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CHILDREN'S PEDIATRICS: APPROACHES TO THE PREVENTION AND TREATMENT OF ACUTE RESPIRATORY DISEASES

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ABSTRACT: This scientific article presents an in-depth analysis of the prevalence, symptoms, vaccination-related, hygiene-related, and parental health-related knowledge of acute respiratory infections (ARIs) in pediatrics. The study was conducted in children's polyclinics and preschool institutions in Tashkent, Fergana, and Kashkadarya regions. Statistical analyses, questionnaires, interviews, and observations revealed the relationship between the incidence of ARIs in children and age, conditions, and health-improving measures. The results demonstrate the relevance of a systematic approach to maintaining children's health, vaccination, and improving the hygienic environment. The article also includes practical recommendations for prevention, healthy lifestyle formation, and improving pediatric approaches.

KEYWORDS: Childhood pediatrics, acute respiratory infections, ARI, vaccination, health promotion, hygiene, parental knowledge level, child health, prevention.

INTRODUCTION

Pediatrics is a branch of medicine that deals with the health care, prevention, diagnosis and treatment of children from birth to adolescence, and is one of the most complex and responsible areas of medicine. Because the stages of physical, mental and emotional development of a child have their own characteristics. Each department of pediatrics - neonatology, immunology, endocrinology, psychology and other branches are of great importance for the lives of children. Today, among the diseases that occur in children, respiratory diseases such as acute respiratory infections, bronchitis, pneumonia occupy a leading place. Climate change, environmental factors, nutritional disorders, weak immunity, low medical literacy lead to the outbreak of these diseases. Acute respiratory infections (ARI) are among the most common and serious diseases in pediatrics. They are not only dangerous for health, but also have a negative impact on schooling and participation in social life. Early detection, correct diagnosis and treatment of these diseases based on an integrated approach are important in pediatrics. At the same time, diseases can be prevented by preventive measures - compliance with sanitary and hygienic requirements, vaccination, strengthening immunity, proper nutrition and increasing the level of knowledge of parents. Scientific studies show that early detection of symptoms of ONII in children and the right approach prevent their transition to a chronic state. This article focuses on acute respiratory infections in pediatrics. The study examines the scientific basis for the causes of the spread of these diseases among children, their diagnosis, modern treatment methods and preventive measures. The article aims to find solutions to existing problems in this area, based on scientific, theoretical and practical data. Protection of motherhood and childhood is a priority of the policy of the Government and the President of Uzbekistan. A full-fledged system of prevention and early detection of congenital and hereditary diseases in children has been created in the republic, which includes medical examination of persons entering marriage, prenatal and neonatal screening and treatment, and correction of congenital

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defects. In 2000, the Government of the Republic of Uzbekistan undertook the obligation to achieve the Millennium Development Goals. One of the goals of the Millennium Development Declaration was to reduce infant and under-five mortality by two-thirds between 1990 and 2015. Child mortality indicators reflect not only the state of health of children, but also the level of socio-economic well-being of society as a whole. Accurate and timely analysis of infant mortality rates makes it possible to develop a number of specific measures to improve the health of pregnant women and children, as well as to assess the effectiveness of preventive measures being carried out and the activities of local health departments for the protection of motherhood and childhood. Analysis of the structure of infant mortality by causes, sex, and seasonal fluctuations is of great importance for the development of measures of an economic, social, and medical-organizational nature.

METHODOLOGY

Previous research on acute respiratory diseases

Acute respiratory tract infections (ARI) are among the most common pathological conditions in children. According to the World Health Organization (WHO), ARI is recorded in millions of children worldwide each year and is the leading cause of death in children under 5 years of age (World Health Organization, 2023). Among these diseases, influenza, parainfluenza, adenovirus, respiratory syncytial virus (RSV), rhinovirus, and coronaviruses are the leading causes.

Disease prevalence in pediatrics

Studies show that ARI is more active in the autumn-winter season and is more common in children living in cold climates (Hassan et al., 2021). Epidemiological observations conducted in Uzbekistan confirm that ONI is often found in preschool institutions and in conditions of poor sanitation and hygiene (Karimova, 2020).

Clinical manifestations of diseases and diagnostic approaches

ONI in children usually manifests itself with symptoms such as fever, nasal congestion, cough, suffocation, difficulty breathing, and weakness. Therefore, not only clinical observation, but also laboratory and instrumental examinations are necessary for diagnosis. PCR diagnostic methods, chest X-ray examination, and pulse oximetry are widely used in modern medicine (Singh et al., 2022).

