encouraged at home. Surveillance for symptoms of hypoglycaemia should be routine.

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T-BET MEDIATED ANTI-NEOPLASTIC EFFECTS OF DENDRITIC CELL-CYTOKINE INDUCED KILLER CELLS IN-VITRO

M. Liu[1], P. Zhou[2], Y. Jiang[1]

[1]Department of Paediatrics, Renmin Hospital of Wuhan University, [2]Hubei Center for Medical Device Quality Supervision and Testing of State Drug Administration, Wuhan, China

Background and aims: To investigate the molecular mechanism underlying T-bet mediated anti-neoplastic effects of cytokine induced killer (CIK) cells.

Methods: Lymphocytes isolated from peripheral blood of leukemic children were induced with IFN-γ, CD3McAb and IL-2 and co-cultured with dendritic cells (DCs) to generate DC-CIK cells. The morphology and immunophenotype of these cells were determined by electron microscopy and flow cytometry, respectively. IL-2 and IFN-γ levels released by DC-CIK cells were quantified by ELISA. Cytotoxicity of DC-CIK cells against leukemia cell lines was measured by the MTT assay. FCM was used to detect CD4+CD25+Treg cells,while RT-PCR and Western blot were used to determine mRNA and protein expressions of Foxp3 and GATA3 in DC-CIK cells treated with T-bet monoclonal antibody.

Results: Induced DC-CIK cells were regular, round and transparent with variable cell volume and cellular aggregation. The main effector cells in this population were CD3+CD8+ cells and CD3+CD56+ cells. We demonstrated a time dependent increase in IL-2 and IFN-γ levels after induction. DC-CIK cells were cytotoxic to B95 cells, Jhhan cells and M07e cells, with the highest cytotoxicity towards B95 cells. Treatment with mouse anti-human T-bet monoclonal antibody resulted in an increase in the proportion of CD4+CD25+Treg cells and elevation of Foxp3 and GATA3 mRNA and protein levels.

Conclusion: DC-CIK cells induced with cytokines were strongly cytotoxic towards a number of cancer cell lines. Foxp3 and GATA3 were implicated in the T-bet mediated anti-neoplastic effects of DC-CIK cells via activation of the Th1 pathway and suppression of theTh2 and Treg pathways.

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PLASMA LEVELS OF LEPTIN AND SOLUBLE LEPTIN RECEPTOR IN SURVIVORS OF CHILDHOOD ACUTE LYMPHOBLASTIC LEUKEMIA

S. Skoczen[1], **P.J. Tomasik**[2], M. Surmiak[1], K. Sztefko[2], W. Balwierz[3]

[1]Chair of Clinical Immunology and Transplantation, [2]Department of Clinical Biochemistry, [3]Department of Pediatric Oncology and Hematology, Jagiellonian University Medical College, Krakow, Poland

The prevalence of overweight in adolescents and children in Europe is about 20%. Comparing to general population survivors of pediatric acute lymphoblastic leukemia (ALL) have increased risk of being overweight. The purpose of the study was determination of leptin and leptin soluble receptor in ALL survivors. 82 patients (male 55%), aged 5 to 26 (median 13) years were studied. ALL therapy was conducted according to modified German (n=69) or American (n=13) regimens. In 38% cranial radiotherapy (CRT) was used in median dose 18.2Gy. Median age at diagnosis and time from completion of treatment were 5 and 3 years respectively. Patients with BMI ≥85 percentile were classified as overweight. Correlation of plasma concentration of leptin and leptin soluble receptor, and overweight was analyzed with respect to the intensity of chemotherapy and to CRT. Overweight was observed in 31% of studied group. There was a significant increase in leptin concentrations in entire overweight, overweight girls and radiotherapy subgroups. Reverse relationship was observed for soluble leptin receptor concentrations with significant differences in entire overweight group as well as in overweight boys. There were significant negative correlations ($p < 0.05$) between leptin and leptin receptor in the entire group and in gender subgroups.

Conclusions:

1) The prevalence of obesity in our cohort was higher than in European population (31% vs 20%),

2) leptin and leptin receptor levels can serve as good markers for high risk of overweight specially for patients treated with cranial radiotherapy.