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**Title:** Total blood Lymphocytes and Monocytes in a population of Iranian Thermal burn patients.

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**Abstract:** Background and objectives: The defect causing immunosuppression after burn injury is associated with the greatly increased susceptibility of thermal injured patients to infection from a variety of pathogens. Both blood lymphocyte and Monocyes have been reported to be affected. The present study aimed to compare the quantitative differences between total blood lymphocyte and monocyte in patients on the third and seventh day after thermal burn injury.

All patients were treated with cephalosporin and aminoglycoside antibiotics.

**Materials & Methods:** Blood samples were collected at three and seven days post burn from 67 patients with thermal burn injury were examined at the Motahary (Burn center Tehran) hospital. The age of patients was varied from 18-60 years. Questionary was administer to each study subject in order to collect demographic, lifestyle and medical information. Complete blood counts were performed. White blood cell differential counts were conducted on the smear of patients. All results were analyzed by SPSS.

**Results:** Seventh day post-burn: The mean percentage of total blood lymphocyte was diminished (16.46 ± 5.52) Compared to the normal level and third day (16.97 ± 6.1) post-burn. Although the number of blood monocyte cells was diminished at third day (1.81 ± 1.06) post-burn compared to the seventh day (2.29 ± 1.13). The differences between total lymphocyte and monocyte levels were statistically insignificant. Burn injury was associated with sepsis and above cells in few patients. Because aminoglycosides are more toxic than cephalosporin for less adverse effects patients were treated with mainly cephalosporin.

**Conclusion:** Defects in lymphocyte and monocyte in burned patient may play an important role in sepsis and death. It may thus be concluded that lymphocyte and to some extent monocyte play an important role in the development of the immune response and clinical manifestations after burn injury. Burn injury induces a systemic hypermetabolic response, resulting in inflammation, immune compromise. However we found special correlation between a CBC with differential (Which was Schedual every days or as necessary) and lymphocytes, monocyte numbers, in these patients.

**Presentation:** Poster