

CpG Island Methylator Phenotype (CIMP) Correlation with Clinical and Morphological Feature of Colorectal Cancer in Iraq patients

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Abstract

In colorectal cancer CpG islands of tumor suppressor genes is thought to be an important mechanism in human carcinogenesis, has been shown to occur early in colorectal carcinogenesis, purpose of this study early detection of tumorigenic pathway of CRC by used molecular method. Total of 47 patients with colorectal carcinoma were collected among of these patients 26 (55%) males and 21(45%) females, with a range age from 37 years to 72 years, mean age (54.5 year), CIMP_{high} was show 36.17%, while the CIMP_{low} 25.53% and CIMP_{neg.} 38.29%, with a cutoff value of 2 from 5 genes. CIMP was associated with female in 42.85% compared with male 30.76%, while related with age, CIMP_{high} was highly expression in patients with group two Group 1≥50 41.37% versus 27.77% of group one Group 1≤50, but close associated with poorly differentiated 47.05%, followed by moderate differentiated 29.41%, compared with well differentiated 23.52%, and CIMP_{high} more frequency (52.94%) in right site compared with left site and rectum 35.29%, 11.76% respectively, while in mucinous 75% compared with non-mucinous 29.78%, classical panel of CIMP the highly repeated was shown in Hmlh1 with 34%, followed by p16 with 31.91%, while the MINT2 was revealed 29.78%, and less percentage was recorded in both MINT1 and MINT31 with 25.53% and 23.40% respectively. The rate of methylation loci, CIMP_{high} shown close association between CIMP with female old patient's right site mucinous and poorly differentiated of CRC specimen.