Treatment and therapeutic approaches

In medical practice, there are symptomatic and etiological approaches to the treatment of ONI. For viral ONI, antiviral drugs, paracetamol, nasal sprays, and drugs that facilitate breathing are used. Antibiotics are prescribed only when a bacterial infection is detected. Medicinal plants and hot drinks used in folk medicine are also widely used as adjuvants (Rahmonova, 2019).

The importance of prevention and immunization

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Vaccination plays a major role in disease prevention. RSV and influenza vaccines are widely used in some developed countries. The Ministry of Health of the Republic of Uzbekistan is trying to limit the spread of infection by expanding vaccination programs among children (Uzbekistan SSV, 2022). Also, compliance with hygiene rules, regular ventilation of rooms, and protection of children from excessively cold or hot air are considered important factors in preventing ONI. Research methods, participants and data collection approaches. This scientific study aimed to identify, analyze and evaluate preventive measures for acute respiratory diseases, which are considered particularly relevant in pediatrics. The study collected qualitative and quantitative data based on a mixed-methods approach. This approach allowed for a comprehensive analysis of the prevalence, symptoms, treatment and prevention of diseases.

Research design

- The study was conducted in two main stages:
- Quantitative stage - collection and analysis of statistical data.
- Qualitative stage - a deeper study of the root of the problem through interviews with doctors, parents and educators, questionnaires and observations.

RESULTS

Analysis of the prevalence, symptoms and preventive approaches of acute respiratory diseases in children.

According to the results of the study, the analysis conducted in different regions of Uzbekistan showed a high incidence of acute respiratory diseases (ARI) among children. Analysis of questionnaires and medical records, as well as interviews with doctors and educators, revealed that the prevalence of ARI is associated with demographic, social and hygienic factors.

1. Prevalence of ARI by age

Of the 150 children who participated in the study:

- 71% of children aged 1–2 years were noted to have suffered from ARI during the year;
- In children aged 3–4 years, this figure was 58%;
- In children aged 5 years, it was about 42%.

These results confirm that the incidence of the disease increases with age, which may be due to the incomplete formation of the immune system.

2. Frequency of symptoms

The survey revealed the following results regarding the symptoms of ONI:

- Cough in 92% of children;
- Stuffy or runny nose in 85% of cases;

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- Fever in 67% of children;
- Difficulty breathing in 43% of children;

Loss of appetite in 31% of cases.

This diversity of symptoms indicates that the type of disease is caused by different viruses and bacteria.

3. Vaccination status and disease association

78% of participating parents reported that their children had been vaccinated against influenza or other ONI. The study shows that vaccinated children had significantly fewer and milder cases of ONI. This confirms the effectiveness of vaccination through practical examples.

4. Level of knowledge of parents on health care

- Based on questionnaires given to 100 parents, the following situations were identified:
- 65% of parents try to treat themselves only with folk remedies (for example, honey, lemon, herbal decoctions) during illness;
- More than 50% treat themselves at home instead of immediately contacting a doctor when the temperature rises;

Only 35% of parents follow their child's vaccination schedule completely and regularly.

This indicates the need to strengthen explanatory work among parents in the field of health care.

5. Analysis based on doctors' opinions

Based on interviews with 30 pediatricians and family doctors, it was identified:

- Most doctors (87%) indicated non-compliance with hygiene rules, malnutrition, and weakened immunity as the main causes of ONI;
- 73% of doctors confirmed that evasion of vaccinations in children leads to an increase in ONI;

58% of doctors noted that cases of improper and self-medication of medicines are increasing among the population.

6. Hygiene conditions based on the results of the observation

The observations conducted in kindergartens revealed the following problems:

In most preschool educational institutions, ventilation systems do not work adequately;

The habit of washing hands among children is not regular;

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The temperature control system is not in all rooms.

These are some of the factors that create a favorable environment for the development of ONI.

General analysis

These results show that acute respiratory diseases in children are widespread, and a systematic approach is needed to reduce them. Diagnostics, vaccination, education of parents, and improvement of sanitary conditions should be the main priorities in this direction. As can be seen from the literature review, acute respiratory diseases pose a serious threat to children's health. To combat them, scientifically based diagnostic, treatment and preventive measures are necessary. Cooperation between parents, educators and medical personnel is important in this process. Based on these literary sources, modern approaches will be analyzed in the next stages of the study.

CONCLUSION

The results of the above study showed that acute respiratory diseases in children are a widespread problem. The frequency of ARI is especially high in children aged 1–3 years, and the incomplete formation of immunity at this age was noted as the main factor. Insufficient knowledge of parents about health, self-medication with medicines, and substandard hygienic conditions in some institutions contribute to the exacerbation of ARI. Vaccination is also an important factor in reducing ARI. According to doctors, these diseases can be prevented by annual vaccination of children, proper nutrition, and strict adherence to sanitary rules.

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