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RESPIRATORY DISTRESS SYNDROME IN THE AUTOPSY OF NEWBORN INFANTS

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Summary
Respiratory distress syndrome (RDS) is one of the diseases characterized by the highest rate of death. This article carried out a statistical analysis of the levels of respiratory distress syndrome based on the data of the autopsy of newborns, conducted at 6 months from the beginning of 2022 in the Bukhara Regional Pathological and Anatomical Bureau. RDS was detected in 37 cases (29.8%) of 124 newborns.

Keywords: respiratory distress syndrome, newborns, autopsy.

ЯНГИ ТУГИЛГАН ЧАКАЛОКЛАР АУТОПСИЯСИ АМАЛИЁТИДА РЕСПИРАТОР ДИСТРЕСС СИНДРОМИ

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Аннотация
Респиратор дистресс синдроми (РДС) юкори даражадаги улим асоратлари курсаткичи билан тавсифланадиган касалликлардан биридир. Ушбу маколада Бухоро вилояти патологоанатомик бюрода 2022 йил бошидан буён 6 ой ичида утказилган янги тугилган чакалоклар аутопсияси маълумотларига асосланган холда респиратор дистресс синдроми учраши даражалари статистик тахлил килинган. Янги тугилган чакалоклар аутопсиясида жами 124 та чакалокдан 37 холатда РДС (29,8 %) аникланди.

Калит сузлар: респиратор дистресс синдром, янги тугилган чакалоклар, аутопсия.

РЕСПИРАТОРНЫЙ ДИСТРЕСС-СИНДРОМ НОВОРОЖДЕННЫХ ПРИ АУТОПСИИ

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Резюме

Респираторный дистресс-синдром (РДС) является одним из заболеваний, характеризующихся наиболее высокой частотой летальных исходов. В данной статье проведен статистический анализ уровней респираторного дистресс-синдрома на основании данных вскрытия новорожденных, проведенного в 6 месяцев с начала 2022 года в Бухарском областном патологоанатомическом бюро. РДС выявлен в 37 случаях (29,8%) из 124 новорожденных.

Ключевые слова: респираторный дистресс-синдром, новорожденные, вскрытие.

Relevance

Respiratory distress syndrome is caused by a deficiency of pulmonary surfactant in the lungs of neonates, most commonly those born < 37 weeks gestation. The risk increases with the degree of prematurity. Symptoms and signs include shortness of breath, involvement of accessory muscles, and flaring of the alae of the nose, appearing shortly after birth. The diagnosis is clinical; prenatal risk can be assessed using fetal lung maturation tests. Respiratory distress syndrome (RDS) of a newborn is characterized by the presence of clinical signs of respiratory failure, developing, as a rule, in the first 4-6 hours after birth. The leading symptoms of RDS in a newborn are considered to be tachypnea, flaring of the wings of the nose, "grunting" breathing, and signs of retraction between the ribs or the lower third of the sternum. The main morphological manifestation of RDS is the presence of hyaline membranes in the alveoli during microscopic examination of histological preparations of lung tissue. In this regard, RDS in a newborn is also referred to as hyaline membrane disease (HMD) [Tumanova U.N., 2019].

Purpose of the Study

The aim of this study is to conduct a statistical analysis of respiratory distress syndrome levels based on neonatal autopsy data performed at 6 months from the beginning of 2022 at the Bukhara Regional Pathological and Anatomical Bureau. Materials and research methods. An autopsy analysis of newborns with respiratory disorders was carried out on the basis of the official accounting and reporting documentation of the Bukhara Regional Pathological Bureau conducted in 6 months from the beginning of 2022. During the study period, 124 cases of autopsy were performed.

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Research Results and Discussion

In case of respiratory distress syndrome in young children, an autopsy reveals diapedetic bleeding in the lungs, total atelectasis, and a single convergence of the hyaline membrane.

Background: Immaturity.

The main complication of the disease is pulmonary edema.

General venous congestion and degeneration of internal parenchymal organs.

(Fig.1)

Figure 1. Macroscopic view of parenchymal organs.

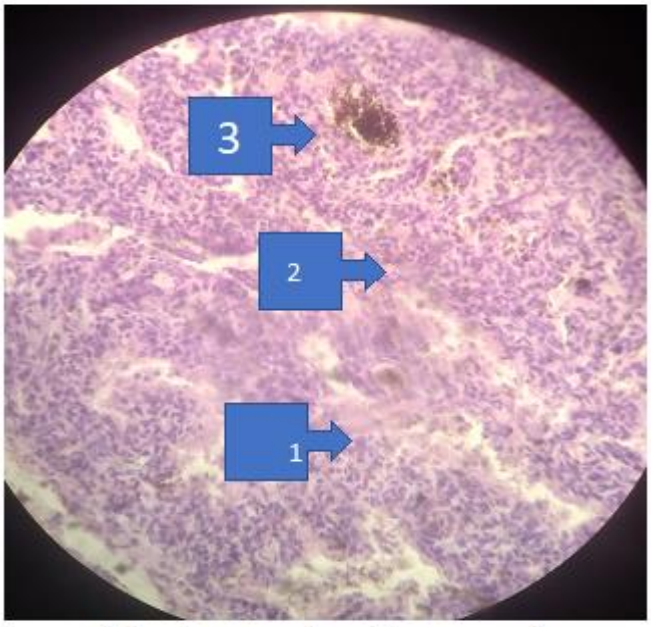

Figure 2. Microscopic view of the lung: 1 hyaline membrane. 2 alveolar atelectasis. 3 hemorrhage.

The level of respiratory distress syndrome based on the autopsy data of newborns conducted at 6 months from the beginning of 2022 in the Bukhara Regional Pathological Bureau was detected in 37 cases out of 124 newborns. This is about 30 percent.

Conclusions

Respiratory distress syndrome, characterized by impaired breathing in newborns, develops in about 20% of preterm infants, but its frequency is highly dependent on gestational age and can vary from 5-10% in children born at 35-36 weeks to 80-88 % in children with a gestational age of less than 27 weeks. The syndrome of respiratory disorders occurs in full-term children in 1-2% and is associated mainly with morpho-functional immaturity, birth asphyxia and some other conditions. The development of the syndrome of respiratory disorders is based on the structural and functional immaturity of the lungs and the associated insufficiency in the formation of surfactant. In addition, the cause of the development of SDR may be a violation of the structure of the surfactant, its increased destruction or inhibition. The immaturity of the surfactant system leads to the development of hyaline membranes, edematous hemorrhagic syndrome, etc. Fetal hypoxia as a pathogenetic factor in the syndrome of respiratory disorders is no less important than gestational age at the time of birth. Hypoxia can lead to vasoconstriction and hypoperfusion of the lungs, inactivation of alveolar surfactant. The analysis of the SDR of the lungs revealed total or partial atelectasis, pulmonary edema, pneumopathy, and the formation of hyaline membranes.

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