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SAT-09 Poster

High micronuclei frequency in peripheral blood lymphocytes of untreated women with cervical lesions

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Cervical cancer is the third most common cancer worldwide in women. It develops gradually through two precancerous lesions - low grade squamous intraepithelial lesions (LSIL) and high grade squamous intraepithelial lesions (HSIL). The objective of this study was to evaluate chromosomal instability in the peripheral blood lymphocytes (PBL) of women with different stages of cervical lesions by cytokinesis-block micronucleus (CBMN) assay. The analyzed sample included 78 untreated patients (30 LSIL, 31 HSIL and 17 cervical cancer) aged 24 to 65 years (mean 43.7 ± 11.7). The control sample included 61 healthy women aged 24 to 58 years (mean 41.5 ± 8.1). The mean baseline MN frequencies were significantly higher ($p < 0.0005$) in all patient groups compared to the baseline MN frequency in healthy controls (13.4 ± 4.6 in LSIL; 14.6 ± 4.6 in HSIL; 15.5 ± 3.3 in CC, vs. 7.3 ± 3.1 in controls). The highest MN frequency in PBL was obtained in CC patients, followed by HSIL and LSIL patients, but the differences between the groups were not statistically significant ($p > 0.05$). Considering the likely factors that might affect MN frequency, it can be concluded that age and health status affected MN frequency in the analyzed sample ($p < 0.0005$), while smoking did not influence MN frequency ($p > 0.05$). In conclusion, our results indicate that a high frequency of MN in PBL of patients with different stages of cervical lesions corresponds to increased levels of chromosomal damage.