expenditure, which were not fully evaluated in this study, may be the contributors of obesity.

Keywords: PYY; single nucleotide polymorphism; obesity

Association Of Genetic Variant Of Tumor Necrosis Factor Alpha-304 G>A With Sporadic Colorectal Cancer Susceptibility In Malaysian Population

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Sporadic Colorectal cancer (CRC) is a multifactorial disease, caused by interaction between environmental factors and genetic factors. Several animal models and epidemiological observations suggest that a continuous inflammatory condition predisposes to CRC. Since inflammatory response is modified by germline variation in inflammation response genes, we hypothesize that single nucleotide polymorphism in inflammation response genes would be associated with CRC. Tumor Necrosis Factor alpha (TNF-α) is a pro-inflammatory cytokine mediating inflammatory response. A genetic polymorphism of TNF-alpha gene at position -308 promoter regions has been found to be associated with susceptibility to various types of cancer. The objective was to investigate the TNF-α -308G > A polymorphism genotype frequencies in healthy controls and CRC patients in Malaysian population and to determine the influence of the polymorphic genotype on sporadic CRC susceptibility risk. In this case control study, the study group consisted of 61 histopathologically confirmed CRC patients as cases and 61 healthy normal controls. Peripheral blood samples were collected from study subjects, DNA extracted and PCR-RFLP was employed to genotype TNF-a -308G>A polymorphism and the results were further confirmed by sequencing. The genotypes were classified into 3 groups; heterozygous (G/A), homozygous variant (A/A) and homozygous wild type (G/G). The genotype frequencies among cases and controls were compared and the association of variant genotype with CRC risk was estimated deriving Odd Ratios. Out of 61 patients successfully analyzed, 23 (38%) showed homozygous wild type genotype (GG), 23 (38%) showed heterozygous variant genotype (GA) and 15 (24%) showed homozygous variant genotype (AA). On comparing the frequencies of genotypes of patients and controls, the homozygous variant AA was significantly higher in CRC patients (P=0.014). Investigation on the association of the variant genotype with CRC susceptibility risk also showed significantly increased risk with OR = 4.304, 95% (CI = 1.372-13.507, P=0.012) for homozygous variant. The result from this study showed that polymorphism of inflammation response gene TNF-a -308G>A is significantly associated with susceptibility risk in Malaysian CRC patients and could be considered as a potential predisposition risk factor for CRC. Results are also in favour of