

PEROXIDATION DISORDERS IN THE DYNAMICS OF EXPERIMENTAL PERIODONTITIS DEVELOPMENT

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The experiments were performed with use of white clinical healthy rats 150-200 g weight in conditions of vivarium, contained in a standard diet balanced for the basic elements. The investigations was conducted in conformity with the general rules and regulations of the European Convention for the Protection of vertebrate animals that use for experimental and other scientific purposes (Strasbourg, 1986), the General ethical animal experimentation (Kyiv, 2001). The animals were divided into 3 groups: I – intact animal, controls (n=10); II – animals with experimental periodontitis on the 7th day study (n=8); III – animals with experimental periodontitis on the 14th day study (n=8). Experimental periodontitis was caused in experimental animals with introduction of complex mixtures of microorganisms diluted egg protein in periodontal tissues. For this significant quantitative changes were found in prooxidant-antioxidant system. On 7th day of the experiment, there was an excessive accumulation in serum of lipid peroxidation products, as evidenced by increased concentration diene conjugates (DC) (by 2.20 times; $p<0.01$) and triene conjugates (TC) (by 1.93 times; $p<0.01$), respectively, compared with the control group of experimental animals. The later, on the 14th day of experimental periodontitis model, there was a gradual decline in DC (by 1.53 times; $p<0.01$) and TC (by 1.52 times; $p<0.01$) in serum compared a group of animals studied at the 7th day of the experiment, but these indexes were elevated relatively intact animal group (by 1.44 times: $p<0.01$ and by 1.26 times, $p<0.01$, respectively). The data shown increased generation of reactive oxygen species, activation of free radical oxidation of lipids throughout the periods of the inflammatory response formation, but the most expressive in the peak of inflammation, which

corresponded to a more severe clinical picture was in the animals of this group. In the later period of periodontitis development, despite some easing of intensity of lipid peroxidation, while full attenuation process in inflamed periodontal tissues not happened.