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Title: Evaluation of phagocytic capacity of Neutrophils of skin burned patients with different degree of burning.

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Abstract: Phagocytosis plays a major role for intracellular killing of bacteria, involve a complex enzymatic and metabolic process including glycolysis, oxygen consumption, hexose monophosphate shunt and myeloperoxidase activities, resulting in the formation of halides, H+ and lactic acid (lowering the pH to 4), hydrogen peroxide, superoxide, hydroxyl radicals, and singlet oxygen which are the final bactericidal agents. NBT test evaluate Phagocytosis rely on these agents.

Material & Methods: Studies were made on 50 patients of both sexes and of different ages admitted to our burn department during the period 2009-2010, suffering from thermal burns of different depths. The burned area exceeded 50 per cent of the body surface area in 19 Patients. The specific tests applied in this study were: The nitro blue tetrazolium (NBT) dye test.

Results: During this study 2 of the 31 patients having burns of less than 50 per cent surface area died, while 14 Of the 19 patients with more than 50 per cent burns died. Therefore the overall mortality rate by week 4 was 32 per cent. Only 34 patients were followed for 4 weeks after injury.

DISCUSSION: This study has shown that the phagocytic power of Neutrophils is not affected by burns to any significant Extent. On the other hand the intracellular Killing as monitored by the percentage bactericidal Capacity and the percentage of formazan cells Deteriorated steadily during the first 3 weeks and Improved during week 4. In conclusion we support that the NBT test is a simple, inexpensive and rapid investigation in clinical Practice to assess neutrophil function, and to predict infection.

Keywords: Skin burn – NBT test – follows up.

Presentation: Poster