

AN INCREASED MICRONUCLEUS FREQUENCY PREDICT THE RISK OF CANCER IN HEALTHY WORKERS EXPOSED ON IONIZATION

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Introduction: The Cytokinesis-Blocked Micronucleus (CBMN) assay also allowed us to score the abnormal nuclear shapes (ANS). The CBMN assay in human lymphocytes is one of the most commonly used methods for measuring DNA damage. **The aim of this study** was to evaluate the genotoxicity of ionizing radiation using the CBMN assay and to determine the human health risk. **Material and methods:** The study population included 20 healthy workers exposed to ionizing radiation (radiologist, technicians and nurses) and 20 individuals healthy people not exposed on radiation. **Results:** We found an high frequency of micronuclei in healthy workers exposed on ionization in comparison with the control group (healthy people not exposed on ionization). Also we evaluate other nuclear changes like nucleoplasmic bridges and binucleated cell with nuclear buds are biomarkers of chromosomal instability and major alterations in genetic material of the cells. **Conclusion:** These results suggest that chromosomal instability is in the correlation with micronucleus frequencies and genetic load in healthy workers. The formation of micronucleus and other changes indicates that healthy workers are exposed on clastogenic and aneugenic agents like ionizing radiation and have chromosomal instability and risk of cancer.

