

ABSTRACT

Many researches have examined on the effects of oral contraceptive usage, which is a type of estrogen-progesterone combination, to the health periodontal tissue, especially to gingival. However, there are still found some contradictions stated that most of oral contraception have an adverse effects on periodontal tissue. Mostly, these researches use a contraception contained high-dose estrogen-progesterone. In the decade of 1970's, there was a fact that oral contraceptive combination contained 50 to 150 μg of estrogen and 0.5 to 25 mg of progesterone components. Currently, the concentration of oral contraceptive combination is lower than before, that is about 20 to 35 μg of estrogen and 0.15 to 2.5 mg of progesterone. For a research, it is suggested to use the contraception with the lowest hormone. This study aims to examine effects of etinilestradiol-levonorgestrel oral contraceptive combination to gingival tissue and to know whether there is a distinction of the effects after using in different duration.

This study uses the Separate-sample Pretest-posttest Control Group Design. Sample uses 45 rat Wistar aged 8 weeks and randomly classified into 9 groups. These groups consist of 1 pretest control group which is gave no treatments and directly killed on the first day; 4 posttest control group treated by 2 ml CMC 1 % and killed on 1, 2, 4 and 8 weeks after the treatment; and 4 last groups treated by 0.75 μg estrogen etinilestradiol and 0.000375 mg progesterone levonorgestrel in 2 ml CMC 1 % and also killed on 1, 2, 4 and 8 weeks after the treatment. Furthermore, there is a histological specimen with the stained Hematoxilllin and eosin. For identification of the tissue changes, the cells inflammation of neutrophil, lymphosit, plasma cell, and fibroblast must be estimated by using a light-microscope. The data is analyzed by the statistic test of Multivariate Analytic of Variant.

The results show that there is no significant effects ($P > 0.05$) between the usage of the oral contraceptive combination and the histological features in the number of gingival cells inflammation, and there is also no significant difference between the various duration and the number of gingival cell inflammation.

Key words : oral contraceptive/estrogen progesterone, gingival inflammation/gingivitis