World Academy of Science, Engineering and Technology
International Journal of Bioengineering and Life Sciences
Vol:10, No:04, 2016

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

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Abstract : The present study was planned to investigate the role of molecular changes and immunohistochemical in early detection of liver cancer in Saudi patients. our results were carried out on 54 patients liver cancer. We obtained our data from laboratory in King Khalid University Hospital. The specimens were taken (54) patients with liver cancer 34 male and 14 female and 2 control. The average age of varied from 37-85 years. The tumor was diagnosed as grade I in tow patients (male and female) and grade 2 in 45 patients (28 male and 17 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 with 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 muscular layer. With advancing the disease, there were haemorrhage in blood and increase in lymphocytes and increase in the 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 reaction 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 liver cancer.

Keywords : cancer, CK20, DNA, cytometry analysis, liver, immunohistochemical, molecular changes, PCNA, p53
Conference Title : ICCMB 2016 : International Conference on Cellular and Molecular Biology
Conference Location : Paris, France
Conference Dates : April 25-26, 2016