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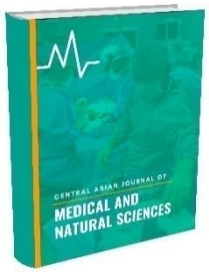

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Systemic Hypoplasia in Children, Clinical Observations, Diagnosis and Approach

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Abstract: It has been established that among children in cotton-growing and industrial areas, whose environmental objects are contaminated with pesticides and industrial emissions, there is a high incidence of diseases of the endocrine, respiratory and nervous systems, gastrointestinal tract organs, allergic diseases associated with dental pathologies, and as well as retardation in physical and intellectual development and congenital malformations.

Key words: hypoplasia, hard dental tissues, metabolic disorders, mineralization of teeth, dental status

It has been established that among children in cotton-growing and industrial areas, whose environmental objects are contaminated with pesticides and industrial emissions, there is a high incidence of diseases of the endocrine, respiratory and nervous systems, gastrointestinal tract organs, allergic diseases associated with dental pathologies, and as well as retardation in physical and intellectual development and congenital malformations. In the republic, there are practically no studies concerning dental hypoplasia of the children's population under conditions of isolated and combined exposure to pesticides, mineral fertilizers and other industrial chemical emissions (sulfur and nitrogen dioxides, ammonia, etc.), the toxic effect of which may increase in children. background of high atmospheric temperature [1]. Dental hypoplasia occurs due to the influence of unfavorable environmental factors on the child's body in utero and during the first years of life [2]. Thus, in order to reduce and prevent complications of the disease of systemic hypoplasia in children living in environmentally disadvantaged areas of the Bukhara region, there is a need to strengthen measures of secondary prevention of systemic dental hypoplasia in children.

The purpose of the study is to evaluate –the effectiveness of secondary prevention measures to prevent complications of systemic dental hypoplasia in children.

Materials and methods

A statistical analysis of the data from the annual examination of children aged 7-15 years in three districts (Karaulbazar, Gijduvan and Madaniyat village) of the Bukhara region for two years (2017-2019) was carried out. It turned out that systemic hypoplasia of the enamel of permanent teeth was found in 144 children out of 296 examined. Of the 144 children with diagnosed systemic dental hypoplasia, 35 (24.3%) were aged 13-15 years, and 109 (75.7%) were aged 7-12 years. Taking into account statistical data, we developed and tested for two years (2017-2019) a comprehensive system of

secondary prevention to prevent complications of systemic dental hypoplasia in children living in areas with different environmental environments.

Treatment was carried out depending on the form, clinical manifestations and age of the patients. For spotted forms, local and general treatment was carried out without filling teeth. For erosive, mixed and grooved forms, local and general treatment was carried out with preparation and filling of the tooth defect.

As for general remineralization therapy, we prescribed calcium glycerophosphate 0.5 g orally and ascorbic acid 2 times a day for 1 month for children 7-12 years old, and calcium glycerophosphate 0.5 g twice a day for 1 month for children 13-15 years old. ascorbic acid also 2 times a day for 1 month, repeating the course of treatment after 3 months. In addition, oral multivitamins (Oligovit) were prescribed, 1-2 tablets depending on body weight, immediately after breakfast. To improve oral hygiene, local application to the teeth and mouth rinse were prescribed.

Application of teeth. After brushing the teeth with the paste, the teeth were covered for 10-12 minutes with swabs moistened with a 10% solution of calcium gluconate, then for 5-6 minutes with rollers moistened with SPLAT Professional Forest Herbs and Biocalcium rinse aid. For one course, 3-6 procedures were carried out every other day 3-4 times a year.

Mouth rinse. After brushing teeth with SPLAT “Biocalcium” pastes from 12 years old and SPLAT JUNIOR at 6-11 years old, the mouth was rinsed with SPLAT Professional “Forest Herbs and Biocalcium” for 1 minute. 8-10 procedures were prescribed per course. After rinsing for 2 hours, children were not recommended to eat or brush their teeth. Such courses were repeated 3-5 times a year.

Results and discussion

Thus, already in the first 3 months of treatment in the Karaulbazar district in children at the age of 7-12 years, with enamel hypoplasia, spots completely disappeared in 4.5%, partial improvement in color - in 16%, in 6-9 months the spots completely disappeared in 22.7%, partial improvement in 31.8%. In children 13-15 years old, complete disappearance of spots was observed in 3 months in 7.7% of patients, decreased in 30.7% of patients, in 6-9 months complete disappearance was observed in 30.7% of cases, partial change in 61.5 %. In the Gijduvan region, at the age of 7-12 years, within 3 months, complete disappearance of spots was observed in 7.4% of children, partial improvement in color - in 29.6%. For 6-9 months at 18.5% of cases, spots disappeared completely, partially - in 44.4%. At the age of 13-15 years complete disappearance was observed after 3 months in 6.7%, partial improvement color loss - 40%, after 6-9 months complete disappearance was observed in 26.7%, partial improvement in color. 53.3% of children.

Conclusion

Thus, the highest priority measure for improving oral hygiene and for the treatment of dental hypoplasia in children is the oral administration of calcium glycerophosphate, ascorbic acid and <<Oligovit”, the use of the new toothpaste SPLAT “Biocalcium” (from 12 years), SPLAT JUNIOR (6- 11 years old) and the SPLAT “Forest Herbs” rinse aid, experimental and clinical testing of which showed high efficiency.

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