

ANALYSIS OF EARLY IMMUNOLOGICAL CHANGES IN A MAJOR BURNED PATIENTS COHORT

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Argomento: Altro

OBJECTIVES

Our aim is to characterize the still mostly unknown early immunological changes in major burned patients in order to study correlations with mortality and optimize the current therapies.

METHODS

We studied 8 patients admitted in the Burns Unit of Cardarelli Hospital (Naples) for major burns from November 2018 to January 2019. Venous blood withdrawal was performed at acceptance (T0) and after 10 days (T10) to analyze humoral and cell-mediated immunity (white blood cells count, complement, total IgA, IgM and IgG levels, IgG subclasses, lymphocyte subpopulations). For each patient demographic data, total Burned Skin Area (TBSA), vital parameters, renal and hepatic analytes, sepsis onset, survival were recorded. Means and frequencies were calculated.

RESULTS

Mean age was 57 years (range 13-80 years), all Caucasian, 2 women; mean TBSA was 33.3% (13.5 to 100). All the patients showed neutrophilia, monocyte increase, varied renal and hepatic impairment. One patient (male, 75 yo, TBSA 100%) died at T0 after acceptance. He had low CD4⁺ cells and IgG. One patient (male, 82 yo, TBSA 36%) died at T10: he had low CD4⁺ and CD8⁺ cells, low IgM and IgG with IgG1-2 deficiency at T0, with worsening at T10. The other 6 patients survived: interestingly, 5 showed low CD⁺ and IgG subclasses deficit (4 had low IgG1-2-3, one low IgG1). One survivor (male, 30 yo, TBSA 49.5%) became septic at T10, showing low CD4⁺ and IgG with low IgG1-2-3. No patient had IgG4 deficit.

We are confident that by increasing the number of patients and the time of analysis we can confirm the significance of our observations and plan new therapeutical interventions aimed at reverting the immunologic impairment.