J Cancer Sci Ther 2017, 9:1(Suppl)
http://dx.doi.org/10.4172/1948-5956-C1-097

16th Global Annual Oncologists Meeting

Diagnostic characterization of acute promyelocytic leukemia and targeted therapy in this leukemia

S Nasouhi Pur
Tabriz University of Medical Sciences, Iran

This type of acute myeloid leukemia is characterized either by abnormal promyelocytes with distinctive large granules and multiple Auer rods (faggots or sultan bodies' cells) or, less commonly, by atypical hypogranular or microgranular cells with bilobed or multilobed nuclei. These cells contain procoagulant material which, when released into the circulation, causes disseminated intravascular coagulation (DIC). Excessive bleeding due to DIC is common. The microgranular variant of APL may be mistaken with Acute Monocytic Leukemia (AMOL). In the microgranular variant M3, only occasional cells have granules visible by light microscopy, so, morphology and immunophenotyping is suggested for diagnosis of this variant M3. The cytogenetic documents of t(15;17), and FISH is required for confirmation of diagnosis. The translocation t(15;17) (q22;q21) or t(15;17) (q22,q11-12) is the genetic hallmark of APL, resulting in the PML-RARa fusion protein. PML-RARa recruits histon deacetylases (HDAC) and represses target genes of wild type RARa leading to a block of myeloid differentiation. The Retinoic Acid Receptor a_ (RARa_) Chimeric Proteins PML-, PLZF-, NPM-, and NuMA-RARa_ have Distinct Intracellular Localization Patterns. NPM-RARa_ is predominantly nuclear whereas NuMA-RARa_ is predominantly cytoplasmic. Typical immunophenotypic findings in APL: CD34. HLA-DR and Tdt usually is negative and CD2 is expression in a minority, CD13++ CD33+++ This leukemia with t(15;17) has a good prognosis, because it is sensitive to retinoid and chemotherapy, whereas PLZF-RARa consistent with this, APL patients bearing the t(11;17) (q23;q21) respond poorly to ATRA treatment and All-trans retinoic acid (ATRA) as a highly effective therapy in acute promyelocytic leukemia (APL). The patients receiving ATRA followed by chemotherapy did significantly better compared with patients treated with ATRA alone or chemotherapy alone. With this combination the CR rate ranges from 90 to 96 percent. Treatment options for patients with relapsed disease include arsenic trioxide and allogeneic stem cell transplant.

snasouhipur1331@gmail.com

The diagnostic potential of circulating microRNA-21 in hepatocellular carcinoma Egyptian patients

Mai Zahra
Alexandria Univeristy, Egypt

Background: Hepatocellular carcinoma (HCC) is the second most common cause of death from cancer worldwide. In Egypt, the burden of HCC has been increasing with a doubling in the incidence rate in the past decade. One of the reasons for the high mortality in HCC is that the tumors are frequently detected at a stage when curative resection is no longer feasible. Therefore, there is an urgent need to identify novel biomarkers with high efficacy for early detection of HCC. The present study was designed to validate the role of serum miRNA 21 expression in diagnosis of HCC in Egyptian patients.

Methods: A total of 60 serum samples (20 samples from HCC patients, 20 samples from cirrhotic patients and 20 samples from healthy volunteers) were collected. The serum expression level of miR-21 was detected by real time quantitative reverse-transcriptase PCR (RT-qPCR).

Results: Serum miRNA-21 levels in patients with HCC were significantly higher than in cirrhotic patients and control group. ROC analyses for the diagnostic power of serum miRNA-21 yielded an AUC of 0.881 with 90% sensitivity and 72.5% specificity.

Conclusions: In conclusion, serum miRNA 21 expression level was more sensitive and specific biomarker in diagnosis of HCC than the traditional marker, Alpha fetoprotein (AFP). When combined together, AFP and miRNA 21 level showed better sensitivity and specificity in HCC diagnosis. Therefore, serum miRNA 21 can be used as a useful additional biomarker, with AFP for screening of HCC among patients with liver cirrhosis.

mai_el_kelani@yahoo.com