

Indications for urgent surgical intervention in the neonatal period

According to time urgency, operations are distinguished:

- **acute**- they are carried out as soon as possible (eg stopping massive bleeding, surgery for intestinal perforation);
- **urgent** - performed in a matter of hours (e.g. removal of an inflamed appendix of the cecum, gastroschisis surgery);
- **elective** - the operation can be postponed until everything is ready so that the procedure and the subsequent healing take place as best as possible (e.g. correction of hypospadias, plastic surgery of an uninjured inguinal hernia).^[1]

Urgent consultation of a (pediatric) surgeon is indicated for bleeding from the GIT and suspicion of a sudden abdominal event (volvulus or torsion of the stomach, midgut volvulus, ileus condition, pneumoperitoneum, etc.), for clinical signs of esophageal atresia, agenesis of the anus, for necrotizing enterocolitis IIIA (with signs of bowel perforation, i.e. IIIB immediately), in case of gastroschisis, omphalocele, in case of suspected hernia incarceration, **early** in case of suspected anatomical or functional obstruction of the GIT, in case of atypical placement of an anus or suspicion of a fistula, in case of pitch leaving somewhere other than an anus, in congenital diaphragmatic hernia, necrotizing enterocolitis IIA and IIB or suspected posterior urethral valve.^[2]

By systems

Digestive system

- intestinal obstruction, atresia and stenoses (esophagus, intestine, rectum and anus), malrotation and volvulus;
- Hirschsprung's disease;
- meconium ileus;
- abdominal wall defects: omphalocele, gastroschisis;
- necrotizing enterocolitis (NEC), spontaneous intestinal perforation (SIP);
- duplicates and mesenteric cysts (asymptomatic → elective procedure), Meckel's diverticulum;
- herniated inguinal hernia;
- congenital hypertrophic pyloric stenosis;
- trauma.^[3]

Respiratory tract

- choanal atresia;
- tracheo-esophageal fistula;
- congenital lobar emphysema, cystic adenomatoid malformation, pulmonary sequestration;
- congenital diaphragmatic hernia.

Retroperitoneal tumors

- neuroblastoma;
- mesoblastic nephroma;
- Wilms tumor (nephroblastoma)
- teratoma.

Urogenital tract

- acute ovarian torsion (rare in newborns)
- bladder exstrophy.^[4]

By manifestation

Acute conditions accompanied by vomiting

- intestinal obstruction and atresia, malrotation, volvulus;
- Hirschsprung's disease;
- meconium ileus;
- Abdominal wall defects.

Bleeding from the digestive tract

- vomiting of coffee grounds, hematemesis, melena, hematochezia;
- upper GIT bleeding is usually benign in newborns;

- rectal bleeding: Meckel's diverticulum, polyps, lymphonodular hyperplasia, anorectal fissures, intestinal duplication;
- necrotizing enterocolitis.

Shortness of breath

- congenital diaphragmatic hernia;
- congenital lung malformations: congenital cystic adenomatoid malformation (CCAM), pulmonary sequestration, congenital lobar emphysema, bronchogenic cysts.^[3]

Sources

Related articles

- Congenital developmental defects of the newborn requiring an urgent solution
- Blood in the newborn's stool • Bleeding from the alimentary canal

External links

References

1. DUŠKOVÁ, M, et al. *Úvod do chirurgie : Učební text pro studenty 3. LF UK* [online] . 1. edition. 2009. Available from <https://www.lf3.cuni.cz/3LFSVI-61-version1-uvod_chirurgie.pdf>. ISBN 978-80-254-4656-0.
2. JANOTA, Jan – STRAŇÁK, Zbyněk. *Neonatologie*. 1. edition. Mladá fronta, 2013. pp. 174-197. ISBN 978-80-204-2994-0.
3. OKADA, Pamela J. – HICKS, Barry. Neonatal surgical emergencies. *Clinical Pediatric Emergency Medicine*. 2002, y. 1, vol. 3, p. 3-13, ISSN 1522-8401. DOI: 10.1016/s1522-8401(02)90012-1 (<http://dx.doi.org/10.1016%2Fs1522-8401%2802%2990012-1>).
4. GOMELLA, TL, et al. *Neonatology : Management, Procedures, On-Call Problems, Diseases, and Drugs*. 7. edition. Lange, 2013. pp. 877*896. ISBN 978-0-07-176801-6.