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ALGORITHM FOR REHABILITATION OF CHILDREN WITH CONGENITAL CLEFT LIP AND PALATE IN A REGION WITH ECOTOXICANTS

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Abstract: Children born and living in a region with industrial ecotoxicants have a high percentage of concomitant somatic diseases and abnormalities in the blood picture. An algorithm has been developed for the rehabilitation of children with congenital cleft lip and palate in a region with ecotoxicants, optimized by including consultations and treatment with a toxicologist, anesthesiologist, immunologist, otorhinolaryngologist, gastroenterologist, and endocrinologist. The algorithm is aimed at improving the child's health by increasing the effectiveness of prevention and treatment of somatic diseases in the preoperative period and normalizing blood quality parameters.

Keywords: Congenital cleft lip and palate, rehabilitation algorithm, prevention of somatic diseases, ecotoxicants, ecology, concomitant diseases.

INTRODUCTION

Congenital cleft of the upper lip and palate is a common malformation of the fetus, it occupies a leading place in the structure of all antenatal pathologies, leads to changes in the aesthetics of the child's face, dysfunction of nutrition, breathing, the occurrence of speech defects, disability of children from early childhood until complete elimination of functional disorders [1]. The problem of treating children with congenital cleft lip and palate requires substantiation of age-specific approaches, improvement of treatment methods and rehabilitation of patients [2]. For successful rehabilitation of patients with congenital cleft lip and palate, it is necessary to maintain continuity at the stages of medical care, in which doctors of various specialties take part. A comprehensive approach to the treatment of patients with congenital cleft lip and palate involves a pediatrician, neonatologist, otorhinolaryngologist, audiologist, speech therapist, surgeon, maxillofacial surgeon, pediatric dentist, orthodontist, psychologist, etc. [3].

MATERIALS AND METHODS

A retrospective analysis of the medical records of children diagnosed with "congenital cleft lip and palate" in the Department of Oral and Maxillofacial Surgery was conducted. A quantitative assessment of atmospheric air pollution in cities with petrochemical industries showed a high level of pollutants (benzopyrene, nitrogen dioxide, nitrogen oxide, hydrogen chloride, etc.).

Our study noted a direct relationship between the level of environmental pollution with ecotoxicants and the frequency of concomitant somatic diseases in children. Based on data from 3463 medical records of children with congenital cleft lip and palate, it was established that 1446 children were born and live in an area with petrochemical ecotoxicants, and 2017 - without petrochemical ecotoxicants. When analyzing the medical histories of children, we obtained the following results on the frequency of concomitant diseases.

In an area without petrochemical ecotoxicants, diseases of the ENT organs were identified in 1046 children (72.33%), frequent relapses of acute respiratory viral infection - in 993 (68.71%), diseases of the respiratory system - in 514 (35, 52%), pathologies of the central nervous system - in 419 (29.02%), diseases of the cardiovascular system, including congenital heart defects - in 248 (17.12%), gastrointestinal tract - in 152 (10 .18%), iron deficiency anemia according to

blood tests - in 122 (8.43%), food and drug allergies - in 114 (7.89%), malformations of the visual organs - in 72 (4.95%), urinary pathologies systems, including infectious ones - in 54 (3.71%), malnutrition, reduced body weight - in 46 (3.16%), combined diseases of various organs and systems - in 814 (56.31%).

RESULTS AND DISCUSSION

INFANCY PERIOD (from 1 month to 1 year)

This period of rehabilitation is aimed at preparing and performing the cheilorhinoplasty operation, which is usually performed in children at 2.5–3 months of age. In case of bilateral complete cleft of the upper lip, alveolar process, soft and hard palate in this age period, early preoperative orthopedic preparation of the patient continues. The goal of early preoperative orthopedic treatment is to eliminate displacement of the maxillary fragments, protrusion of the median fragment and prevent secondary displacement in the postoperative period. If there are concomitant somatic and neurological diseases, they are treated.

Frequently ill children with concomitant somatic pathologies are prescribed a consultation with an immunologist-allergist to correct the immunological status before surgery.

Children born and living in a region with petrochemical ecotoxicants have a high percentage of concomitant somatic diseases. The presence of concomitant diseases and changes in blood tests in children with congenital cleft lip and palate is a contraindication to surgical treatment according to the accepted timing, which leads to a shift in the timing of the planned primary operation. An algorithm for the rehabilitation of children with congenital cleft lip and palate in a region with a petrochemical industry has been developed, optimized by including consultations and treatment with a toxicologist, anesthesiologist, immunologist, otolaryngologist, gastroenterologist, endocrinologist and other specialists in concomitant pathology. The algorithm is aimed at improving the child's health by increasing the effectiveness of the prevention and treatment of somatic diseases in the preoperative period.

CONCLUSION

Thus, our optimized algorithm for the rehabilitation of children with congenital cleft lip and palate in a region with industrial ecotoxicants was developed taking into account the adverse effects on the body of emissions into the air from large oil industrial enterprises. Children with congenital cleft lip and palate, born and living in a region with petrochemical ecotoxicants, who have contraindications to surgical treatment according to the accepted time frame due to the presence of concomitant diseases and abnormalities in blood tests, require additional treatment from a toxicologist, anesthesiologist and other specialists. The algorithm includes a list of additional preventive and therapeutic measures carried out by related specialists at important time stages in the development of a child with a congenital cleft lip and palate, which allows improving the child's somatic condition and the quality of preoperative preparation.

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