging of the intestinal wall relief using a contrast agent
- CT
- Scintigraphy - ^{99m}Tc pertechnetate scan

Therapy

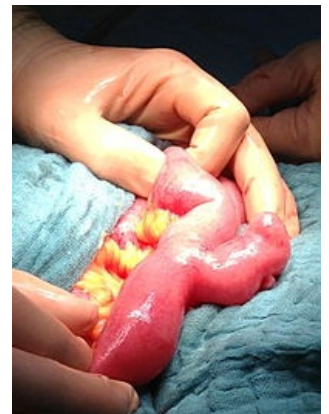
We solve complications by resection. The extent of resection depends on the size of the diverticulum and the lesions associated with it.

There is no consensus on the management of asymptomatic MD.

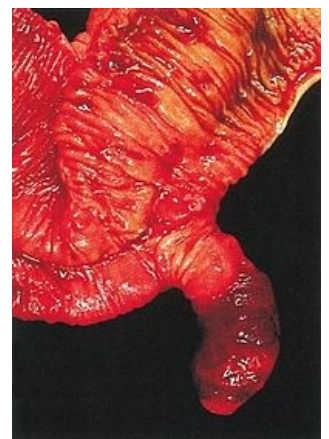
Links



Meckel's diverticulum - vascular supply scheme



Meckel's diverticulum - perioperatively



Meckel's diverticulum



Meckel's diverticulum

Related articles

- Esophageal diverticula
- Digestive tract diverticula
- Intestinal development

Resources

- VOKURKA, Martin – HUGO, Jan, et al. *Velký lékařský slovník*. 5. edition. Pargue : Maxdorf, 2005. ISBN 80-7345-058-5.
- ZEMAN, Miroslav – KRŠKA, Zdeněk. *Speciální chirurgie*. 3. edition. Prague : Galén, c2014. pp. 236-238. ISBN 9788074921285.

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