

3rd International Conference on **Genomics & Pharmacogenomics**

September 21-23, 2015 San Antonio, USA

DNA repair gene polymorphisms and toxicities in cancer patients on platinum based chemotherapy

Srinivasa Rao Katiboina

Jawaharlal Institute of Postgraduate Medical Education & Research, India

Among the various classes of anticancer drugs, one of the common agents used are platinum compounds. Cisplatin, oxaliplatin and carboplatin are used as first line agents for management of cancers like lung, ovarian, gastric, head and neck colorectal and cervical, etc. DNA repair gene polymorphisms have been implicated in inter-individual variability in the therapeutic outcomes of platinum based chemotherapy and thus, play an important role in drug induced adverse reactions. Hence, we aim to study the association between DNA repair gene polymorphisms such as ERCC119007 C>T, ERCC1 8092C>A, ERCC2/XPD Asp312Asn, ERCC2/XPD Lys751Gln, XPG His46His, XPG Asp1104His, XPA A23G and XRCC1 Arg399Gly and hematological (anemia, leukopenia, thrombocytopenia), gastrointestinal toxicities (nausea, vomiting, diarrhea) of platinum based chemotherapy in south Indian cancer patients. The study was carried out on 274 cancer patients on platinum based chemotherapy. Genotypes of DNA repair gene polymorphisms were determined by quantitative RT-PCR using TaqMan genotyping assays. This study was approved by the Institute Ethics Committee, JIPMER (Jawaharlal Institute of Postgraduate Medical Education and Research), Pondicherry, India. Written informed consent was obtained from all cancer patients. In this study, we found a significant association between DNA repair gene polymorphisms XRCC1 Arg399Gly ($p=0.0121$), ERCC1 8092C>A ($p=0.0147$) with nausea and vomiting respectively in South Indian cancer patients on platinum based chemotherapy.

Biography

Srinivasa Rao Katiboina is a final year PhD student from Jawaharlal Institute of Postgraduate Medical Education & Research (JIPMER), India. He is working on Pharmacogenomics of platinum based chemotherapy in cancer patients of south Indian population. He has published papers in reputed journals like Biomarkers in Cancer and Environmental Toxicology and Pharmacology. He has presented posters and papers in various national and international conferences.

seenuraok@gmail.com

Notes: