

Influence of Local Immunomodulators on the Dynamics of Clinical and Biochemical Parameters in Patients with Polypous Ethmoiditis

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Abstract

The state of endogenous intoxication against the background of the use of local immunomodulators in polypous ethmoiditis has not been studied enough. The study used the drug Flu Quit capable of inhibiting the release of mediators of allergic reactions, which in turn can lead to polypous ethmoiditis. Under the influence of Flu Quit, the MDA content decreased by 42.6%, plasma catalase activity increased by 60.0%, the MDA / CA ratio decreased by 80.4%, the concentration of MMM254 and MMM280 decreased by 45, 0 and 35.5%, respectively , which significantly brought them closer to the indicators of the healthy group.

Keywords:

polypous ethmoiditis, Flu Quit, endogenous intoxication.

INTRODUCTION

The frequency of polyposis ethmoiditis (PE) is steadily increasing, it is diagnosed in 12-40% of the population of different countries. According to epidemiological studies, the prevalence of polypous ethmoiditis only in the pediatric population is 10-15% [2,4].

Among the many reasons that cause a change in normal homeostasis in PE, endogenous intoxication (EI) occupies. As a result of this violation, intermediate and final products of normal metabolism, products of disturbed metabolism of connective tissue, components of the degradation of its normal structures, as well as waste products of bacteria and antigens that have a toxic effect and cause dysfunction of various organs and systems, accumulate in biological fluids and tissues of the body. [1,3].

Numerous works on the diagnosis and treatment of PE are presented in the scientific literature [7]. However, given the fact that violations of the immune status and lipid peroxidation processes, leading to endogenous intoxication of the body, are important in the occurrence of PE, it became necessary to develop diagnostic criteria and evidence-based methods of treatment. Since, despite the fact that EI in PE does not pose a threat, it significantly worsens the quality of life [1,5,8].

The use of local immunomodulators for the treatment of PE is known, but the state of EI is not well understood. We chose the drug Flu Quit, which is used intranasally, and it is also of no small importance that it can be used in children [6].

Purpose of the study: to study the effect of the local immunomodulator Flu Quit on the indicators of endogenous intoxication in patients with polypous ethmoiditis.

Material and research methods. The work is based on the results of examination and treatment of 22 patients aged 10 to 65 years with PE, as well as 10 practically healthy people from November 2020 to March 2023 in the ENT department of the multidisciplinary clinic of the Samarkand State Medical University. All patients lived in Uzbekistan, 13 in rural areas and 9 - urban residents. The main clinical manifestations of PE were profuse discharge of mucus from the nasal passages, nasal congestion, headache, and impaired sense of smell. Often, the Eustachian tube was involved in the process, which led to a feeling of stuffy ears, hearing loss, tinnitus.

Flu Quit was used 4 times a day, 5-8 drops in each nasal passage for 2 weeks in the postoperative period.

A biochemical blood test was performed before and after treatment: to assess the processes of EI, we used the content of malondialdehyde (MDA), catalase activity, medium mass molecules (MMM) at a wavelength of 254 and 280 nm, and the MDA/CA ratio. The results obtained, characterizing endogenous intoxication in patients with PE, are shown in the table.

Table 1.

Indicators of endogenous intoxication in patients with PE

Indicators Control

n =10 Before treatment

n=22 After treatment

n=22

MDA, $\mu\text{mol/l}$	3,50 \pm 0,23	6,56 \pm 0,28, P<0,001	3,76 \pm 0,12, P<0,1
CA, mkat/sec	10,90 \pm 0,06	0,28 \pm 0,03, P<0,001	0,82 \pm 0,1, P<0,001
MMM254, a.u.	0,24 \pm 0,03	0,51 \pm 0,04, P<0,001	0,28 \pm 0,02, P<0,05
MMM280, a.u.	0,28 \pm 0,03	0,451 \pm 0,041, P<0,001	0,29 \pm 0,02, P<0,1

AFB, a.u. 1,16±0,07 0,88±0,084, P<0,001 1,04±0,07, P<0,1

MDA/CA, a.u. 3,89±0,16 23,43±1,38, P<0,001 4,59±0,20, P<0,1

Note: *-P<0.05, **-P<0.001 significance of differences relative to the control group

Results. In the course of the studies, it was found that in all patients, a positive clinical effect was achieved during Flu Quit therapy. The good tolerability of the drug is noteworthy.

No systemic side effects were noted. The effect of Flu Quit appeared from the first days of treatment and increased in the following weeks.

Under the influence of Flu Quit, the MDA content decreased by 42.6%, plasma catalase (CA) activity increased by 60.0%, the MDA / CA ratio decreased by 80.4%, the concentration of MMM254 and MSM280 decreased by 45, 0 and 35 .5%, respectively, and the AFB was 18.2%, which significantly brought it closer to the indicators of the healthy group.

Conclusion. Thus, the use of Flu Quit in the complex treatment of patients with PE gives positive results, manifested in the improvement of clinical data, from the side of biochemical studies, the maximum approximation of endogenous intoxication indicators to the control ones is observed and, undoubtedly, can be recommended for use in practical otorhinolaryngology.

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