

INCREASED NEUTROPHIL CD64 EXPRESSION IS A PROMISING PREDICTOR OF UNFAVORABLE OUTCOME IN PATIENTS WITH COMPLICATED INTRA-ABDOMINAL INFECTIONS – FIRST RESULTS

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Aim: To establish the prognostic role of neutrophil CD64 (nCD64) expression in patients with complicated intra-abdominal infections (cIAls).

Materials and methods: We performed a prospective study in the Department of Surgical Diseases (DSD) at a University Hospital "Prof. Dr. Stoyan Kirkovich" Stara Zagora. We investigated 23 patients admitted to the DSD and operated on for cIAls between November 2018 and November 2019. Preoperatively and on the 3-rd postoperative day we measured the nCD64 expression by flow cytometry.

Results: Three patients (13%) died during hospitalization. nCD64 expression was significantly higher in non-survivors compared to survivors preoperatively ($97.5 \pm 0.6\%$ vs. $73.9 \pm 18.2\%$, $p = 0.039$) and on the 3-rd postoperative day ($96.9 \pm 1.1\%$ vs. $49.7 \pm 27.5\%$, $p = 0.028$). nCD64 on the 3-rd postoperative day showed a perfect predictive value (AUROC = 1.00, $p = 0.022$), whereat for a cut-off value $\geq 95.25\%$ we identified maximum sensitivity and specificity (100%).

Conclusion: In the studied group of patients nCD64 showed a perfect prognostic performance. This leads us to believe that this biomarker deserves further investigation, as it may be a significant and independent predictor of unfavorable outcome in patients with cIAls.