

Some Observations on Spontaneous Sister Chromatid Exchange Frequencies and Cell Cycle Progression in Stimulated Lymphocytes of Patients With Different Malignancies

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ABSTRACT Total 23 patients with different malignancies viz. Ca. Lung (5), Ca. Uterine & Cervix (5), Ca. Head & Neck (5), Sarcomas (5) and Malignant Melanoma (3); were studied for spontaneous sister chromatid exchange frequencies (SCE) as well as cell cycle progression. All blood samples were collected prior to chemotherapy and/or radiotherapy to exclude the influence of these therapies, if any, on SCEs. Totally 15 healthy, age and sex matched individuals and belonging to the same socio-economic status, but no direct relatives of the patients were studied simultaneously as controls. The SCE rates, when compared to controls (4.00 ± 0.39) were found to be significantly high for patients with Ca. lung (9.42 ± 1.20), malignant melanoma (8.14 ± 0.21), Ca. head & neck (6.85 ± 0.89) as well as sarcomas (6.29 ± 0.79). However, no detectable difference was observed in the SCE rate for patients with Ca. uterine & cervix (5.02 ± 0.88). Cell cycle proliferation and thereby replicative index was significantly elevated in patients with carcinoma of head & neck as well as malignant melanoma. On the other hand, rest of the patients showed no much variation in cell cycle progression when compared to controls.