



CLINICAL AND ANAMNESTIC ANALYSIS OF THE LABOR PROCESS OF MOTHERS OF BABIES BORN WITH PRIMARY ATELECTASIS.

Z.I. Ruziyeva

Tashkent medical akademy

zebo.ruziyeva@mail.ru

| Article history: | Abstract: |
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| <p>Received: August 24th 2023 Accepted: September 24th 2023 Published: October 28th 2023</p> | <p>In this study, the prevalence of risk factors and the pathogenetic mechanism of primary lung atelectasis of infants were studied in groups of premature and full-term infants. A total of 98, including 52 premature, 46 full-term, clinical and anamnestic data and risk factors of primary pulmonary atelectasis were studied. The results showed that maternal diseases such as preeclampsia, infectious diseases, endocrine pathology and various extragenital diseases, as well as complications related to the birth process, are risk factors for the development of primary atelectasis in the lungs of newborns. Mother's age less than 20 or more than 35, preeclampsia, infectious diseases, complications of childbirth, child's head and brain injury and high level of birth defects were identified as risk factors. It was observed that primary atelectasis of the lungs occurs in premature babies in most cases, and the rate of development of diseases identified as a risk factor is also high.</p> |

Keywords: Infant, lung atelectasis, premature birth, risk factor, breast diseases, birth pathologies.

THE URGENCY OF THE PROBLEM.

Atelectasis of the lungs of infants is the non-opening or re-closing of the lung alveoli within 2 days after birth, depending on the specific structure of the broncho-alveolar tissue and central management. Infant pulmonary atelectasis is included in the "respiratory distress syndrome (RBS)" (2, 5, 7). Its overall incidence is 1% of all babies, and it occurs in 14% of premature babies. The relevance of the problem of atelectasis for pediatrics lies in the fact that there are many reasons why the alveolar tissue of the lungs deteriorates at the age of one month. In atelectasis, there is a decrease in the alveolar tissue respiratory surface and the part involved in breathing. The causes of primary atelectasis in infants are: slowness and slowness of the respiratory center, underdevelopment of the respiratory system, hypoxia or asphyxia, head or spinal cord injury. Apart from these, as the primary cause of atelectasis, the syndrome of aspiration with gastric juice takes place. This syndrome is mainly observed when the child is born late or prematurely, and develops hypoxia, hypercapnia, acidosis in the child's body, stimulates the respiratory center, the fetus starts breathing, intestinal peristalsis increases, meconium falls into the amniotic fluid and it aspirates the respiratory tract. Risk factors leading to primary atelectasis developing in the baby mainly include diseases of the mother's body during pregnancy and pathologies that develop due to the birth process (1, 3, 6).

PURPOSE OF WORK. Since the data on the level of primary atelectasis developing in babies have different

indicators, this research aimed to determine the level of risk factors.

MATERIAL AND METHODS.

Clinical and anamnestic data and lung fragments of 52 premature and 34 full-term infants who died from pulmonary insufficiency and underwent autopsy at the Department of Mothers, Children and Infectious Diseases of the Republican Pathological Anatomy Center of the Ministry of Health of the Republic of Uzbekistan during 2017-2021 were considered as material.

RESULTS AND THEIR DISCUSSION.

An analysis of medical records of a total of 448 deaths with various degrees of respiratory distress syndrome from archival material showed that 75.5% had maternal age younger than 20 or older than 35 as a manifestation of risk factors. If the mother's age is less than 20, the body is not ready for the reproductive process, if it is more than 35, it can cause pregnancy complications due to the development of various diseases. 3%) was confirmed to cause premature birth of the child. One of the next dangerous factors, toxicosis of pregnancy, that is, preeclampsia, is of great importance, under its influence, in most cases, atelectasis, a form of respiratory disorder syndrome, can develop in the fetal lungs. In our material, the number of people with preeclampsia was 36, that is, 36.7%, which means that preeclampsia was a risk factor in 36.7% of cases of atelectasis development (Table 3.1). In this case, in most cases, it was observed that children were born



prematurely, and in our material 28.3% of cases served as a risk factor for primary atelectasis. Infectious diseases developed in the mother's body during pregnancy, including chlamydia, herpes, krasnukha, and other infections are considered to be the main risk factors for the development of respiratory distress syndrome in the fetus, and in our material, it was found in 28 of the

98 cases, which made up 28.6%, of which 23, 5% were born prematurely. Since endocrinopathy diseases in the mother's body, including diabetes, are a chronic disease, they become more severe during pregnancy and can be a risk factor for any disease of the fetus, including primary atelectasis that develops in the child's lungs. was found to cause atelectasis (Table 3.1).

