Extended Abstract

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Hematologic Oncology 2016: The value of measurement of circulating tumor cells in hepatocellular carcinoma - Fatma Khalaf - Menoufia University

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Background & Aim: Liver cancer is the fifth most common cancer in men and the seventh in women. During the past 20 years, the incidence of HCC has tripled while the five year survival rate has remained below 12%. The presence of circulating tumor cells (CTCs) reflects the aggressive nature of the tumor during the development of the HCC. CTCs detection and identification can be used to estimate prognosis and may serve as an early marker to assess antitumor activity of treatment. CTCs are an interesting source of biological information in order to understand dissemination, drug resistance and treatment-induced cell death. The aim is to estimate the CTCs (AFP mRNA & TGF-β1 mRNA) in the peripheral blood of patients with HCC as an early non-invasive marker of HCC detection and prognosis. Patients & Methods: The study was done on 100 patients, 58 patients with hepatocellular carcinoma (HCC), 42 patients with liver cirrhosis (LC) and 20 healthy volunteers as a control group. Detailed clinical history and examination were carried out. Complete blood count, liver function test, serum Albumin, serum AFP, AFP mRNA, serum TGF-β1 and TGF-β1 mRNA were measured. Abdominal ultrasound was done for all studied subjects and CT scan abdomen for those with HCC to determine the size and number of tumor. Results: The detection rate of AFP mRNA was 39.7%, 11.9% and 5% in patients with HCC, LC and control subjects respectively with a significant expression in HCC patients compared to other groups. Also TGF-β1 mRNA expression was significantly high in HCC cases with detection rate 60.3%, 14.3% in HCC and LC respectively while it was not detected in the controls. Both CTC were correlated with Milan criteria. The serum levels of AFP and TGF-β1 was significantly higher in HCC patients. Conclusion: TGF-β1 mRNA is a more reliable marker for diagnosis of HCC and if combined with AFP mRNA yielded better prediction of HCC prognosis. Since HCC is among the cancers with worst prognosis, early diagnosis and treatment are essential for better outcome.

A parent cell partitions to frame two girl cells, and these little girl cells are utilized to assemble new tissue or to supplant cells that have passed on due to maturing or harm. Sound cells quit separating when there is not, at this point a requirement for more girl cells, however malignant growth cells keep on delivering duplicates. They are additionally ready to spread starting with one piece of the body then onto the next in a procedure known as metastasis. Malignant growth cells are made when the qualities liable for directing cell division are harmed. Carcinogenesis is brought about by transformation and epimutation of the hereditary material of typical cells, which disturbs the ordinary harmony among expansion and cell demise. This outcomes in uncontrolled cell division in the body. The uncontrolled and regularly quick expansion of cells can prompt favorable or threatening tumors (disease). Benevolent tumors don't spread to different pieces of the body or attack different tissues. Harmful tumors can attack different organs, spread to inaccessible areas (metastasis) and become perilous. More than one transformation is fundamental for carcinogenesis. Truth be told, a progression of a few transformations to specific classes of qualities is typically required before an ordinary cell will change into a disease cell. Harm to DNA can be brought about by presentation to radiation, synthetics, and other ecological sources, however transformations likewise collect normally after some

time through uncorrected blunders in DNA translation, making age another hazard factor. Oncoviruses can cause particular kinds of malignant growth, and hereditary qualities are likewise known to assume a job. Immature microorganism research recommends that overabundance SP2 protein may transform undifferentiated organisms into malignant growth cells However, an absence of specific co-invigorated particles that guide in the manner antigens respond with lymphocytes can debilitate the common executioner cells' capacity, at last prompting disease. Cells assuming jobs in the invulnerable framework, for example, T-cells, are thought to utilize a double receptor framework when they decide if to slaughter wiped out or harmed human cells. On the off chance that a cell is under pressure, transforming into tumors, or tainted, particles including MIC-An and MIC-B are created with the goal that they can append to the outside of the cell. These work to assist macrophages with identifying and execute malignancy cells.

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