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Immunohistochemical Localization of p16 Tumor Suppressor Gene and Bcl-2 Oncogene in Colorectal Tumor Tissues

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Abstract : Background: Colorectal cancers rank fourth in frequency in men and third in women. There is at least a 25-fold variation in occurrence of colorectal cancer worldwide.Bcl-2 is known to inhibit apoptosis and is thought to play a role in colorectal tumor development. In colon cancer, p16 expression is mostly elevated, whereas normal tissues exhibit only little or no protein expression.
Objective: To examine the impact of cellular dysregulation mediated by the concordant protein expressions of P16 & BCL-2 in implicated in colorectal carcinogenesis.
Patients and methods: Seventy-five formalin-fixed, paraffin embedded colorectal tissues were enrolled, among them, 60 biopsies obtained from patients with colorectal carcinomas (30 biopsies from the cancer mass and another 30 biopsies from the marginal tissues of these colorectal cancers) and 15 tissues as control group, which were proved by colonoscopic and histopathological examinations as an apparently normal colorectal tissues. Immunohistochemistry detection system was used to demonstrate the expression of P16 & Bcl-2 genes.
Results: Expression of Bcl_2protein was detected by IHC in 14 cases (46.7%) of the CRC-mass group, 12 cases (40%) of marginal group, and none in control group. A significant differences ($P<0.05$) were found when comparing the mass group with its control group. Expression of P16 protein was detected by IHC in 18 cases (60%) of the CRC- mass group, 10 cases (33.3%) of marginal group, and none in control group. A significant differences ($P<0.05$) were found when comparing the mass group with its control group. **Conclusions:** Our results indicate that the significance prevalence of BCL-2 as well as P16 - expression in colorectal carcinoma could point to an important contributing role of these molecular factors in the development and carcinogenesis of a subset of colorectal cancers.
Key word: CRC, BCL-2, P16,IHC.

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