

Abstract ID: - 144

Abstract Topic: - Molecular and cytogenetic diagnostics

Abstract Title: - Screening of VEGFR1-710 C/T Polymorphism in Type 2 Diabetes Male Patients

Presenting author name: - Manmeet Kaur

Presenting author institute: - Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab

Co-authors name: - Deepanshi Mahajan, Vasudha Sambyal, Kamlesh Guleria, , , , , ,

Co-authors institute: - Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, Department of Human Genetics, Guru Nanak Dev University, Amritsar, Punjab, , , , , , ,

Aims: - Diabetes mellitus (DM) is a metabolic disease characterized by chronic hyperglycemia resulting from deficiencies in insulin secretion, insulin action, or both along with polyuria, polydipsia and polyphagia symptoms. Type 2 Diabetes mellitus usually occur in overweight young and elderly people. Angiogenesis is the formation of new blood vessels from pre-existing ones that provides sufficient blood flow and oxygen for growing tissue. VEGFR1 is one of the important receptors of VEGF angiogenesis signalling and has a relevant role in process of normal vessel formation. Increased VEGFR1 levels have been reported in the urine of Type 2 Diabetic patients. In VEGFR1 several single nucleotide polymorphisms have been reported in promoter, untranslated, exonic and intronic region. VEGFR1 -710C/T polymorphism has been studied in breast cancer and Bronchopulmonary Dysplasia but no study has been reported on Type 2 Diabetes. The aim of the proposed study was to investigate the association of VEGFR1-710C/T polymorphism with Type 2 Diabetes in male patients from Punjab, North-West India.

Methods: - The genomic DNA from blood samples of 53 male Diabetic patients and 53 age matched healthy unrelated male controls were isolated using standard phenol chloroform method. The DNA samples were screened for VEGFR1-710C/T polymorphism using PCR-RFLP technique. Amplified DNA samples were digested with NspI restriction enzyme. Genotype was assigned to each sample according to the sizes of restriction digestion products.

Results: - The mean age of Type 2 Diabetic patients and healthy controls were 53.45 ± 9.51 and 53.33 ± 12.06 years respectively. The frequency of CC genotype was 96.22% vs 94.33% and of CT genotype was 4% vs 5.6% in patients and controls respectively. Genotype TT was completely absent in both patient and controls. The frequency of C allele was 98.1% vs 97.1% and T allele was 1.88% vs 2.8% in patient and controls respectively.

Conclusions: - There was no apparent association of VEGFR1-710 C/T polymorphism with Type 2 Diabetic patients from Punjab, North- West India.

Keywords: - The mean age of Type 2 Diabetic patients and healthy controls were 53.45 ± 9.51 and 53.33 ± 12.06 years respectively. The frequency of CC genotype was 96.22% vs 94.33% and of CT genotype was 4% vs 5.6% in patients and controls respectively. Genotype TT was completely absent in

both patient and controls. The frequency of C allele was 98.1% vs 97.1% and T allele was 1.88% vs 2.8% in patient and controls respectively.