


NASOPHARYNGEAL MICROBIOTA IN CHILDREN WITH CHRONIC ADENOIDITIS

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Article Info	ABSTRACT
<p>Article history: Received Jul 21, 2024 Revised Jul 20, 2024 Accepted Aug 10, 2024</p> <p>Keywords: <i>Chronic Adenoiditis, Rhinoceros Mite, Viruses, Bacteria.</i></p>	<p>Background: Adenoiditis is a common condition in children that can lead to significant respiratory complications and may affect overall health and quality of life. Specific Background: This study was conducted at the LOR-Department and polyclinic of the Bukhara Regional Children's Multidisciplinary Medical Center, along with the "BUKHARA LOR MED CENTRE," focusing on the bacteriological profiles of pediatric patients diagnosed with adenoiditis. Knowledge Gap: Despite the prevalence of adenoiditis, there is limited understanding of the microbial agents involved, particularly in the pediatric population, which hinders effective treatment strategies. Aims: The objective of this study was to perform a bacteriological examination of children aged 3 to 18 diagnosed with adenoiditis to identify common pathogens and their distribution by gender. Results: A total of 154 children were examined, of whom 67.5% were boys and 32.5% were girls. The bacteriological analysis revealed a diverse range of microbial agents, providing insights into the predominant pathogens associated with adenoiditis in this demographic. Novelty: This research contributes to the limited existing literature by detailing the microbial landscape of adenoiditis in a significant pediatric cohort, specifically in the Bukhara region. Implications: The findings underscore the importance of targeted bacteriological assessments in the management of adenoiditis, which may inform more effective therapeutic approaches and improve clinical outcomes for affected children. Further studies are warranted to explore the clinical significance of the identified pathogens and their potential impact on treatment protocols.</p> <p>This is an open-access article under the CC-BY 4.0 license.</p> 

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DOI : <http://doi.org/10.61796/ijeirc.v1i8.196>

INTRODUCTION

In addition, with a constant increase in lymph nodes, complications associated with impaired hip joint function often occur. Frequent enlargement of lymphatic vessels may also be the cause [7,8]. This is mainly due to the special properties of the microbiota, as well as the fact that microorganisms have high viral and invasive activity.

Scientific researchers have mentioned in their scientific research about the peculiarities of the microflora of the burunhalghum in children, that is, the ability of microorganisms to high virulence and invasiveness is important in the development of the inflammatory process. This is especially characteristic of pathogenic bacteria, which are often detected in surtma from patients who have a chronic inflammatory process in the nose.

Treatment of this disease requires an individual approach, taking into account the age of the patient, the clinical picture of the disease and the characteristics of the burunhalghum microbiota. Conservative treatment usually involves the use of topical and systemic anti-inflammatory and antibacterial drugs, as well as physiotherapeutic treatments. However, when the disease recurs more often or complications associated with this disease develop, adenotomy surgery is recommended.

In the Prevention of chronic inflammation of the burunhalghum, it is necessary to strengthen local and general immunity, eliminate foci of chronic infection in the oral cavity and burunhalghum, and also attach importance to the correct Organization of lifestyle and diet. Particular attention is paid to measures to reduce the risk of infectious diseases, such as oral hygiene, preventing contact with infectious diseases and strengthening the immune system with vitamins and probiotics [6,10].

The Eustachian wedge is important in middle ear ventilation, providing a balance of the pressure between the middle ear and the larynx by providing aeration of the thoracic cavity. In addition, the general immunobiological state of the body also affects the development of the disease [5,9]. In modern medicine, there are various methods of treating sani, but their effectiveness is limited to this day. One of the main causes of long-lasting, slow-moving, frequent relapses and chronic diseases that are difficult to treat is a decrease in the body's protective strength. These changes are often associated with the frequent and unreasonable use of systemic antibiotics in the treatment of the disease against the background of stunted immune reactivity in children prone to disease [1,4]. In modern applied medicine, great attention is paid to the importance of respiratory viruses in the development and recurrence of inflammatory diseases in the burunhalcum. This connection is especially relevant considering the interaction of herpes infections with bacterial flora in the formation of bioplyonka [2,3]. However, studies in the literature aimed at studying the incidence and specificity of clinical signs in patients with hm disorders are rare in the literature. Especially in the treatment of the disease, there is not enough data on the development of specific diagnostic and prognostic criteria, including when complications associated with this disease develop [4,7].

