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Down-regulation of miR-221 in serum of gastric cancer patients

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MiRNAs are small non-coding RNAs (18-25 nt) that can regulate mRNA translation. miR-221 can be related to cell growth, invasiveness and apoptosis in cancer. Surprisingly, miR-221 can control oncogenes and also tumor suppressor genes. miR-221 regulates lots of tumor suppressors such as p27/kip1, p57kip2, c-kit, Bim, ERa, PTEN, TIMP3, and PUMA. This study aimed to evaluate miR-221 expression in Gastric Cancer patients and its association to disease progression. We examined expression of miR-221 from serum of 50 gastric cancer patients and their average age is 63.1±13.6 and 50 healthy controls matched to the patients from age, sex and ethic. After RNA extraction, we analyzed expression of miR-221 by Real-time PCR with specifically primers. Differences in miR-221 gene expression levels in patients and controls were evaluated and normalized with REST 2009, Graphpad prism6 and SPSS software. The data showed that there was significantly difference between the expression of miR-221 in Gastric Cancer patients (mean±SEM=0.5981±0.204) and control groups (mean±SEM=1.641±0.316). And difference between means are 1.043±0.37 (P-value=0.006). Also it was showed that miR-221 associate to progress of gastric cancer. With due attention to another study mentioned to miR-221 is up-regulated in gastric cancer cell lines but we showed that it is down regulated in serum of GC patients, we suggest that should research it again in a larger amount of patients.

Biography

She is a student in a Islamic Azad University, Iran.

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