

Meconium ileus

Meconium ileus develops on the basis of intestinal obstruction with meconium (plum), most often in the area of the terminal ileum. Abnormally viscous meconium adheres tightly to the wall of the small intestine and closes its lumen. Complications of meconium ileus include ileal perforation, meconium peritonitis, volvulus, and ileal atresia or stenosis. 90% of patients with meconium ileus have cystic fibrosis (CF), so any newborn with meconium ileus should be screened for CF.^{[1][2][3]}

Meconium plug syndrome is a transient obstruction of the distal colon and rectum by a "plug" of thickened meconium. The cause is neuromuscular intestinal immaturity leading to temporary retention and thickening of pitch. Meconium does not go away, the newborn has a distended abdomen and vomits the stagnant contents of the stomach. On the X-ray of the abdomen in suspension, there is dilatation of the loops. Treatment is conservative. It is more common in newborns of diabetic mothers and in premature newborns. It can be a symptom of Hirschprung's disease.^{[3][1]}

Meconium consists of exfoliated epithelia, bile pigments and mucus. It usually goes away **within 24 hours** of birth. In case of fetal hypoxia, it can leave before birth, resulting in amniotic fluid clouded with meconium.^[2]



Meconium

Clinical picture

- A typical picture of mechanical ileus:
 - lack of passage of meconium and stool;
 - the abdomen is distended;
 - the child vomits stagnant contents from the stomach.
- Signs of a sudden abdominal attack.

Perforation can occur already intrauterine. Sterile meconium is passed into the abdominal cavity, meconium peritonitis develops with calcifications and fibrous bands that can oppress the intestine from the outside. Signs of mechanical ileus appear after birth.^[3]

Diagnosis

- Prenatal ultrasound may show dilated intestinal loops, with meconium peritonitis calcifications may be visible.^[2]
- Native X-ray of the abdomen with a horizontal beam, hanging position:
 - in the right lumbar landscape we see a hazy image (*image of milk glass*) with tiny air bubbles;
 - pneumoperitoneum – a strip between the liver and the diaphragm;^[4]
- Abdominal X-ray with contrast.

Therapy

- Surgical - depending on the cause.
- Conservative (with early diagnosis): enema.^[4]

Sources

Related articles

- Congenital atresias and stenoses of the gastrointestinal tract
 - pylorostenosis congenita
 - intestinal malrotation and volvulus
 - small bowel obstruction
 - Superior mesenteric artery syndrome
 - megacolon congenital

References

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4. BENEŠ, Jiří. *Studijní materiály* [online]. ©2007. [cit. 2010-04]. <<http://www.jirben.wz.cz/>>.