A preliminary Study of Clinically Significant Red Cell Antigen Phenotypes in Fayoum Blood Donors.

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Abstract

Chronic myeloid leukemia (CML) was the first human cancer to respond to molecular target therapy; of which imatinib (IM), *a first generation tyrosine kinase inhibitor (TKIs)*, exhibited dramatic response. Quantitation of cytokines like Interleukin-6, Interleukin-7 and Transforming growth factor-α plasma levels before IM therapy, could assess Early molecular response (EMR) to IM and predict imatinib failure. In our case-control study, plasma levels of IL-7, IL-6 and TGF-α were significantly higher in CML patients ($p<0.05$). We divided CML cases into improved and non-improved groups based on EMR at 3 months after IM therapy. Plama levels of IL-7, IL-6 and TGF-α dropped significantly in improved group after IM therapy, compared to non-improved group ($p<0.05$). Correlation studies revealed a strong positive correlation between pretreatment levels of both IL-6 and TGF-α and posttreatment levels of BCR-ABL transcript ($r=0.89$ and 0.84, respectively). High levels of IL-6 and TGF-α at diagnosis can predict IM response.