The purpose of the study is to study the microbiota of the burunhalghum in

children with chronic adenoiditis.

METHODS

This research was carried out at the LOR-Department and polyclinic of Bukhara regional children's Multidisciplinary Medical Center and the BUKHARA LOR MED CENTRE Clinic. During the research, a bacteriological examination was carried out, in which all patients were smeared from the burunhalgum. The study examined 154 patient children between the ages of 3 and 18 who were diagnosed with adenoiditis. Among them, boys made up 67.5% and girls made up 32.5%. The average age is 7.5 years.

Children and their mother approached the medical facility with major complaints such as difficulty breathing through the nose (98%), decreased hearing (72%), and nasal detachment (61%).

Children were diagnosed with allergic rhinitis (67%), obstructive syndrome (49%), bronchial asthma (23%), chronic tonsillitis (16%), and other accompanying diseases of the upper respiratory tract.

RESULTS AND DISCUSSION

154 patients involved in the study were subjected to bacteriological examination of children with the extraction of rub from the burunhalgum.

Based on complaints identified from the word patients and their parents, Anamnesis data, as well as the results of an otorhinolaryngological examination and the results of a comprehensive instrumental and laboratory analysis, including bacteriological examination of the smear obtained from the surface of the larynx murtagi, we studied the causes of the manifestation of adenoiditis of various etiologies in children.

The microorganism most identified in this sample was *Staphylococcus aureus*, found in 26.6% of patients. Next, *Streptococcus pneumoniae* was found in 21.7% of patients and *Haemophilus influenzae* in 17.2% of patients. Other microorganisms such as *Klebsiella pneumoniae*, *Moraxella catarrhalis*, *Pseudomonas* species and *Streptococcus pyogenus* were scarce, accounting for 5.9%, 2%, 3.2% and 2% respectively.

Also noted was the Association of microorganisms consisting of two and three types of bacteria. The combination of *Staphylococcus aureus* and *Streptococcus pneumoniae* was found in 4% of patients, while *Staphylococcus aureus* and *Streptococcus pyogenus* were also found in 4% of patients together. Combinations of *Staphylococcus aureus* and *Acinetobacter baumannii*, as well as *Haemophilus influenzae* and *Streptococcus viridans*, were found in 5.8% and 4% of patients respectively. 4% of patients reported that three microorganisms, *Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Streptococcus viridans*, occur together.

Thus, chronic adenoiditis in children was found to be caused by microorganisms such as *Staphylococcus aureus* (26.6%), *Streptococcus pneumoniae* (21.7%), *Haemophilus influenzae* (17.2%), *Klebsiella pneumoniae* (5.9%), *Moraxella catarrhalis* (2%), *Pseudomonas* species (3.2%) I *Streptococcus pyogenus* (2%).

CONCLUSION

In this study involving 154 pediatric patients diagnosed with adenoiditis, we performed a comprehensive bacteriological examination utilizing smears obtained from the surface of the larynx. The analysis, based on patient complaints, anamnesis data, and otorhinolaryngological assessments, identified the predominant etiological agents contributing to chronic adenoiditis. *Staphylococcus aureus* emerged as the most frequently isolated pathogen, present in 26.6% of the cases, followed by *Streptococcus pneumoniae* at 21.7% and *Haemophilus influenzae* at 17.2%. Additionally, we observed a variety of less common microorganisms, including *Klebsiella pneumoniae*, *Moraxella catarrhalis*, *Pseudomonas* species, and *Streptococcus pyogenes*, which were found in lower frequencies. Notably, several patients exhibited polymicrobial infections, with combinations of *Staphylococcus aureus* and *Streptococcus pneumoniae*, as well as other bacterial pairings, detected in a subset of the cohort. These findings underscore the multifactorial nature of chronic adenoiditis in children, highlighting the need for tailored diagnostic and therapeutic strategies that consider the specific microbial profiles involved. By elucidating the bacterial etiology of adenoiditis, this study contributes valuable insights that may guide clinical practices in managing this common pediatric condition.

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