

IMMUNE/INFLAMMATORY PROFILE IN CHILDREN WITH TYPE 1 DIABETES MELLITUS AND CELIAC DISEASE AND/OR AUTOIMMUNE THYROIDITIS



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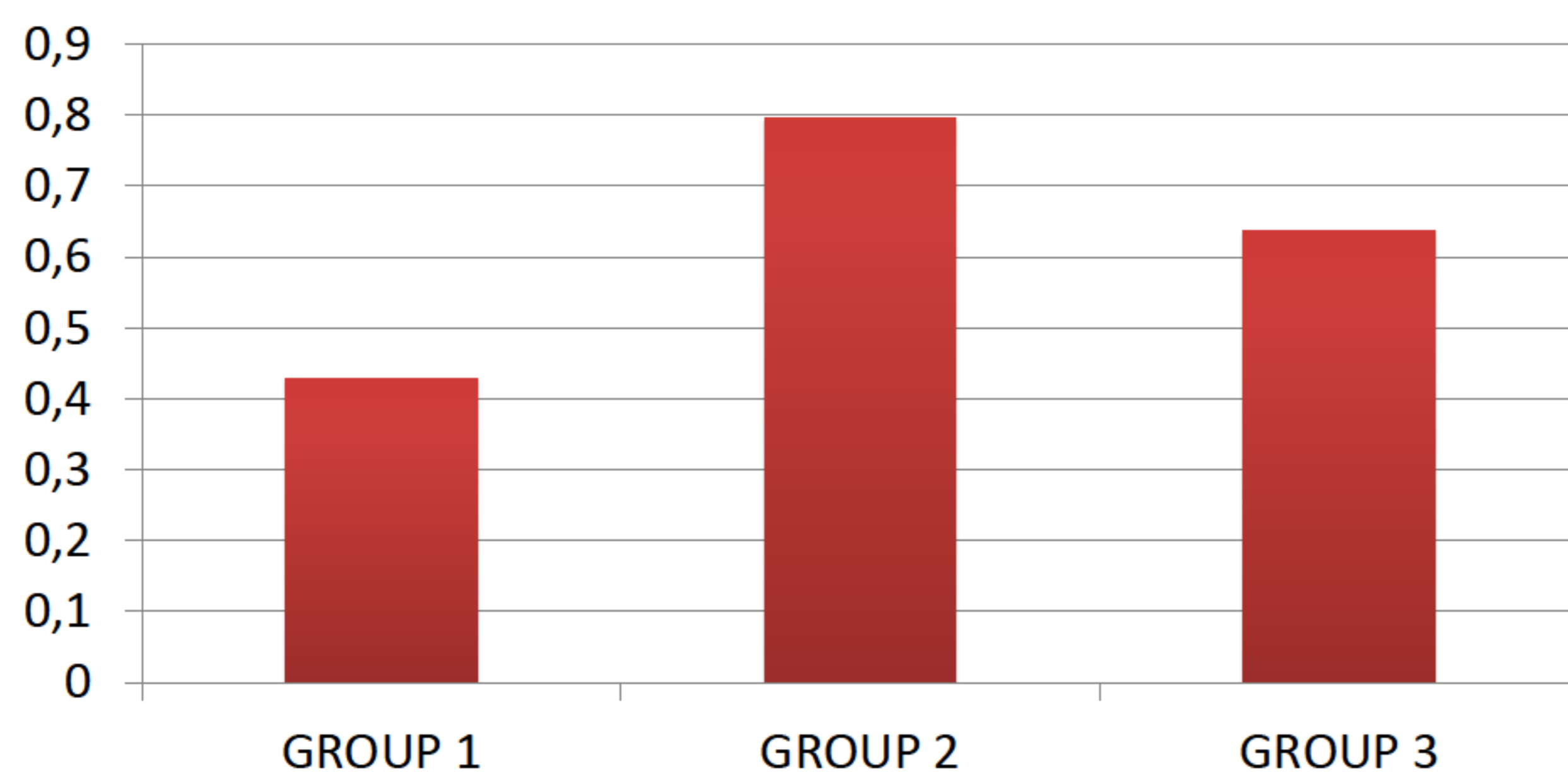
Background: Most studies examined immune/inflammatory parameters in type 1 diabetes mellitus (T1D) showing discrepant results and not yield definitive conclusions. A study carried out by our group in 2013 compared meta-immunologic profiles of three groups: high-risk children, newly diagnosed children affected by T1D and controls.

