TITLE: Characterization of 331G/A polymorphism of RP gene and identification of viral oncogene HMTV virus as genetic markers for the improvement of breast cancer management in Cameroon.

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ABSTRACT :

Breast cancer is a real public health problem in Cameroon, where more patients with this cancer usually die a year after diagnosis, as it is still based on histological examination, mortality due to cancer is far from decreasing. Since cancer is an accumulation of molecular changes, the +331 G/A polymorphism of PgR gene (progesterone receptor) and viral oncogene HMTV (Human Mammary Tumor Virus) has been recently considered as a molecular markers associated with breast cancer. Due to that we fixed our objectives to characterize these markers. We carried out a case control study, in which 26 cases diagnosed positive for breast cancer at the CHU of Yaounde were recruited through the identification of archived biopsies. Blood samples were also collected from 20 women recruited using a questionnaire and a inform concern sign by each of them. +331 G/A polymorphism in the PgR gene was identified using NIaIV endonuclease by PCR-RFLP, and HMTV viral oncogene by hemie-nested PCR. The data were analyzed using Microsoft Excel and SPSS v20. We got a mean age of 57,73 +/- 9,87 in our cancerous group with the predominance of infiltrant duct carcinoma at grade II of SBR. An Odd Ratio of 1.268 with Confident Interval of 95% 1.004-1.664 proving that there is a significant association between 331G/A mutation and breast cancer with P-value of 0.026, obtained by comparing the mutant group (AA) 28,5% and wild genotype (GG). In addition, 3 cases were detected with the HMTV virus, one was found in the cancer group and two in the control group. These results indicate that, HMTV is considered as viral cause and can predispose to breast cancer, beside 331 G/A polymorphism is an associated risk factor of that cancer.



BIOGRAPHY:

I am NGUEDIA KAZE Niels a Cameroonian graduated in Biomedical Sciences. Having a great passion for Biomedical Sciences, I focused my studies in Clinical Biochemistry for my undergraduate studies, and Public health Biotechnology for my graduate studies at the Biotechnology Centre of the University of Yaounde I. During that, I acquired substantial knowledge on different medical research technics and data analysis, putting them into practice through internships and many projects. Firstly, at the Anatomo-pathological service of the University Hospital Centre, secondly, at the Malaria research Unit of Centre Pasteur of Cameroon, Where I was included in many projects for the identification of biomarkers linked to tropical diseases especially malaria using different Molecular Biological technics. My own research project was focused on the quantification of biomarkers related to breast cancer in which we identified a correlation between Human mammary tumor virus (HMTV) and presence of cancer in patients. Genetic and molecular research studies are still ongoing to identify HMTV as a probable risk factor for cancer development in Cameroon.