

# Atresia and stenoses of the small intestine

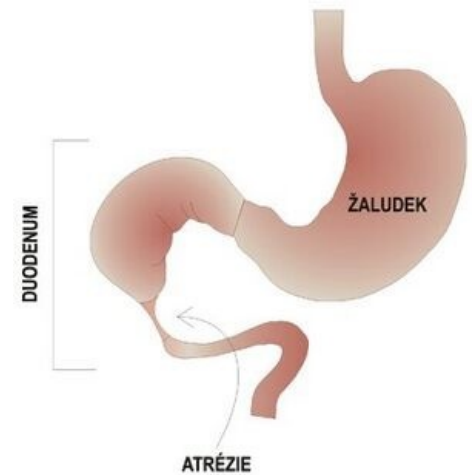
## Duodenal atresia and stenosis [ edit | edit source ]

Duodenal atresia A typical finding on an X-ray image in the suspension of duodenal atresia - the so-called double bubble sign

The incidence of atresia and stenoses is 1:5000-10000. 30% of patients also have Down syndrome and more than 50% of patients have associated birth defects.

### Clinical course [ edit | edit source ]

**Prenatally**, polyhydramnios occurs due to interrupted circulation of amniotic fluid. The so-called image of two "bubbles" that are closed by the liquid occurs. **Postnatally, with complete obstruction in the first 24 hours, the clinical picture of high ileus develops**, which is manifested by violent vomiting with bile admixture. In 90% of cases, the obstruction is located below the papilla of Vater. In the remaining 10% of cases, the vomit does not contain bile. The doctor can observe a bulging epigastrium, sunken hypogastrium (boat-shaped belly), peristalsis is visible. Smolka is not leaving. In case of partial obstruction, the clinical manifestation is late.



Duodenal atresia

### Diagnostics [ edit | edit source ]

**Prenatal** diagnosis is performed using ultrasound screening. **Postnatally, a native** X-ray of the abdomen is observed in the suspension, which is typically depicted as **two bubbles or levels**, this applies to the stomach and the enlarged duodenum. In most cases, there is an absence of gas in the distal part of the GIT. More than 20 ml of liquid is aspirated from the stomach using a nasogastric tube. The normal volume of fluid in the stomach is 5 ml. This is followed by insufflation of gas into the stomach and thanks to this the image of the two bubbles can be reproduced on the X-ray. Contrast X-ray of the upper part of the GIT is performed to clarify the diagnosis and at the same time rule out malrotation or volvulus.

### Treatment [ edit | edit source ]

The treatment is surgical, the patient undergoes a duodenoduodenal anastomosis.

## Atresia and stenosis of the jejunum and ileum [ edit | edit source ]

The incidence of atresia and stenoses of the jejunum and ileum is 1:1500.

### Clinical course [ edit | edit source ]

Polyhydramnios occurs **prenatally**. **Postnatally**, in the first 36 hours, the development of the clinical picture of a moderately high ileus occurs, which results in vomiting with bile. The abdomen is distended and there are also breathing difficulties - dyspnoea, due to the high state of the diaphragm. Smolka is not leaving. Dehydration with hypochloremia and weight loss develops.

### Diagnostics [ edit | edit source ]

**Prenatal** ultrasound shows dilatation of intestinal loops. **Postnatally**, a native X-ray of the abdomen in suspension is observed.

### Treatment [ edit | edit source ]

The treatment is surgical, the atretic or stenotic section of the intestine is removed and an end-to-end anastomosis is performed.

- **Gallery of diagnostic X-ray images in patients with various obstructions of the small intestine**



A typical finding on an X-ray image in the suspension of duodenal atresia - the so-called double bubble sign

## Links [ edit | edit source ]

## Related Articles [ edit | edit source ]

- Congenital atresias and stenoses of the gastrointestinal tract
  - Esophageal atresia
  - Congenital hypertrophic pyloric stenosis
  - Anal and rectal atresia
- Superior mesenteric artery syndrome
- Bowel malrotation and volvulus
- Meconium ileus
- Megacolon congenitum

## References [ [edit](#) | [edit source](#) ]

ŠNAJDAUF, Jiří and Richard ŠKÁBA. *Pediatric surgery*. 1st edition. Prague: Galén, 2005. ISBN 807262329X .

HOLCOMB III, George W., J. Patrick MUPRHY, and Daniel J. OSTLIE. *Ashcraft's Pediatric Surgery*. 6th edition. Elsevier, 2014. ISBN 145574333X .

MUNTAU, Ania Carolina. *Pediatrics*. 4th edition. Prague: Grada, 2009. p. 365. ISBN 978-80-247-2525-3 .



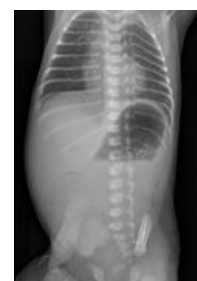
Irigraphy in the previous patient with jejunal atresia IV. type



X-ray of the hanging abdomen in a full-term newborn with jejunal atresia IV. type



X-ray image one hour after administration of contrast to the stomach to confirm the diagnosis of duodenal atresia



Not entirely typical finding on X-ray of the hanging abdomen in a slightly premature newborn with duodenal atresia