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## **Cardiovascular System Functional Changes in Children with Prolonged Cough Recurrent Bronchitis**

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### **Relevance of the problem.**

In young children, the incidence of respiratory pathology remains one of the important problems of pediatric pulmonology. Diseases of the respiratory organs are accompanied by functional disorders of organs and systems, the least studied remain those involving the cardiovascular system, which is closely interconnected with breathing and directly involved in providing the body with oxygen.

**The purpose of the study.** To study the features of functional changes in the cardiovascular system in children with recurrent bronchitis accompanied by a lingering cough

### **Materials and research methods.**

We examined 45 sick children, who were currently in the early childhood department, including those with a diagnosis of Recurrent Bronchitis (RB) of the first 3 years of life, including 25 children aged under 1 year, 12 children aged 2 years, and 8 children aged 3 years. The children were divided into groups: Group 1 - Recurrent bronchitis with changes in the heart on the ECG - 30, Group 2 - children with RB without changes on the ECG - 15 children. There were 28 boys and 17 girls. Clinical and anamnestic, functional and instrumental - ECG EchoCG research Consultations with specialists; ENT, neurologist, ophthalmologist. Survey - questionnaires of parents

### **Results.**

A combination of ante- and intranatal hypoxia was observed in 37 children. 35% were born full-term, but with low body weight of 2200-2500 and 15% of full-term children with a body weight of 3300-3500 g. 65% of children were born prematurely, of which 3 children had low body weight (1200-1500). When studying the electrocardiographic data, it was established that signs of functional disorders of the cardiovascular system of varying severity were detected in children of group 1 - 90.2%. The main signs of functional disorders of the cardiovascular system in children were cyanosis (86.4%), "marbling" of the skin (84.7%), changes in the sonority of heart sounds from muffled (37.3%) to accentuated (30.5%), bradycardia (23.7%) and tachycardia (22.0%), arrhythmia (22.0%) and impaired ventricular repolarization of the myocardium (100%). Heart rhythm and conduction disorders were observed in 80% of premature and 85.7% of full-term

newborns with a history of perinatal CNS damage. Ventricular extrasystole was observed only in premature infants. The structure of cardiac rhythm disturbances was presented as follows: sinus tachycardia and/or arrhythmia - 25, sinus bradycardia - 6, extrasystole -3, supraventricular paroxysmal tachycardia - 3, ectopic rhythm - 2, sick sinus syndrome - 1, WPW syndrome - 1, atrioventricular block grade 1 - 1 child. In 2/3 of children, ST segment depression, inversion, decreased T wave amplitude were noted, more pronounced in the early neonatal period.

**Conclusion.** Signs of functional disorders of the cardiovascular system of varying severity were detected in 90.2% of children in Group 1. The main signs of functional disorders of the cardiovascular system in children were cyanosis (86.4%), "marbling" of the skin (84.7%), changes in the sonority of heart sounds from muffledness (37.3%) to accentuation (30.5%), bradycardia (23.7%) and tachycardia (22.0%), arrhythmia (22.0%) and impaired repolarization of the ventricles of the myocardium (100%). Disturbances in cardiac rhythm and conduction were observed in 80% of premature and 85.7% of full-term newborns with perinatal damage to the central nervous system. Vegetative regulation of heart rhythm in children today remains a pressing issue not only for pediatricians, but also for specialists in general.