

Role of Molecular Changes and Immunohistochemical in Early Detection of Colon Cancer

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Abstract : The present study was planned to investigate the role of molecular changes and immunohistochemical in early detection of colon cancer in Saudi patients. Our results were carried out on 48 patients colon cancer. We obtained our data from laboratory in King Khalid university hospital. The specimens were taken (48) patients with colon cancer 34 male and 14 female and 2 control. The average age of varied from 37-85 years. The tumor was diagnosed as I in tow patients (male and female) and grade 2 in 42 patients (29 male and 13 female) while the grade 3 in 4 patients (all males). The specimens were processed for haematoxylin and eosin staining , immunohistochemical technique and flow cytometry analysis. Our study noted that most patients had adenocarcinoma which characterized by presence of signet-ring cells were very clear in advanced patients of adenocarcinoma. Our sections in adenocarcinoma in grade 2 and stage 3 had an increase in signet ring cells, an increase in the acini of glands and an increase in number of lymphocytes which spread to the muscularis layer. With advancing the disease, there were haemorrhage in blood and increase in lymphocytes and increase number of nuclei in the tubular glands. Our study was carried on 48 patients, immunohistochemical diagnosis (CK20, PCNA, P53) and the analysis of DNA content by flow cytometry technique. Our study indicated that the presence of correlation between the immunohistochemical analysis for P53 and the grades. The reaction of P53 appeared as strong in nucleus in grades & stage 3 and appeared in other sections as dark brown pigment. Our study indicated that the absence of correlation between the immunohistochemical analysis for pcan and the grades. In our sections, there were strong reactions in the more 80% of nuclei in grade 1 & stage 2. Our study indicated that the presence of correlation between the immunohistochemical analysis for CK20 and the grades. Our results indicated the presence of positive reaction in cytoplasm varied from weak to moderate in grade 3 & stage 4. Concerning the Flow cytometry technique our results indicated that the presence of correlation between the DNA and different stages of colon cancer.

Keywords : DNA-CK20, PCNA, P53, colon cancer

Conference Title : ICGP 2015 : International Conference on Genetic Programming

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 12-13, 2015