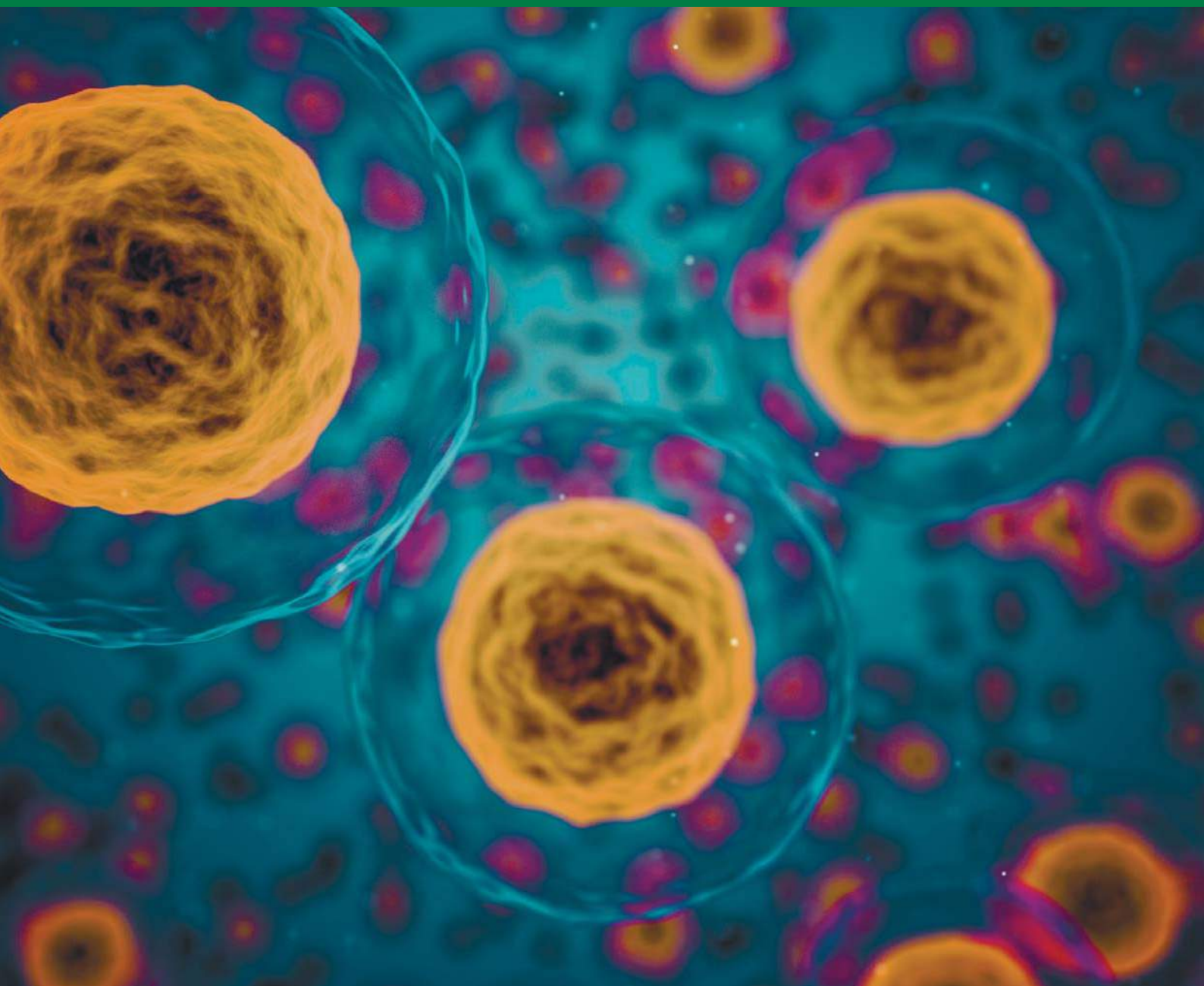


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ISiC



DENTISTRY





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THERAPEUTIC EFFICACY OF LOCAL TREATMENT PATIENTS WITH I-II DEGREES OF SEVERITY OF CHRONIC GENERALIZED PERIODONTITIS

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Introduction. The misbalance between pro-inflammatory (TNF- α) and anti-inflammatory (IL-4) mediators as being the cytokines for which there is the most substantial evidence for having a central role in cytokine networks in periodontal diseases. Being small, liposomes go through regions that other delivery systems might not get an access to. It is remarkable that liposomes are the most frequently used for drug delivery due to simple methods of preparation and easiness of scaling up.

Anti-inflammatory characteristics of «Lipoflavon» (JSC „Biolek”, Kharkov), which contains lecithin liposomes and quercetin, are based on its marked anti-leukotrienes effect. Quercetin inhibits production of inflammation-producing enzyme 5-lipoxygenase. The immunomodulating action of Quercetinum is known. Efficacy of local application of medical drugs in periodontal tissues depends on the display of substances in the periodontal pocket (PP), choice of medical substances, method of his application and contact with the gingival oral mucosa.

As a consequence, the considerate research of changes of pro-inflammatory TNF- α and anti-inflammatory IL-4 cytokines might have considerable scientific and practical importance while treating patients with CGP of I-II degrees of severity with gel from the granules of Quercetinum (GQ) and liposomal Quercetinum-lecithin complex (LQLC).