Table 3.1

Indicators of risk factors for primary pulmonary atelectasis in infants by preterm and full-term birth groups, in (%).

| № | A risk factor | Premature birth | | A mature birth | | Жами N = 448 | |
|----|---|-----------------|----------------|----------------|--------------|-----------------|-------------|
| | | quantity | % | quantity | % | quantity | % |
| 1 | Female age is less than 20 or more than 35 | 63 | 64,3* | 11 | 11,2* | 74 | 75,5 |
| 2 | Preeclampsia | 28 | 28,6* | 8 | 8,1* | 36 | 36,7 |
| 3 | Maternal infection during pregnancy | 23 | 23,5** | 5 | 5,1** | 28 | 28,6 |
| 4 | Endocrine pathology, diabetes | 17 | 17,3** | 4 | 4,1** | 21 | 21,4 |
| 5 | Other diseases during pregnancy | 75 | 76,5** | 14 | 14,3* | 89 | 90,8 |
| 6 | Complicated childbirth | 28 | 28,6** | 9 | 9,1** | 37 | 37,7 |
| 7 | The conversion of water from the vagina into meconium | 21 | 21,4*** | 8 | 8,2** | 29 | 29,6 |
| 8 | Premature birth | 52 | 53,1*** | 0 | 0 | 52 | 53,1 |
| 9 | Premature displacement of the placenta | 14 | 14,3*** | 5 | 5,1** | 19 | 19,4 |
| 10 | Brain injury during childbirth | 38 | 38,8*** | 8 | 8,1** | 46 | 46,9 |
| 11 | The presence of heart defects in the child | 13 | 13,3*** | 4 | 4,0** | 17 | 17,3 |

supplement: * - $p \leq 0,05$; ** - $p \leq 0,01$; *** - $p \leq 0,001$

Various extragenital diseases present in the mother's body during pregnancy, including cardiovascular, gastrointestinal, nervous system, genitourinary diseases, are also considered a risk factor in the development of atelectasis pathology in the child's lungs, including extragenital diseases in our material, in total 90.8% , 76.5% of them corresponded to premature births.. Most of these dangerous factors that we are discussing are combined in one mother's organism, as a result of which the childbirth process is complicated, which can lead to the development of a

respiratory disorder syndrome in the child's respiratory system, in our material, childbirth complications 37, It was found to be a risk factor in 7% of cases, and in 28.6% of cases in the premature birth group.

If the amount of amniotic fluid accumulates in the amniotic cavity of pregnant women increases or becomes infected and turns into meconium, it can enter the respiratory tract of the fetus and develop a respiratory syndrome in the lungs, including primary atelectasis. In our material, it was identified as a risk factor for the development of atelectasis in a total of 29



cases, that is, in 29.6% of them, it served as a risk factor for the development of atelectasis in premature babies in 21.4% of cases, and in the remaining 8.2%, it served as a risk factor for the development of atelectasis in premature babies. In our material, 19.4% of infants with primary atelectasis were diagnosed with this pathology, 14.3% of which were premature (Table 3.1). 52 of the cases we selected as material were premature babies, 34 were full-term babies. Analyzing the medical records of premature babies revealed the presence of risk factors that cause lung atelectasis. One of the main reasons for the development of atelectasis in the lungs of premature babies is the morpho-functional deficiency of premature babies, which was found in 27 out of 52 cases studied by us, i.e. 51.9%. Another cause of primary atelectasis is the birth of a baby with hypoxia

