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WEEKLY EVALUATION OF ESTROGEN A AND PROGESTERONE RECEPTORS IN THE MAMMARY EPITHELIUM OF WOMEN AFTER THE USE OF COMBINED ORAL HORMONAL CONTRACEPTIVES FOR ONE MONTH

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The increased risk of breast cancer (BC) is the most controversial adverse effect of combined oral hormonal contraceptives (COHC). An evaluation of hormone receptors (HR) revealed that their expressions are inversely proportional to the rate of cell proliferation, with a hierarchy where proliferative cells would be controlled by paracrine factors released by positive HR cells. Thus, the greater the proliferation, the greater the risk of the actions of environmental carcinogens. Compare the expressions by immunohistochemistry (IHC) of estrogen (ER) and progesterone receptors (PR) weekly in the mammary epithelium (ME) of patients using COHC for one month with those in the natural cycle. Retrospective cohort study of 118 women, 42 of whom were excluded and with a final sample of 76 women. Study group (A) consisted of 31 users of COHC with 30 µg of ethinyl estradiol (EE) and 150 µg of levonorgestrel (L), and control group (B), 45 non-users of COHC. In parity comparison, the Fisher's exact test was used, and for the mean ages, the Student's *t*-test for independent samples. The Generalized Estimation Equation (GEE) model was used to evaluate ER and PR counts over the four weeks and compare them. The Analysis of Variance (ANOVA) with two fixed factors and the Kolmogorov-Smirnov test were used to compare the total ER and PR counts. Statistical analyses were performed using the SPSS 20.0 and STATA 12 programs, with a significance level of 5% ($p \leq 0.05$). As for age, group B had a mean age of 23.7±5.9 years compared to group A, with a mean age of 20.5±5.1 years, statistically significant $p=0.016$. With regard to parity, group A presented 83.9% of nulligravida *versus* 73.3% in group B, with $p=0.164$ without statistical significance. According to GEE, group A had higher mean percentages of ER ($p < 0.001$) and PR ($p < 0.001$) when compared to women in the control group. The expressions of the IHC of the ER and PR in percentages, weekly in the ME of the patients in the users of COHC presented higher mean percentages of ER and PR, both statistically significant, when compared with non-users.