Objective and hypotheses: to compare metabolic profile in three groups: children affected by T1D and an additional autoimmune disease; children affected by T1D; control subjects. The aims of this study are: 1) to verify if metabolic profile of children affected by T1D is significantly different respect to ones with additional autoimmune disease and 2) if it might reveal possible predictors of disease severity.

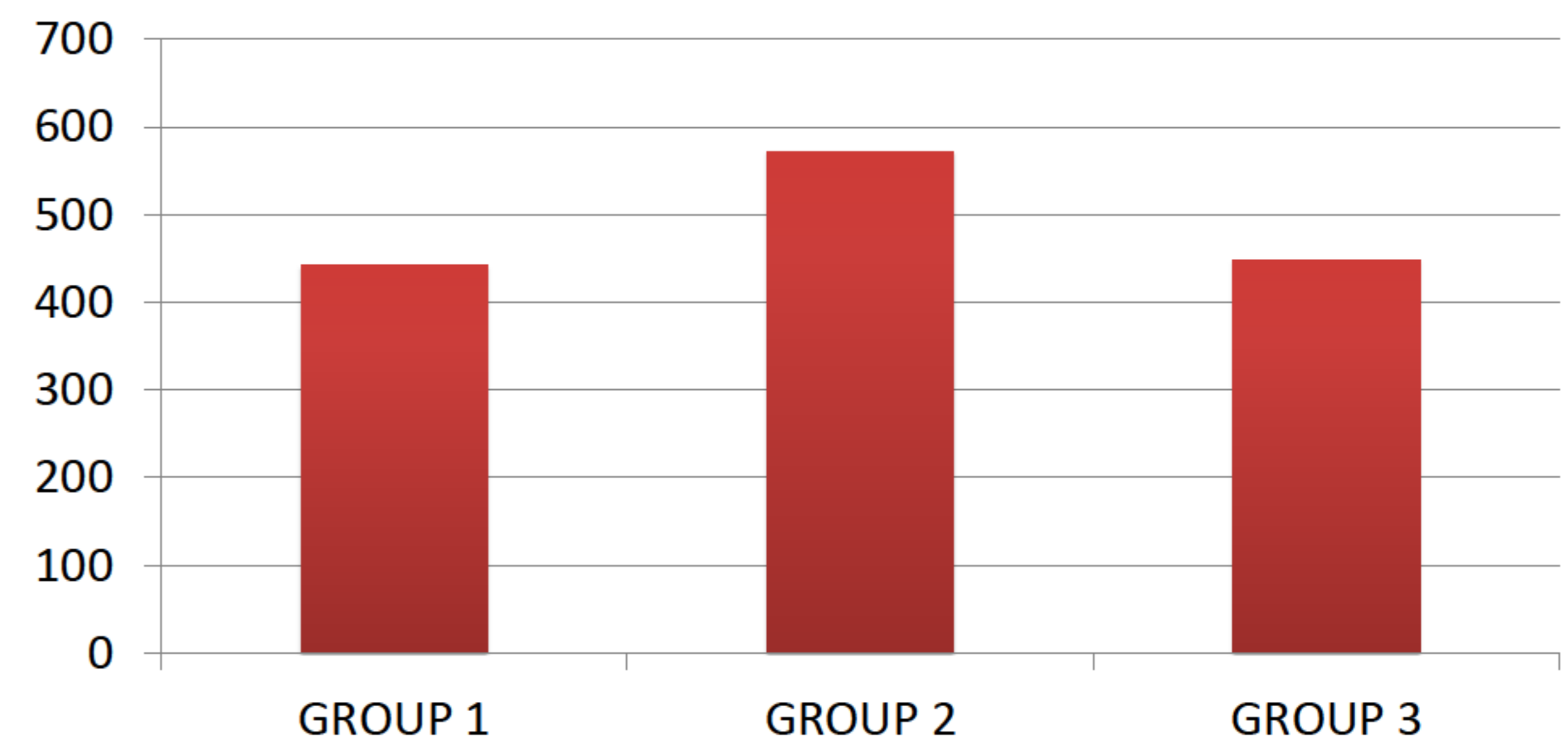
Method: 134 consecutive T1D-children, recruited in the Department of Pediatrics at Univeristy of Naples "Federico II", were analyzed for a wide range of metabolic parameters. Metabolic profile was verified at baseline (T0, after a first glyceimic stabilization by insulin) and 12 months after diagnosis (T1). 64/134 had at least one autoimmune disorder besides T1DM: 44 celiac disease (CD) and 20 autoimmune thyroiditis (TAI) (GROUP 1) and 70 only T1DM (GROUP 2). 56 healthy children were enrolled using the following criteria: fasting blood glucose of <5.5 mmol/L (100 mg/dl), personal and family history negative for autoimmune disorders, negative islet autoantibodies (GROUP 3). The 3 groups were matched for sex, age and body mass index. We evaluated the following metabolic variables: leptin, sLepR, MCP-1, sCD40L, OPG, MPO, sICAM, sTNFr, resistine. Variables were preliminary evaluated by means of T-test.

