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Abstracttitel: CYTOKINIC NETWORK AND CLINICAL OUTCOME IN DIABETIC
CARDIOSURGICAL PATIENTS.

PURPOSE: Diabetes mellitus is an important cardiovascular risk factor and a frequent co-morbidity in patients undergoing coronary artery bypass (CABG). We investigated the influence of cytokinic network on clinical outcome and renal, hepatic, myocardial dysfunction in diabetic patients.

METHODS: We enrolled n.8 patients with diabetes mellitus type II (DM) and n.7 patients without DM undergoing CABG in extracorporeal circulation (CEC). Blood samples were collected to evaluate TNF- α , p55R, IL-6, IL-8, IL-1 β , IL-12, IL-10, IL-4, IL-6r, INF γ and VES, PCR, cardiac, renal and hepatic markers in both groups before anaesthesia (T0), after anaesthesia before CEC (T1), after 6 hours from CEC (T2), after 24 h (T3) and after 96 h (T4) from anaesthesia induction. We considered as clinic outcome: length of stay in Intensive Care Unit (ICU), hospitalization, renal, hepatic and myocardial function markers alterations. Data were analysed using T-test ($p < 0.05$) and linear correlation ($r > 0.5$).

RESULTS: DM patients showed increased PCR levels in T3 and T4 ($p < 0.05$). In T0, IL-4 was lower in DM than control group ($p < 0.05$). ICU stay and hospitalization were longer in DM group (ICU stay: 1.5 days vs. 1 day; Hospitalization: 7.38d vs. 4d, $p < 0.05$). In DM patients at T0, a correlation between TNF- α and hospitalization ($r = 0.76$) and between p55R and VES, PCR ($r = 0.75$) were present. Evaluating the whole population, at T0, IL-12 correlates with hospitalization ($r = 0.65$) and ICU stay ($r = 0.63$) whereas at T4, in DM IL-12 is connected with augmented hepatic enzymes and TNF- α with cardiac necrosis markers ($r = 0.74$). At T4, p55R values were associated with altered renal function, measured as $>50\%$ creatinine and azothenia baseline increase (DM: $r = 0.73$; Contr: $r = 0.88$), which is related to coagulation abnormalities.

CONCLUSION: Despite this small population, these preliminary data showed an important correlation between preoperative TNF- α and IL-12 with hospitalization in DM patients and relationship between cytokines and organ function markers.