



Factors Influencing the Development of Bronchopulmonary Complications According to the World Health Organization

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Abstract: This article examines the dynamics of factors influencing the development of bronchopulmonary complications associated with whooping cough in the Surkhandarya region. The study was conducted in the Airborne Infections Department of the Termez City Children's Infectious Diseases Hospital from 2019 to the first quarter of 2024 in 140 children under one year of age who had whooping cough. According to the epidemiological history, the patient's mother had anemia (46%) and toxicosis of pregnancy (34%) during pregnancy.

Key words: whooping cough, children, vaccination schedule, bronchopneumonia, anemia, toxicosis of pregnancy, ARVI.

Relevance of the problem: Whooping cough is one of the serious problems facing the global medical community. According to the World Health Organization, in 2008, whooping cough affected 16 million children worldwide, 95% of whom were in developed countries, and approximately 195,000 children died from the disease [2]. Pertussis causes 10.5% of deaths as a monoinfection among infants worldwide [1,3,4,5].

Whooping cough is the third most common disease in the WHO Expanded Programme on Immunisation after tuberculosis and poliomyelitis.

The introduction of vaccination has significantly reduced the incidence of whooping cough in many countries. Before vaccination was introduced in the 1950s, more than 100,000 cases were reported in England each year. By comparison, in 1980, only 1,471 cases were reported in England [6].

Today, the infant mortality rate is 15.6% per 1,000 live births, but the birth rate is very low at 9.1%. [9,10]

Whooping cough remains the leading cause of death among infants worldwide. In developed countries, complications of bronchopneumonia occur in approximately 6% of cases in children with whooping cough, and in infants and children under 6 months this rate of complications is 4 times higher [7,8].

According to the DSEM data for the Surkhandarya region and the city of Termez, an assessment of the trend in the incidence of whooping cough over the past 5 years has been studied.

The aim of the study is to assess the dynamics of factors influencing the development of bronchopulmonary complications against the background of whooping cough in the Surkhandarya region.

Materials and methods of examination: The examination was conducted in the Airborne Infections Department of the Termez Children's Infectious Diseases Hospital. From 2019 to the 1st quarter of 2024, 140 people under 1 year of age with children with whooping cough were hospitalized. The mothers of all sick children were explained about the examination and their consent to participate in the examination was obtained. Patients with whooping cough are usually hospitalized with spasmodic cough. Many patients in the catarrhal period, contacting a polyclinic at their place of residence, cannot timely identify whooping cough and receive outpatient treatment with a diagnosis of "ARVI", "ORC". These patients are taken to the infectious diseases hospital when specific clinical symptoms of the disease appear, that is, during an attack of spasmodic cough.

When studying the gender of sick children, there were 48 (53%) boys in the main group, 42 (47%) girls, 26 (52%) boys in the control group, and 24 (48%) girls. There were no statistically significant differences in gender composition.

Table 1. Information about the age of child patients included in the study.

Ages	Main group N=90		Control group N=50		Total N=140	
	M	%	M	%	M	%
0-3 month	17	19	5	10	22	15,7
3-6 month	36	40	18	36	54	38,6
6-12 month	37	41	27	54	64	45,7

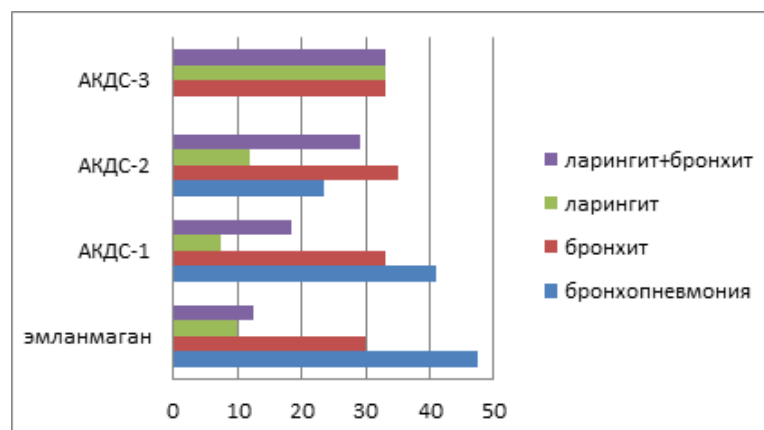
Results of the study: When interviewing mothers of the examined children about their obstetric and gynecological history, it was found that in mothers of children under one year old with whooping cough complicated by bronchopulmonary complications (53 - 59%), first: anemia (26 people - 49%), second: important place was taken by toxicosis (16 people - 30%), for the rest in small proportions - ARVI (6 people - 11%), pathologies of the genital organs (5 people - 9%). The main complications of childbirth in mothers were considered to be slow labor (51.4%), rapid labor (11.4%) and prolonged dehydration (14.3%).

Among extragenital diseases, the presence of foci of chronic infection in the mothers of the examined children (22.8%), chronic diseases of the gastrointestinal tract and respiratory organs (20%), chronic diseases of the cardiovascular system and kidneys (12.8%) is important.

When studying the perinatal history of sick children, it was found that 17.1% of children were born with low birth weight, 5.7% of children were born prematurely, 44.3% of children were born with asphyxia.

The high frequency of extragenital diseases in the mother, the presence of intra-, peri- and postnatal changes in children leads to the development of a negative premorbid background and causes disruption of **the vaccination process**.

Diagram – 1. Monitoring complications depending on the level of vaccination against pertussis





Conclusion: According to the epidemiological history, the mothers of the patients had anemia (46%) and toxicosis of pregnancy (34%) during pregnancy. In all patients with bronchopulmonary complications, degree II anemia - 9%, rickets - 8.8%, all developed bronchopneumonia as a complication and had a severe course.

In children under 1 year of age, whooping cough occurs in a severe form due to incomplete vaccination against **whooping cough, which requires a different therapeutic approach.**

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