

Results of the Research of Helminths Carrying as a Comorbidity with Chronic Recurrent Aphthous Stomatitis

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Abstract In everyday clinical practice, patients seeking dental care with diseases of the oral mucosa, represent one of the most difficult problems in dentistry due to difficulties in diagnosis and treatment (Storck C., 2000; Akman A. et al., 2017). The problem is further complicated by the fact that so far no measures of communal prevention of diseases of the oral mucosa have been developed. Chronic recurrent aphthous stomatitis is considered to be one of the most frequent diseases of the oral mucosa. So, according to A. I. Rybakov, G. V. Banchenko (2008), it was 5% of all diseases of the oral mucosa. According to other researchers, about 20% of the population suffers from aphthae at one time or another. Before puberty, people of both genders are equally affected, but women predominate among adults.

Keywords Stomatitis, Gastrointestinal tract disorders, Helminthosis

1. Introduction

Currently, due to the lack of special epidemiological studies, data on the prevalence of this lesion of the oral mucosa in the literature is almost not found.

The etiology and pathogenesis of chronic recurrent aphthous stomatitis is not completely revealed. It has been established that a significant role in the pathogenesis of chronic inflammatory processes belongs to the state of microbiocenosis of the oral mucosa.

Its participation in the processes of metabolism, synthesis of vitamins, formation of the immune status and nonspecific resistance has been proven. Clinical and experimental data indicate the role of gastrointestinal pathology and liver disease in the pathogenesis of chronic recurrent aphthous stomatitis (Sulka A. et al., 2006; Tani H. et al., 2017). The issue of allergic genesis of the disease is widely discussed. At the same time, the problem of free radical processes and antioxidant protection in saliva in this pathology remains poorly understood. It is known that violations of the immunological and free radical status can affect the course and prognosis of chronic diseases of the oral mucosa.

Helminthiasis is a chronic parasitic disease in which all organs and systems are involved in the process. In total there

are more than 250 species of helminths, and in the CIS there are about 90 species.

According to the World Health Organization more than 16 million die every year because of infectious and parasitic diseases. Intestinal helminth infections are on the third place in the structure of infectious diseases. According to the World Bank, the economic damage from intestinal helminth infections is on the fourth place among all diseases and injuries [5,6].

In recent years, the incidence of helminth infections in humans increases due to socio-economic problems in the country and the decrease in the volume of sanitary and educational work; unsatisfactory sanitary improvement of settlements and industrial enterprises [1]; the use of water from polluted open water bodies, as well as the consumption of fish and meat, raw or without sufficient heat treatment.

The pathological effect of helminths on the human body is most pronounced in childhood. The main links in the pathogenesis and side effects of the worms are: allergization, immunosuppression, mechanical damage to organs and tissues, the development of secondary infectious and non-infectious diseases, impaired metabolic processes of the body (including, as a result, hypovitaminosis, deficient anemia), impaired physical and mental development, chronicity, and a more severe course of other diseases [4].

2. Methodology

We analyzed the helminthic carriage as a concomitant disease in patients with aphthous stomatitis who received

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treatment for this disease in 2014–2015. We used traditional macro- and microhelminthological methods to identify helminths. We used the Kalantaryan method of elutriation, made native preparations, and also used some special research methods: scraping from perianal folds (Schulz R.S., Skryabin K.I.), method of Kevorkova, cellophane method [2,3].

3. Result and Discussion

During the study period, 210 patients with moderate and severe forms of chronic recurrent aphthous stomatitis were treated. During the laboratory study of feces on the eggs of worms various types of helminthic invasions were detected in 176 cases which made up 84.3% of all treated children. During the study period, 94 patients were treated with moderate and severe forms of chronic recurrent aphthous stomatitis. In a laboratory study of feces on the eggs of worms, in 77 cases, various types of worm infestations were detected, which made up 82% of all treated children. As a result of studying the helminth infection in children, the most frequently detected were: enterobiasis (60.7%), ascariasis (18.2%), giardiasis (10.3%), hymenolepiasis (7.3%). The results of our research allow us to conclude that there is a relationship between oral diseases with disorders of various parts of the gastrointestinal tract, which is caused by the morphofunctional unity of the digestive apparatus. Chronic diseases of the gastrointestinal tract (stomach, liver, pancreas, etc.) are accompanied by a deficiency of vitamins, minerals, proteins, carbohydrates in the body, which leads to functional and organic disorders in the oral mucosa, the development of inflammatory and dystrophic changes in tissues oral cavity, dysfunction of the chewing apparatus and reduced immunity. The development of combined lesions with helminthic invasions of the gastrointestinal tract exacerbates the severity of the pathology of the oral organs.

4. Conclusions

Thus, the presence of concomitant pathology of the gastrointestinal tract (helminths) in patients aggravates the course of the underlying disease, in this case, chronic recurrent aphthous stomatitis. So, according to our data, the prevalence of concomitant helminth infections is found in children with moderate and severe forms of chronic recurrent aphthous stomatitis.

REFERENCES

- [1] Zryachkin N.I. Helminthiasis (pathogenesis, clinic, diagnostics, treatment, clinical examination and prevention): tutorial. - 2nd ed., - Saratov: SSMU, 2016. - 21 p.
- [2] Kuryakina N.V. Therapeutic dentistry of children's age. - N. Novgorod: NGMA, 2014. - 744 p.
- [3] Ovrutsky G.D. Introduction to the clinic of diseases of the oral mucosa / G.D. Ovrutsky, N.A. Goryachev. - Kazan, 1990. - 104 p.
- [4] Parasitic diseases in children: tutorial. /S. Bakasova, L.N. Minich, N.Sh. Andreeva et al. — Bishkek: KSMA, 2016. — p. 8-9.
- [5] Practical Guide to Anti-infective Chemotherapy /L.S. Strachunsky, Yu.B. Belousov, S.N. Kozlov. - Smolensk: MAK-MAX, 2017. - 464 p.
- [6] Pechkurov D.V. Worm infestations in children: diagnosis and treatment / D.V. Pechkurov, A.A. Tyazheva // Rus. Med. j. —2014. - № 3. - p. 242-246.