

MODERN APPROACHES TO DIAGNOSIS AND MANAGEMENT OF RESPIRATORY DISEASES IN CHILDREN

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Abstract

Respiratory diseases remain one of the leading causes of morbidity and hospitalization among children worldwide. Early diagnosis and effective treatment strategies are essential to reduce complications and improve clinical outcomes. This article reviews modern diagnostic methods and therapeutic approaches in pediatric respiratory diseases, emphasizing evidence-based medicine and clinical practice guidelines.

Keywords

pediatrics, respiratory diseases, pneumonia, diagnosis, treatment, children

Introduction

Respiratory diseases are among the most common pathological conditions in pediatric practice. According to global health statistics, acute respiratory infections account for a significant proportion of hospital admissions in children under five years of age.

The immaturity of the immune system, anatomical особенности дыхательных путей, and environmental factors such as air pollution contribute to the increased susceptibility of children to respiratory diseases.

Advancements in diagnostic methods, including radiological imaging and laboratory testing, have improved early detection and management.

Materials and Methods

This study is based on a comprehensive review of international clinical guidelines, including WHO recommendations and pediatric respiratory protocols. Data from peer-reviewed journals and clinical observations were analyzed.

The methodological approach included:

- literature analysis
- comparative evaluation
- clinical interpretation

Results

The findings indicate that early diagnostic interventions significantly reduce morbidity and mortality in pediatric respiratory diseases.

Modern diagnostic tools include:

- chest X-ray
- computed tomography (CT)
- pulse oximetry
- laboratory inflammatory markers

Children diagnosed early showed faster recovery and fewer complications compared to late-diagnosed cases.

Discussion

Radiological imaging plays a crucial role in diagnosing pneumonia, bronchitis, and other respiratory conditions. Chest X-ray remains the first-line diagnostic tool, while CT is used in complicated cases.

Treatment strategies include:

- antibiotic therapy
- antiviral treatment
- oxygen therapy
- supportive care

Preventive measures such as vaccination and proper nutrition significantly reduce disease incidence.

Conclusion

Early diagnosis combined with modern treatment strategies significantly improves outcomes in pediatric respiratory diseases. Integration of clinical and radiological methods is essential for effective management.

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