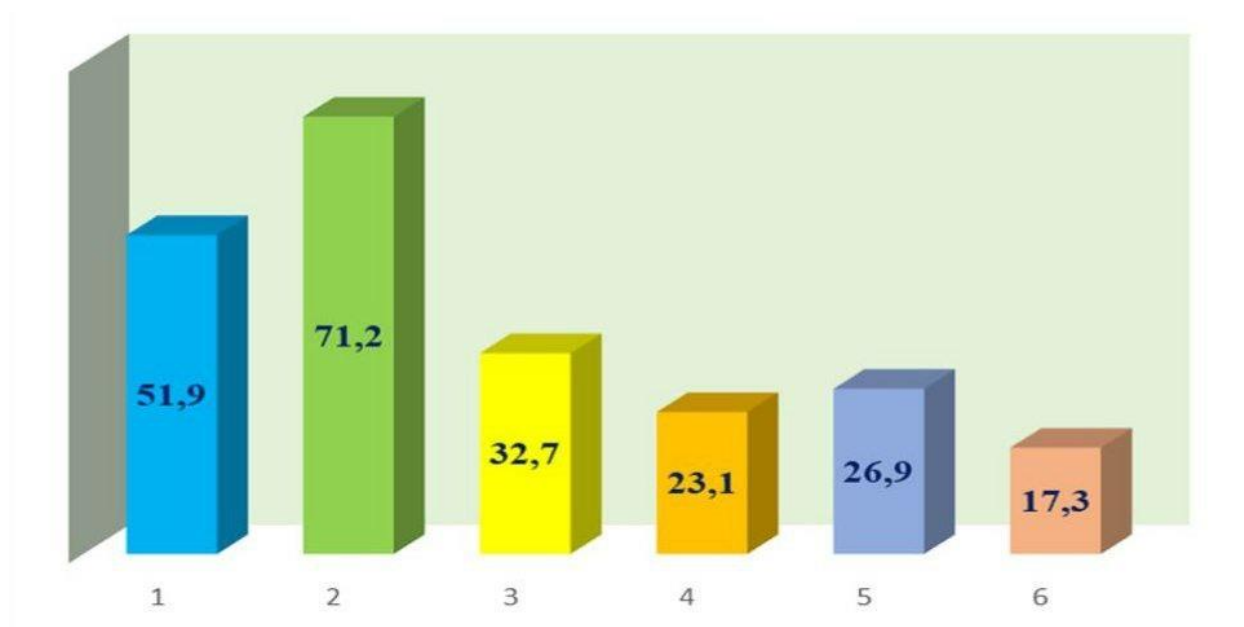
for any reason. This risk factor was observed to have the highest rate in our material, that is, it was detected in 71.2% of cases (Table 3.2). During the last stages of pregnancy, if the breathing reflex is activated in the fetus due to the large amount of amniotic fluid and its conversion to meconium, aspiration of amniotic fluid develops and leads to atelectasis of the lungs. In our material, it was observed that this condition occurred in 32.7%. Premature placental migration leads to acute asphyxia of the fetus, resulting in the development of primary atelectasis in the fetal lung. In our material, 23.1% of cases of placental abruption occur as a risk factor. Cerebral injury during childbirth was confirmed as a risk factor for lung atelectasis in 26.9% of cases, birth defects in 17.4% of cases (Table 3.2, Chart 3.1).

Table 2
Risk factors for lung atelectasis in preterm infants, (%).

| Nº | Risk factors | quantity: n = 52 | % |
|----|-------------------------------|------------------|------|
| 1 | Morpho-functional deficiency | 27 | 51,9 |
| 2 | Hypoxia | 37 | 71,2 |
| 3 | Cold water aspiration | 17 | 32,7 |
| 4 | Early migration of the spouse | 12 | 23,1 |
| 5 | Brain injury | 14 | 26,9 |
| 6 | Button defects | 9 | 17,3 |

3.1- Chart.

RISK FACTORS OF ATELECTASIS IN PREMATURE INFANTS %.



When analyzing the medical records of the second group of our study, that is, the group of babies who were born full-term but died of pulmonary atelectasis, the risk factors that caused pulmonary atelectasis were identified. One of the main risk factors turned out to be

diabetes in the mother's body, which was confirmed as a risk factor in 47.1% of cases in our material (Table 4). The highest risk factor was the development of lung atelectasis due to the influence of various infections in the mother's body and their transfer to the fetus.



Maternal infections were identified as a risk factor in 73.5%. Aspiration of sputum causes atelectasis due to blockage of the bronchi in the lungs, and this risk factor was identified in 38.2% of our material. Premature

migration of the placenta from the next risk factors - 26.4%, brain injury - 32.2%, birth defects - 20.6% were identified as a risk factor for pulmonary atelectasis (Table 3.4, Chart 3.2).

