OMICS Group Conferences
Accelerating Scientific Discovery

3rd World Congress on
Cancer Science & Therapy

October 21-23, 2013 DoubleTree by Hilton Hotel San Francisco Airport, USA

Micronucleus in Exfoliated Buccal Mucosa Cells of Mexican Women with Breast Cancer

Aurelio Flores-García,
Autonomous University of Nayarit, Mexico

Abstract

Breast cancer is the most frequently diagnosed form of cancer and the leading cause of cancer death among females in the world.Increased number of micronucleus (MN) in exfoliated buccal mucosa cells (BMC) of patients with primary breast, lung and cervix uteri cancer has been observed compared to control subjects.Micronucleus (MN)originates from chromosomal fragments and/or whole chromosomes that are not included in the main daughter nuclei during nuclear division.MN frequency in BMCof Mexican women with primary breast cancer was evaluated in this study, including30 never-treated cancer patientsfrom the State Center of Cancer of Nayarit,and 60 females in the control group. Average age of participants was(49.50±14.12 and 50.35±10.24 yearsfor cancer patientsandcontrol subjects respectively). They signed an informed consent andwere asked to complete a questionnaire concerning smoking habits, alcohol consumption, health status,diet andconsumption of drugs or antioxidants. BMC were collected from both cheeks ineach subject. Smears were air-dried, fixedin 80% ethanoland stained with acridineorange. Micronucleated cells (MNCs) were counted in 2,000 cells at 100× magnificationusing amicroscopeepifluorescence. MNCs were scoredaccording to the criteria established by Tolbert and the criteria recently described by Ceppi.Analysis of the data using theMann–Whitney U-test showed significant increase ofMNCsnumber in breast cancer patientscompared to control subjects ($p<0.0001$). Cancer patients presented 1.67±1.15 (0-4, rank) MN, and 0.80±0.63 (0-2, rank)MN in control subjects. In conclusion, a genotoxic damage was observed in BMC of Mexican women with breast cancer.

Biography

Aurelio Flores-García obtained his Ph.D. in Immunology from the University of Guadalajara. He is currently a Professor and Researcher at the Autonomous University of Nayarit School of Medicine.