Lymphocytes obtained from RA patients expressed higher levels of IL-15R alpha (p<0.01). Expression of CD69 was significantly higher on both CD4+ (p<0.04) and CD8+ (p<0.02) T cells isolated from RA bone marrow. The percentage of CD4+CD25+ cells was higher in RA bone marrow in comparison to OA (6.1 ± 2.8 vs. 3.2 ± 1.6 x10^6 cells/ml, p=0.008). There were elevated levels of IL-15, TNFα, IL-6, IL-1β in bone marrow plasma from RA in comparison to OA patients.

Methods: Bone marrow samples were obtained from patients undergoing joint replacement surgery. Levels of IL-15, TNFα, IL-6, IL-1β, IL-17 and IL-8 were measured using specific ELISAs. The real number of lymphocytes stained for CD3+, CD4+, CD8+ were counted in the presence of TruCount beads using FACS. Surface expression of IL-15Rα, CD25, CD69 and intracellular IL-15 was evaluated by FACS.

Results: Bone marrow from RA patients contained double CD3+ T-cells in comparison to OA (6.1±2.8 vs. 3.2±1.6 x10^6 cells/ml, p=0.008). There were elevated levels of IL-15, TNFα, IL-6, IL-1β in bone marrow plasma from RA in comparison to OA patients.

Objective: To compare the real T cell numbers in bone marrow isolated from RA and OA patients; 2. To measure the levels of soluble IL-15, TNFα, IL-6, IL-1β and IL-8 in bone marrow plasma; 3. To analyze the expression of IL-15Rα, CD25 and CD69 on T cells in bone marrow; 4. To measure the levels of soluble TNFα, IL-6 and IL-17 in cultured bone marrow mononuclear cells stimulated by IL-15; 5. To measure levels of IL-15 in bone marrowstromal cells.

Methods: Bone marrow samples were obtained from patients undergoing joint replacement surgery. Levels of IL-15, TNFα, IL-6, IL-1β, IL-17 and IL-8 were measured using specific ELISAs. The real number of lymphocytes stained for CD3+, CD4+, CD8+ were counted in the presence of TruCount beads using FACS. Surface expression of IL-15Rα, CD25, CD69 and intracellular IL-15 was evaluated by FACS.

Results: Bone marrow from RA patients contained double CD3+ T-cells in comparison to OA (6.1±2.8 vs. 3.2±1.6 x10^6 cells/ml, p=0.008). There were elevated levels of IL-15, TNFα, IL-6, IL-1β in bone marrow plasma from RA in comparison to OA patients.

Lymphocytes obtained from RA patients expressed higher levels of IL-15R alpha (p<0.01). Expression of CD69 was significantly higher on both CD4+ (p<0.04) and CD8+ (p<0.02) T cells isolated from RA bone marrow. The percentage of CD4+CD25+ cells was higher in RA bone marrow (p<0.02). RA BMMC produced higher level of IL-17 after stimulation by IL-15 than OA BMMC. Bone marrow stromal cells produce high levels of IL-15.

Conclusion: It is likely that locally overproduced IL-15 (and other proinflammatory cytokines) are responsible for activation and proliferation of T-cells reflected by significantly increased number of activated T-cells in RA bone marrow.

AB06

Comparative efficacy and safety of treatment with biological agents etanercept and anakinra in children with Juvenile Idiopathic Arthritis in Latvia

D. Guseinova, V. Stanevicha, R. Shantere, D. Berzina, A. Schegolevs, D. Balode, A. Uruma

AB07

Antimicrobial therapy resistance in group A beta haemolytic Streptococcus infection and rheumatic fever

D. Zavadskas, L. Drukalska, N. Pugačova, D. Berzina, D. Gardovskas, V. Stanevicha, E. Miklaševics

References