

The newborn of a drug-addicted mother

This article has been translated from WikiSkripta; ready for the **editor's review**.

Drug addiction of the mother is a risk factor that negatively affects the pregnancy and the development of the newborn. It is accompanied by a whole range of problems: a risky lifestyle, a higher incidence of non-transmissible diseases, a toxic effect on the fetus, the withdrawal syndrome of the newborn after birth, and problematic socioeconomic background.^[1]

Pathophysiology

Addictive substances tend to have a low molecular weight and are water-soluble and lipophilic, which is why they easily pass through the placenta into the fetal bloodstream and into the amniotic fluid. The half-life of an addictive substance is usually longer in a fetus than in an adult.

Most addictive substances affect the CNS - they bind to CNS receptors (e.g. opiates) or affect the release and reuptake of various neurotransmitters (e.g. cocaine). This action can have a long-lasting effect on developing dendritic structures.

Addictive substances during pregnancy apparently also affect intrauterine programming through epigenetic or other factors.^[2]

Pregnancy

It is often an unmonitored pregnancy, a condition after repeated abortions. History-taking is unreliable. Maternal comorbidities (infectious hepatitis and other sexually transmitted diseases) and malnutrition are common. Many women addicted to drugs use a combination of substances, smoke tobacco, and drink alcohol. **Cite error: The opening <ref> tag is malformed or has a bad name**

Pregnancy drug addiction is associated with premature birth, premature outflow of amniotic fluid, intra-amniotic infection, and fetal growth restriction. When using cocaine, there is an increased risk of hypertension, placental abruption, heart and cardiovascular complications, and intrauterine fetal death.^[2]

Some substances have a teratogenic effect:

- alcohol: fetal alcohol syndrome;
- anticonvulsants - barbiturates (phenobarbital): fetal hydantoin syndrome (abnormal pre- and postnatal growth, abnormal CNS function, abnormal craniofacial appearance and abnormal distal limbs); neural tube defects, heart defects, facial clefts, hypospadias, urogenital tract, digestive tract and skeletal defects;
- cocaine: microcephaly, agenesis of corpus callosum or septum pellucidum, septo-optic dysplasia, lissencephaly, schizencephaly;
- SSRI (sertraline, citalopram): increases the risk of cardiac septal defects when used in the 1st trimester.^[3]

Urine toxicology screening for addictive substances does not reflect exposure to drugs during the entire pregnancy.

Neonatal abstinence syndrome

Onset of withdrawal symptoms

- alcohol, short-acting barbiturates: < 24 hours;
- heroin: 0-48 hours (peak 12-24 hours after birth);
- tricyclic antidepressants, SSRI, SNRI: 0-72 hours;
- cocaine: 48-72 hours;
- methadone: 1-5 days (peaks 2-3 days after birth);
- diazepam: 2-6 weeks;
- long-acting barbiturates: 2-4 months.^[3]

The onset of clinical symptoms is influenced by the type of addictive substance and its biological half-life, frequency of use, length of addiction, time interval since the application of the last dose, metabolism of the mother and fetus, gestational age of the fetus. **Cite error: The opening <ref> tag is malformed or has a bad name**

Opiate withdrawal symptoms

- increased irritability (increased tendon and primitive reflexes, hypertonus, hyperacusis, tremors, high-pitched crying);
- convulsions, sleep disorders, impaired coordination of sucking and swallowing;
- regurgitation and vomiting, watery stools and diarrhea;
- tachypnea, apnea;
- yawning, hiccups, sneezing, stuffy nose;
- marbling, thermoregulation disorders, sweating, lacrimation, salivation;
- fever, weight loss.^[2]

Scoring*the score according to Finnegan (semi-objective assessment) is most often used.Cite error: The opening <ref> tag is malformed or has a bad name

Diagnosis

- RIA, chromatography, spectrometry;
- urine, sputum of a newborn;
- urine, blood of the mother.Cite error: The opening <ref> tag is malformed or has a bad name

Regime measures

- limit stimuli (silence, darkness, thermoneutral environment) gentle handling, relaxing positions, tying, cuddling (skin-to-skin),
- non-nutritive sucking - pacifier, frequent feeding.Cite error: The opening <ref> tag is malformed or has a bad name

Pharmacotherapy

- withdrawal of opiates: **morphine'** (50-100 µg/kg after 6 hours, possibly increasing by 25-50% every 24-48 hours until symptoms disappear), **opium tincture**;
- convulsions during withdrawal syndrome, withdrawal of several types of substances: **phenobarbital'** (first 20 mg/kg i.v. and then 2.5-5 mg/kg once a day i.v./p.o., it is necessary to monitor the level).[3]

Breast feeding

- some substances pass into breast milk, therefore it is not advisable to breastfeed if the mother continues to use heroin, amphetamine (Pervitin), cocaine or if she is HIV positive.[3]

Effect of individual addictive substances

Alcohol

Marijuana

Pervitin

Cocaine

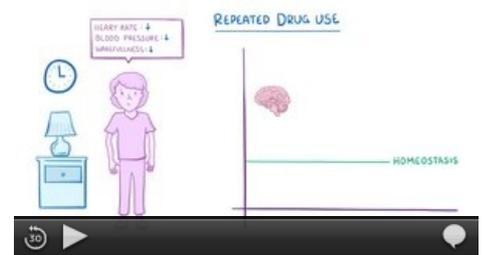
Opiates

Barbiturates

Benzodiazepines

USSR

Nicotine



Cocaine dependence (video).

Links

Related Articles

- Fetal alcohol syndrome
- Substance abuse • Alcohol abuse • Tobacco • Withdrawal syndrome
- High-risk pregnancy and newborn • At-risk child, endangered child
- Adolescent risk behavior syndrome

External links

References

- 1.
- 2.
- 3.