Intrauterine fetal demise/Stillbirth

When a dead fetus is detected in pregnancy or when it dies during childbirth, we speak of **dead fetus syndrome**. This threatens the mother's health and life. These are all deaths during pregnancy and childbirth (intrapartum death) when the weight of the fetus is greater than 500 g and none of the signs of life are present (heart action, respiratory movements, active muscle movements, scream).

Causes of intrauterine fetal death

The most common causes of antenatal fetal death[1]		
Maternal causes	**Fetal causes**	**Placental and umbilical cord causes**
preeclampsia, eclampsia, HELLP syndrome	structural malformation	placental insufficiency with IUGR
diabetes mellitus	chromosomal aberrations	placenta praevia, vasa praevia
nephropathy, hepatopathy	inborn metabolic disorders	abruption of the placenta
cardiovascular and cardiopulmonary diseases	intrauterine infection	strangulation, prolapse of the umbilical cord
antiphospholipid syndrome	feto-fetal transfusion of twins	chorioamnitis
shock, sepsis, profusion hemorrhage	hydrops	hemangiomas, placental teratomas; myxomas, hemangiomas of the umbilical cord

Diagnostics

Subjective feelings of a woman

- reduced frequency or absence of perception of fetal movements;
- vaginal bleeding or discharge;
- subfebrile;
- fatigue;
- laxity of breast tension.

Objective diagnosis

Intrauterine fetal death is diagnosed on the basis of missing fetal heart activity. Heart sounds are not heard during examination with a stethoscope, during Doppler ultrasonography or during cardiotocography (CTG). If the dead fetus is present in the uterus for more than 7 days, a roof-like overlapping of the skull bones (*Spalding's sign*) can be seen on the ultrasound image.

Risks of stillbirth syndrome

- **Disseminated intravascular coagulation** (DIC) – dysregulation of coagulation in the mother's bloodstream occurs after activation of the plasma coagulation system. The trigger is tissue factor, which is washed out on the basis of increased intra-amniotic pressure (on the basis of autolytic processes of the fetus) and a broken uteroplacental barrier.
- **Infection and sepsis** - at first intraovular infection becomes systemic, in the most severe cases septic shock and coagulation disorders occur. Antibiotics are administered prophylactically.
- **Illness of the mother that led to the death of the fetus** - most often it is severe preeclampsiai, HELLP syndrome, hepatorenal failure, cardiovascular or cardiopulmonary failure.

Therapeutic procedure

1. Inform the mother about the death of the fetus.
2. Immediate hospitalization at an obstetrics and gynecology clinic or, if complications are expected, at a perinatology center.
3. Laboratory examination.
   🔎 *For more information see Routine laboratory examination in a woman with a dead fetus.*
4. Prophylaxis:
   - prevent the occurrence of DIC by applying low-molecular-weight heparin (LMWH) according to body weight 0.2-0.4 ml/24 h, further according to the control of hemocoagulation parameters;
   - administration of broad-spectrum ATB as prevention of infection.
5. Induction of labor – we choose between classic (diruption of the sac of membranes) and prostaglandin induction;

- classic induction – induction associated with rupture of the sac of membranes is chosen when the woman is bleeding, when the placenta is separated prematurely, the condition is a permeable cervix; after diruption of the sac, we can continue with the infusion of oxytocin;
- prostaglandin induction – prostaglandin E_2 can be applied locally in the form of a gel (*Prepidil*) or p.o. as tablets (*Prostin*).

Labor management

We primarily deliver vaginally. Stillbirth induction is usually quicker and easier. More caution and observation of the patient during the entire delivery is always appropriate. After the start of regular uterine activity, we apply epidural analgesia and spasmolytics, or smaller doses of opiates. We do not perform an episiotomy, especially if the cranial vault is collapsed. Fetal equipment caesarean section is indicated in the event of an urgent situation (e.g. heavy bleeding of the mother after placental abruption). We deliver the fetus and placenta as one unit without cutting the umbilical cord.

Links

Related articles

- Preeclampsia
- Eclampsia
- HELLP syndrome

References

1. ČECH, Evžen, et al. *Porodnictví.* 2nd edition. Prague : Grada Publishing, 2006. pp. 355-357. ISBN 9788024607931.

External links

- JĚŽOVÁ, Marta – HOTÁRKOVÁ, Sylva – MŮČKOVÁ, Katarína, et al. *Hypertextový atlas fetální patologie : Multimedia support for teaching clinical and healthcare subjects* [online]. Portal of the Faculty of Medicine of Masaryk University [online], ©2008. The last revision 2.2.2010, [cit. 26.11.2011]. <http://portal.med.muni.cz/clanek-463-hypertextovy-atlas-fetalni-patologie.html>.
- JEŽOVÁ, Marta – HOTÁRKOVÁ, Sylva – MŮČKOVÁ, Katarína, et al. *Hypertext Atlas of Neonatal Pathology : Multimedia support for teaching clinical and healthcare subjects* [online]. Portál Lékařské fakulty Masarykovy univerzity [online], ©2010. The last revision 27.9.2011, [cit. 26.11.2011]. <http://portal.med.muni.cz/clanek-527-hypertextovy-atlas-novorozenecke-patologie.html>.

Literature

- ČECH, Evžen. *Obstetrics.* 2. edition. Praha : Grada Publishing, Praha : Avicenum, 2006. pp. 355-357. ISBN 8024713039.