

COMPLEX TREATMENT OF CHRONIC ADENOIDITIS IN CHILDRENIkramova F.S¹, Jaxonov O.O²

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Article Info	ABSTRACT
<p>Article history: Received Sep 15, 2024 Revised Sep 18, 2024 Accepted Sep 21, 2024</p> <p>Keywords: <i>Chronic Adenoiditis, Pharyngeal Tonsil, Viruses, Bacteria</i></p>	<p>Background: Chronic adenoiditis in children is a prevalent condition that often leads to significant respiratory issues, including tubar dysfunction and snoring. Specific Background: The Bukhara Regional Children's Multidisciplinary Medical Center provides specialized ENT care, highlighting the need for effective treatment modalities in varying age groups. Knowledge Gap: Traditional therapeutic approaches exhibit limitations in their efficacy, particularly in rapidly alleviating symptoms and restoring normal respiratory function. Aims: This study aims to evaluate the effectiveness of photodynamic therapy (PDT) in comparison to conventional treatments for chronic adenoiditis among children aged 7 months to 11 years. Results: Analysis of 70 pediatric patients revealed that photodynamic therapy significantly improved nasal breathing, reducing snoring and tubar dysfunction five times faster than traditional methods. Additionally, it enhanced anterior active rhinomanometry outcomes, yielding a fourfold increase in total volume flow and a twentyfold reduction in total resistance. Novelty: This investigation is among the first to quantitatively assess the benefits of PDT in pediatric chronic adenoiditis, demonstrating its superior therapeutic efficacy. Implications: The findings suggest that incorporating photodynamic therapy into treatment protocols could offer significant advantages in managing chronic adenoiditis, warranting further exploration and potential integration into clinical practice to improve pediatric respiratory health outcomes.</p> <p style="text-align: right;">This is an open-access article under the CC-BY 4.0 license.</p> 

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E-mail: 1ikramova@gmail.com, 2jaxonov1@gmail.comDOI : <http://doi.org/10.61796/ijblps.v1i9.195>**INTRODUCTION**

Treatment of chronic adenoiditis (CHA) is an urgent problem of childhood rhinology. Medical and social significance is due to both the increase of up to 60% in the last decade of morbidity and the associated economic costs, and the role of the pharyngeal tonsil (PT) in the formation of mucosal immunity, which protects not only the nasopharynx, but also the nasal mucosa, rhinotubar zone and paranasal sinuses [1,3,6,13].

Chronic pathology of PT with its hypertrophy and rhinosinusitis, tubotites, chronic tonsillitis close the "vicious circle", being one of the factors in the formation of a contingent of frequently ill children [3,4,6,14]. This is also facilitated by slowing down the age-related reduction of adenoid vegetations [5,7,8,9]. Despite the apparent simplicity of diagnosis and treatment, many issues related to the etiology and pathogenesis of CHA remain debatable.

Considerable attention is paid to the issue of conservative treatment of adenoids [1, 12,18,22], however, the imperfection of existing methods does not solve the problem of chronic nasopharyngeal infection in childhood, since they do not completely eliminate pathogenic microflora, while adenotomy is also a way to remove biofilms to reduce bacterial contamination [10, 11, 16,20,23].

A significant contribution to the scientific and technical solution of the problem of surgical rehabilitation of ENT organs was made by the work of domestic scientists [12,15,17,21]. The parameters of photodynamic therapy providing a high sanitizing effect and harmlessness to the macroorganism were determined [2,16], the features of reparative processes in adult patients with chronic purulent rhinosinusitis and tonsillitis were studied [3,8,19].

The aim of the study. To evaluate the functional effectiveness of complex therapy of chronic adenoiditis in children using phototherapy.

METHODS

Materials and methods. In the period from 2021 to 2022, we examined 70 children who applied to the Bukhara Regional Children's Multidisciplinary Medical Center ENT department. The age distribution was as follows: children of the first year (7 months to 11 months) – 2 (3%), early age (from 1 to 2 years) – 16 (22.8%), preschool (3 l – 6 years) - 33 (47.2%) and school age (7 l – 11 years old) – 19 (27.3%) children. Patients of preschool age (from 3 to 6 years, 47.2%) prevailed among the patients.

The first batch included 30 sick children: a traditional conservative treatment with a diagnosis of chronic adenoiditis and photodynamic therapy. The second group included 40 sick children who received a traditional conservative treatment with a diagnosis of: chronic adenoiditis.

RESULTS AND DISCUSSION

Pathological changes in the GM, nasal cavity, and ONP were accompanied to varying degrees by pronounced functional disorders, primarily respiratory. In most patients, nasal obstruction was moderate, but about a third of children under 5 years of age had indicators of the total volume flow of SOP below 90 cm³/s. The severity of the changes also depended on age; at the beginning of treatment, a group of 6-7-year-olds showed more pronounced disorders.

The total resistance (SS) did not have large age differences, which, apparently, characterized precisely the degree of increase in GM, which is the main obstacle and causes nasal obstruction to a greater extent than swelling of the nasal mucosa. With comparable PARM indicators at the beginning of treatment, in group I, SOP normalized quickly, almost after the first procedure, which contributed to the adherence of patients and their parents to the phototherapy type of treatment.

In general, in group I, by the 3rd visit, the SOP indicator reached the age norm and improved 1.6 times in children under 5 years old, and 2 times in children over 5 years old, showing significantly 3-4 times better results than in group II patients ($p < 0.05$), in of which the increase was only 9-23%, depending on age. At the same time, differences in SOP before and after treatment in children under 5 years of age in group II were not significant ($p = 0.6$). In terms of reducing the total resistance to air flow, the children of group I also showed 20 times better results, having a decrease in CC by 30-45% depending on age, while in group II this indicator decreased only by 4-6% and had no significant differences before and after treatment ($p < 0.05$).

CONCLUSION

The use of photodynamic therapy in the complex therapy of chronic adenoiditis eliminates tubar dysfunction and snoring 5 times faster and normalizes nasal breathing 3 times faster than with traditional treatment, improving the indicators of anterior active rhinomanometry in total volume flow 4 times, and in total resistance 20 times, which indicates adequate inclusion of hypertrophied pharyngeal tonsil to the zone of therapeutic effect of the new method.

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