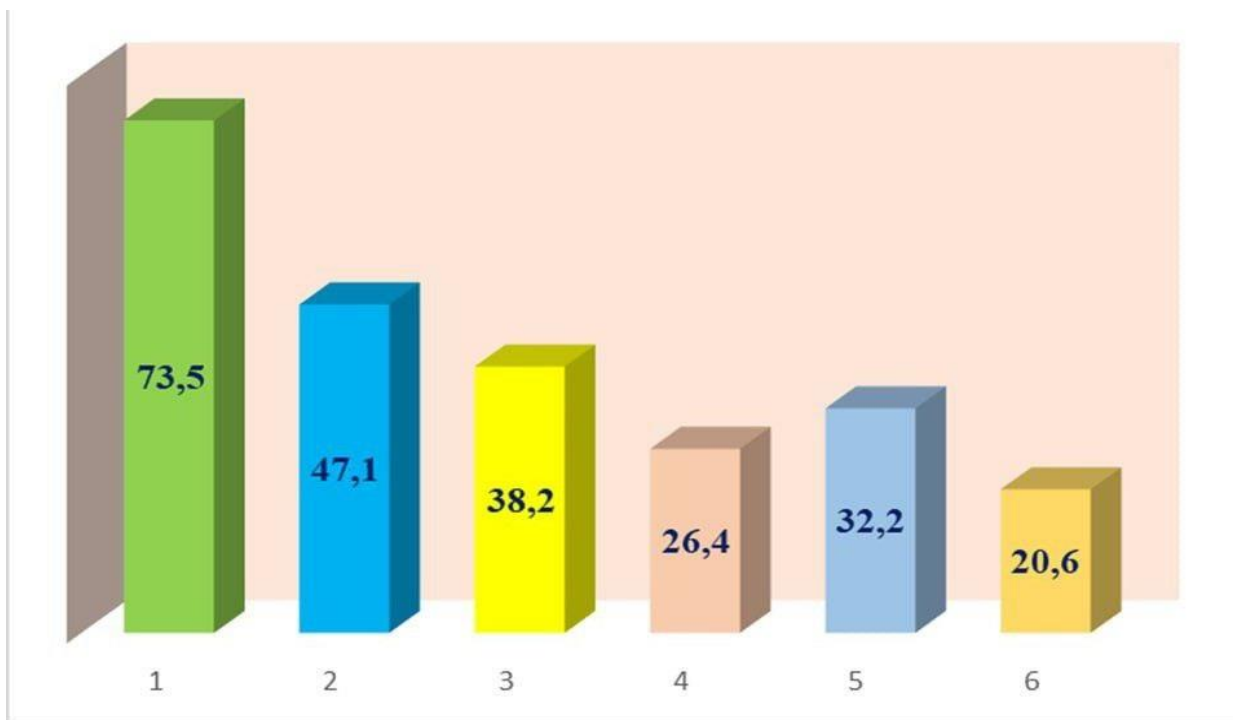
Table 3.4.

Risk factors for pulmonary atelectasis in premature infants, (%).

| Nº | Risk factors | quantity: n = 34 | % |
|----|----------------------------------|------------------|------|
| 1 | Diabetes | 16 | 47,1 |
| 2 | Infection in the mother | 25 | 73,5 |
| 3 | Aspiration of boiling water | 13 | 38,2 |
| 4 | Early migration of the satellite | 9 | 26,4 |
| 5 | Cerebral | 11 | 32,2 |
| 6 | Congenital defects | 7 | 20,6 |

3.2- Chart.

RISK FACTORS FOR ATELECTASIS IN MATURE BIRTH.



CONCLUSION.

Pre-eclampsia, infectious diseases, endocrine pathology and various extragenital diseases, as well as complications related to the birth process, are risk factors for the development of primary atelectasis in the lungs of newborns.

Mother's age less than 20 or more than 35, preeclampsia, infectious diseases, complications of childbirth, child's head and brain injury and high level of birth defects were identified as risk factors.

It was observed that primary atelectasis of the lungs occurs in premature babies in most cases, and the rate of development of diseases identified as a risk factor is also high.

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