The purpose of study was to increase of efficiency of complex treatment the patients with CGP of I-II degrees of severity with gel from the granules of GQ and liposomal LQLC due to the correction of cytokine levels.

Material and Methods. Mouth liquid sampling of all observed patients was taken every morning before treatment and one, six and twelve months after the treatment for immunological researches. The patients of basic group (BG) recieved base therapy with the local application LQLC (injection form of «Lipoflavon») as a suspension, prepared



ex tempore, containing 137.5 mgs of lecithin and 3.75 mgs of Quercetinum. This suspension was prepared by mixing 1/4 parts of content of the small bottle with 5 ml 0,9% solution of natrium chloride, warmed up to 38. The patients of comparison group were treated with base therapy providing local application of gel from GQ during 40 minutes 2 times per a day during 10 days. The 35 patients with CGP of I-II degrees of severity were kept under observation.

In accordance to treatment all patients were divided into 2 groups: I group – basic treatment with local application LQLC (20 patients); II group (group of comparison (CG)) – basic treatment with local application of gel from GQ (18 patients). The control group (C) included 14 healthy subjects without systemic disease. Six months later the patients were examined, the condition of periodontal tissues was inspected and supporting therapy was conducted.

Results and discussion. The cytokine level of the patients of C was $\text{TNF-}\alpha\text{-}21,71\pm 2,95$ pg/ml, where as that of the anti-inflammatory was $\text{IL-4-}243,5\pm 17,48$ pg/ml.

The cytokine level of the patients with I-II degrees of severity in the BG after treatment during one month was $\text{TNF-}\alpha\text{-}30,05\pm 2,9$ pg/ml and anti-inflammatory $\text{IL-4-}328\pm 13,96$ pg/ml, which was 35% lower than in the C. The patients in the CG after treatment during one month were determined with $\text{TNF-}\alpha\text{-}27,31\pm 1,21$ pg/ml and anti-inflammatory $\text{IL-4-}280,2\pm 13,31$ pg/ml, which was 28% lower than in the C.

The cytokine level of the patients with I-II degrees of severity in the BG after six-month treatment was $\text{TNF-}\alpha\text{-}32,54\pm 3,94$ pg/ml, which was 16% higher than in the C and anti-inflammatory $\text{IL-4-}292,8\pm 10,2$ pg/ml, which was 19% lower than in the C. The cytokine level of the patients in the CG after six-month treatment was $\text{TNF-}\alpha\text{-}35,36\pm 2,54$ pg/ml, which was 18% higher than in the C and anti-inflammatory $\text{IL-4-}300,1\pm 16,51$ pg/ml, that was 17% lower than in the C.

The cytokine level of the patients with I-II degrees of severity in the BG after twelve-month treatment was $\text{TNF-}\alpha\text{-}25,12\pm 2$ pg/ml, which was 77% lower than in the C and anti-inflammatory $\text{IL-4-}300,1\pm 16,51$ pg/ml, which was 2% higher. The cytokine level of the patients in the CG after twelve-month treatment was $\text{TNF-}\alpha\text{-}33,37\pm 2,81$ pg/ml, which was 54% lower than in the C and anti-inflammatory $\text{IL-4-}266,4\pm 20,11$ pg/ml, which was 23% lower than in the C.



Conclusions. Considerable therapeutic efficacy of the LQLC for treatment patients with CGP, especially that of I-II degrees of severity is based on its marked anti-inflammatory, immunomodulating and periodontoprotecting effects.

Markovska Iryna

ASSESSMENT OF THE QUALITY OF DRINKING WATER CONSUMPTION BY PERSONS WORKING UNDER THE INFLUENCE OF ELECTROMAGNETIC

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As you know, oral fluid consists of 99.0 - 99.4% of water and 1.0 - 0.6% of dissolved organic mineral salts, which is why an important factor, which affects its properties is the quality and composition of drinking water consumed. Saliva sampling for various types of research is widely used in dentistry because it is a minimally invasive and painless method.

65 people aged 26 to 60 years, directly employed in production in the press and welding shop of the Kharkiv Tractor Plant. The control group consisted of 46 practically healthy people, scientists and technicians, aged 25 to 60 years.

A survey was conducted to determine the nature of water consumed. According to the results of the survey, the following data were obtained: employees of the press and welding shop of the Kharkiv Tractor Plant use boiled (51.8%) and imported (43.2%) frequencies with approximately the same frequency, in addition, 1.89% of is bottled water, 1.66% is tap water. In the comparison group 79.9% drink boiled water, 10.1% - drink bottled water, 10% - imported.

Among the brands of packaged drinking water most often used in everyday life: TM "Roganskaya", "Malyatko", "ALIVIA" and "Morshinskaya".

According to the analysis of samples, the fluoride bridge in the water of TM "Roganskaya" was 1.43 mg/dm², in the water "Baby" - 0.4 mg/dm², "ALIVIA" - 0.36 mg/dm² and "Morshinskaya" - 0.47 mg/dm².

In accordance with state sanitary norms and rules "Hygienic requirements for



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