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ТЕОРІЯ ТА ПРАКТИКА СУЧАСНОЇ СТОМАТОЛОГІЇ

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POSSIBLE PROGNOSTIC BIOMARKERS OF PERIODONTITIS IN ORAL FLUID

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Introduction. Periodontitis is an inflammatory disease affecting approximately 10% of the population. In essence, it is the destruction of periodontal tissues, and supporting tissues of the tooth. Its progression results in the loss of alveolar bone and premature tooth loss. Subsequently, external factors play a role, as well as the body's response. Thus, the disease is a complex of interactions between pathogenic microorganisms and the host immune response [1, 2, 3].

The role of oxidative stress in periodontitis has been studied for decades. The main source of reactive oxygen species is thought to be neutrophils, which are the first line of defense against bacteria. During the process of respiratory inflammation, a superoxide radical is formed. This may then be released into the phagosomal and extracellular space causing the subsequent formation of other radical and non-radical derivatives [1, 2, 4].

Modern predominant perception of the nanoscale lipid artefacts - liposomes as drug delivery systems (DDS), based on the ability of universal incorporation of active pharmaceutical ingredients (APhI). Liposomes are nano- and micro-structured vesicles with a bilayered phospholipid membrane. In addition to these features, liposomes can be designed to increase the bacterial interaction by modification of superficial vesicle compounds [5, 6].

The efficacy and safety of Lipoflavon for systemic and local use in different clinic branches reflect the versatility of the mechanism of action of phospholipid liposomes and quercetin with an emphasis on antioxidant, antihypoxic, membraneprotective and immunomodulatory activity, pro-surfactant effect.

The aim of this study is to measure malondialdehyde (MDA) as an end product of oxidative stress and enzyme antioxidant activity catalase (CAT) in patients with

CGP of initial-I degrees of severity and assess the influence of periodontal treatment with gel from the Granules of Quercetin (GQ) and Liposomal Quercetin-Lecithin Complex (LQLC) on these parameters.

Material and Methods. Oral fluid (OF) sampling of all observed patients was taken every morning before treatment and one, six and twelve months after the treatment for biochemical researches. The patients of basic group (BG) received 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. The patients of comparison group (CG) were treated with base therapy providing local application of gel from GQ with the use of individual periodontal delivery tray during 40 minutes 2 times per a day during 10 days. The 35 patients with CGP of initial-I degrees of severity were kept under observation. The control group (C) included 14 healthy subjects without systemic inflammatory diseases.

The state of prooxidant-antioxidant protection was determined by the level of MDA and CAT. Level determination MDA was performed by the method Uchiyama M. & Michara M. in the modification of Volchegorsky I.A. et al. according to the test with thiobarbituric acid. The determination of CAT activity was determined by the method, which is primed with water peroxide (H_2O_2) to dissolve a stable poisoning complex from molybdenum salts.

Results. The MDA level of the patients of C group was - $4,62 \pm 0,23$ - $\mu\text{mol/l}$, whereas that CAT was - $3,35 \pm 0,08$ units. The MDA level of the patients with initial and I degrees of severity in the BG before treatment was - $6,15 \pm 0,61$ $\mu\text{mol/l}$, which was 33% higher than in the C group and CAT - $2,8 \pm 0,14$ units, which was 16% lower than in the C. The patients in the CG before treatment were determined with MDA - $6,02 \pm 0,58$ $\mu\text{mol/l}$, that was 30% higher than in the C group and CAT - $2,74 \pm 0,18$ units, that was 18% lower than in the C.

The MDA level of the patients with initial and I degrees of severity in the BG after treatment during one month was - $4,73 \pm 0,57$ $\mu\text{mol/l}$, which was 33% higher than

that in the C group and CAT - $4,15 \pm 0,19$ units, which was 12% higher than that in the C. The patients in the CG after treatment during one month were determined with – MDA $4,95 \pm 0,51$ $\mu\text{mol/l}$, which was 33% higher than that in the C group and CAT - $3,75 \pm 0,51$ units, which was 24% higher than that in the C group.

The MDA level of the patients with initial and I degrees of severity in the BG after six-month treatment was - $4,81 \pm 0,25$ $\mu\text{mol/l}$, which was 4% higher than in the C group and CAT - $3,76 \pm 0,11$ units, which was 12% higher than in the C group. The MDA level of the patients in the CG after six-month treatment was - $4,86 \pm 0,43$ $\mu\text{mol/l}$, which was 5% higher than in the C group and CAT - $3,54 \pm 0,1$ units, that was 6% higher than in the C.

The MDA level of the patients with initial and I degrees of severity in the BG after twelve-month treatment was - $4,78 \pm 0,33$ $\mu\text{mol/l}$, which was 3% higher than in the C group and CAT - $3,81 \pm 0,12$ units, which was 14% higher than in the C group. The MDA level of the patients in the CG after twelve-month treatment was - $4,91 \pm 0,55$ $\mu\text{mol/l}$, which was 6% higher than in the C group and CAT - $3,47 \pm 0,13$ units, which was 4% higher than in the C.

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

References:

1. Cherian, D. A., Peter, T., Narayanan, A., Madhavan, S. S., Achammada, S., Vynat, G. P. (2019). Malondialdehyde as a Marker of Oxidative Stress in Periodontitis Patients. *J Pharm Bioallied Sci.*, 11 (Suppl 2), 297-300. doi: 10.4103/JPBS.JPBS_17_19
2. Kluknavská, J., Krajčiková, K., Bolerázská, B., Mašlanková, J., Ohlasová, J., Timková, S., Drotárová, Z., Vašková, J. (2021). Possible prognostic biomarkers of periodontitis in saliva. *Eur Rev Med Pharmacol Sci.*, 25(8), 3154-3161. doi:10.26355/eurrev_202104_25724.
3. Franco, R., Barlattani, A. Jr., Perrone, M.A., Basili, M., Miranda, M., Costacurta, M., Gualtieri, P., Pujia, A., Merra, G., Bollero, P. (2020) Obesity,

- bariatric surgery and periodontal disease: a literature update. *Eur Rev Med Pharmacol Sci.*, 24(9), 5036-5045. doi: 10.26355/eurrev_202005_21196
4. Punj, A., Shenoy, S., Kumari, N. S., & Pampani, P. (2017). Estimation of Antioxidant Levels in Saliva and Serum of Chronic Periodontitis Patients with and without Ischemic Heart Disease. *International journal of dentistry*, 2017, 1965697. <https://doi.org/10.1155/2017/1965697>
 5. Grigoryeva, G. S., Krasnopolsky, Yu. M. (2020). Liposomes per se: pharmacotherapeutic status. *Pharmacology and Drug Toxicology*, Vol.14, 14 (4), 264-271. <https://doi.org/10.33250/14.04.264>.
 6. Krasnopolsky, Yu. M. (2020). Creation in Ukraine of technologies for obtaining pharmacologically active ingredients, medicinal and diagnostic preparations based on lipids. *Bulletin of the National Technical University "KhPI", Series: Chemistry, chemical technology and ecology*, 1, 53-68. <https://doi.org/10.20998/2079-0821.2020.01.10>

