



## Analysis of Expertises of Infant Mortality in Bukhara Branch of R.S.C.F.M.E. Bukhara in 2020

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**Annotation:** Forensic examination of fetuses and fetuses in antenatal and perinatal cases is considered one of the most complex examinations and requires special training from forensic medical experts.

One of the main issues of the forensic medical examination is to describe whether the fetus is born alive or dead, to determine and interpret the correct and legal performance of the procedures performed by obstetricians-gynecologists.

In the article, during 2020, the statistical analysis of the expertise in the cultivation of gudak at the RSTEIAM Bukhara branch was studied and explained, and conclusions were made regarding the work that should be carried out in the future.

**Key words:** examination, antenatal, perinatal, autopsy, fetus.

**Relevance.** When a pregnant woman is taken to a medical institution with a stillborn child, in most cases, the death of the fetus or the newborn baby is suspected.

The practice of examining the bodies of newborn babies and fetuses that died in the mother's womb is distinguished by its uniqueness both in terms of autopsy techniques and in terms of solving issues raised by law enforcement agencies.

Based on such circumstances, during the research, the forensic expert is obliged to clarify a number of special situations and find answers to the questions asked by the law enforcement agencies. In forensic medical practice, a number of criteria have been developed to answer these questions, and now corpses are examined according to these criteria.

**Purpose of work.** During 2020, the statistical data analysis and practical recommendations of the expertise of gudak cultivation at the R.S.C.F.M.E. Bukhara branch.

**Methods and materials.** According to tradition, after macroscopic examination at autopsy, samples of lungs, heart, liver, kidney, spleen, gastro-intestinal tract, brain, birth trauma (if any), placenta and umbilical canal, necessary tissues were taken for microscopic examination. For general morphology, 1.5x1.5 cm pieces were cut from the internal organs (in the case of a dead fetus, 3 parts of the placenta, i.e., from the center, middle part and periphery) and frozen in 10% neutral formalin. After washing in running water for 2-4 hours, they were dehydrated in increasing concentrations of alcohols and chloroform, then paraffin was poured and blocks were prepared. 5-8  $\mu$ m sections were prepared from paraffin blocks and stained with hematoxylin and eosin. Histological preparations were studied under the 10, 20, 40, 100 objectives of a light microscope and the required areas were photographed.

**Results.** The results of the statistical examination showed that 12 infant deaths were examined by forensic medical examination in 2020, of which 1 case of congenital heart defect, 1 case of birth trauma, 1 case of aspiration pneumonia, 4 cases of dead fetus, and 5 cases of perinatal death were observed and autopsies were performed.



Congenital heart failure	Birth trauma	Perinatal death	Dead fetus	Aspiration pneumonia	total
1	1	5	4	1	12

Pathology of the perinatal period.

The perinatal period includes the period starting from the 22nd week of pregnancy to 7 days after the birth of the fetus.

This period itself is divided into 3:

Antenatal - the period from the 22nd week of pregnancy to the beginning of the labor process.

Intranatal - the period from the beginning of the labor process to the birth of the baby.

Postnatal - the period from birth to 7 days.

Causes of death of fetuses and newborns:

- ✓ violent death
- ✓ violent death

sudden death is observed before delivery (in the mother's womb), during delivery and after delivery.

In most cases, violent death is observed after childbirth, and sometimes, in rare cases, it can be observed before and during childbirth.

To a violent death before birth (in the mother's womb).

pathologies in the mother's body:

infectious diseases (flu, pneumonia),

chronic diseases (syphilis),

toxycosis of pregnancy,

pregnancy with heart defects

Cases of congenital anomalies related to the fetus and placenta:

anomalies in the attachment of the placenta to the uterus,

foci of infarction in the placenta,

early placental abruption,

knots in the umbilical cord and wrapping of the umbilical cord around the neck of the fetus can be the cause.

All these conditions lead to fetal hypoxia.

Fetal hypoxia.

Due to lack of oxygen to the fetus, it is manifested in acute disorders of maternal-placental or fetal-placental blood circulation.

Fetal hypoxia can occur before the birth (antenatal) and after the birth (intranatal).

Causes (etiology) of antenatal hypoxia:

- Due to chronic cardiovascular, respiratory, blood and endocrine diseases in the mother's body;



- Intoxication of the mother's body during pregnancy (occupation-related, under the influence of drugs)
- Gestoses
- Infectious diseases of the fetus
- Congenital defects in the fetus or placenta
- Placental insufficiency

Antenatal death was observed in 4 cases, and a forensic examination was carried out.

A macroscopic sign of antenatal death is skin maceration.

Maceration is a process of disorganization of the fetal tissue, which is considered to be a condition that immediately escalates with the occurrence of intrauterine death.

Signs of fetal maceration

Period of intrauterine death	Macroscopic changes in the fetus	Changes in the fetal tissue
4 hour	-	Kidneys: loss of basophilia of the nephroepithelial nucleus.
24 h	Staining of the anterior abdominal wall in liver or brown color, the appearance of fluid-filled bubbles.	Loss of basophilia of hepatocyte and myocardial nuclei
1 week	Wide opening of the fetal mouth, green staining of the internal organs.	Stomach-intestinal tract, adrenal gland, loss of basophilia of the nucleus of the tissue of the trachea.

Organs that must be removed during an autopsy from a fetus or infant with antenatal death:

Lung tissue;

Site of birth injury;

Umbilical system;

Placental tissue;





Pathomorphological examination of the placenta -

this is the GOLDEN RULE.

Acute and chronic placental insufficiency is often the direct cause of such cases.

Acute or chronic placental insufficiency occurs due to the pathology of blood vessels in the placenta.

In our case, 4 dead fetuses were subjected to forensic examination, and in no case was pathomorphological examination of placental tissue performed.

### **Conclusions.**

1. Based on the above cases, it can be concluded that placental tissue stores a lot of valuable information related to the fetus, and in cases of antenatal death, it is necessary to examine the dead fetus together with its placenta.
2. In order to increase the knowledge skills of the forensic experts about the thanatogenesis of infant death, placental tissue, organize seminar trainings, take into account the need to give practical recommendations, and ensure that the heads of the branch departments are included in the work plan.

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