Results: Preliminary results: at T0 GROUP 1 presented statistically significant sTNFr lower than other groups (p=0.0025 vs GROUP 3 and p=0.0004 vs GROUP2); sICAM-1 lower than GROUP 2 (p=0.038); leptin lower than GROUP 3 (p=0.0024); sLepR lower than GROUP 3 (p=0.0001). At T1 GROUP 1 presented statistically significant sICAM-1 and sTNFr lower than GROUP 2 (p=0.04 and 0.08 respectively).

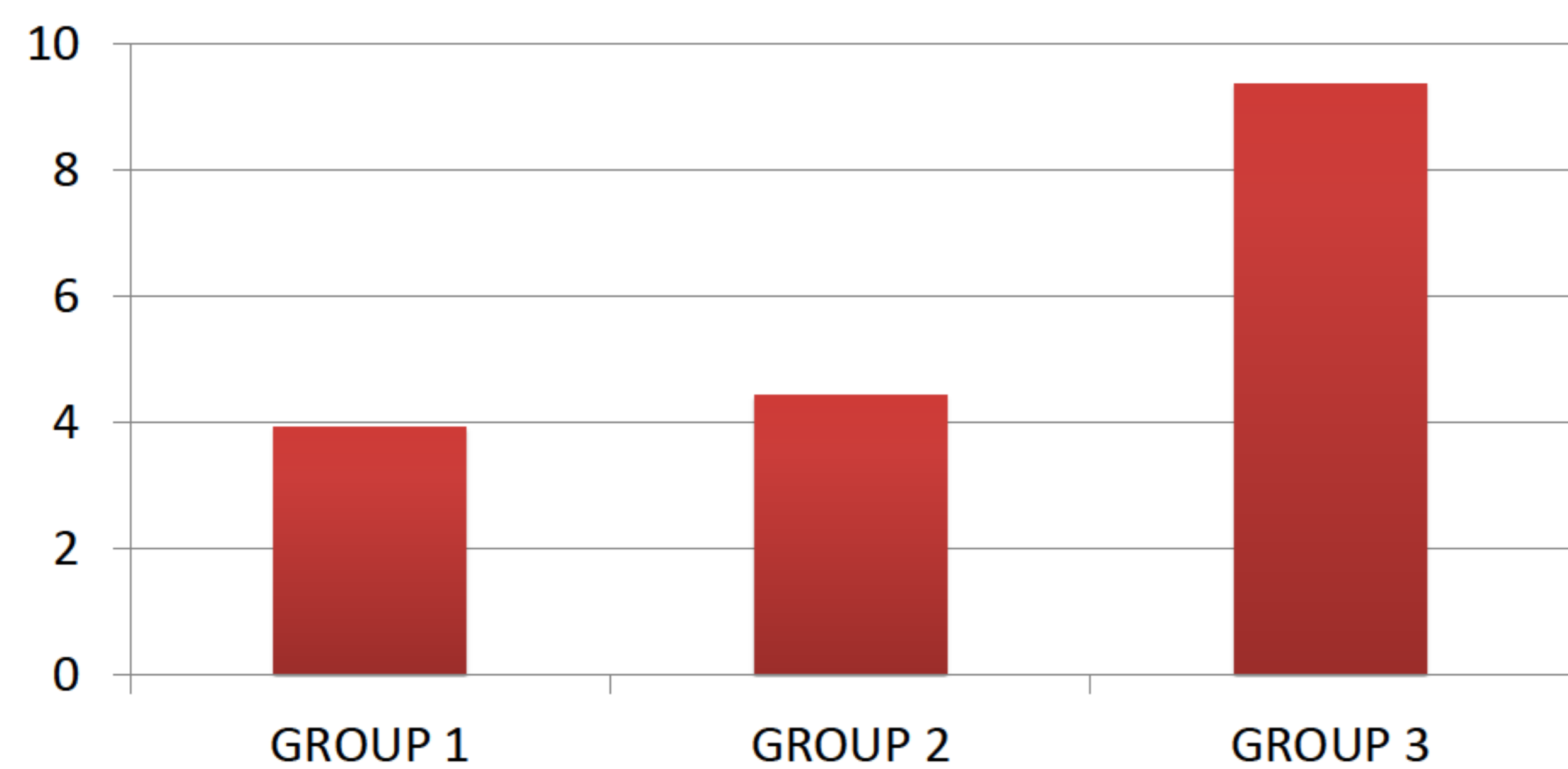
sTNFr



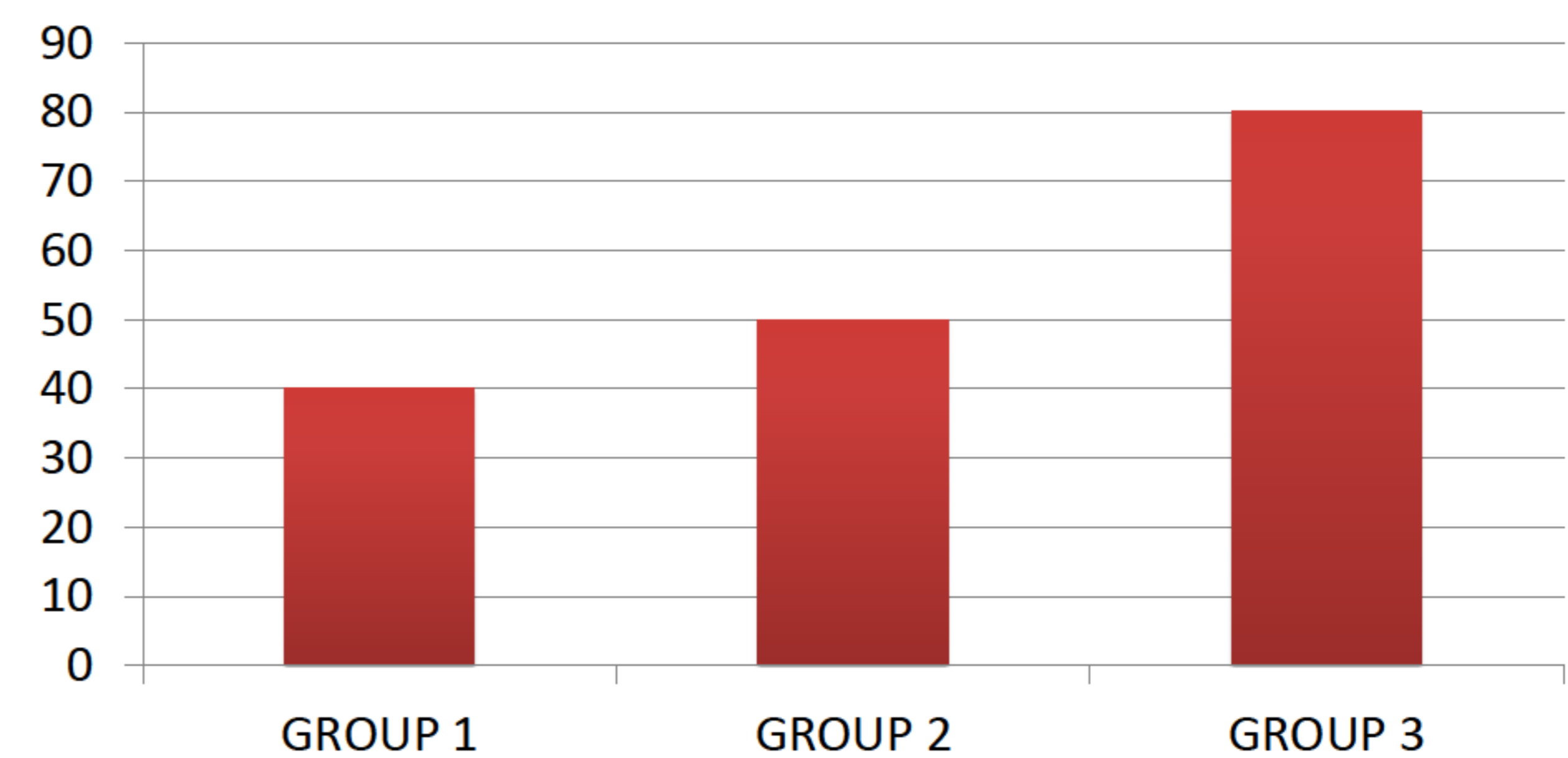
sICAM-1



Leptin



sLepR



Conclusion: patients with T1D and CD and/or TAI present more immune/inflammatory markers than patients with only T1D and controls. Further results are needed to verify if these results are useful to predict disease severity.

