BASAL AND INDUCIBLE LEVEL OF HSP71 IN PERIPHERAL BLOOD LYMPHOCYTES IN SOLDIERS WITH HEAT INDUCED ILLNESS

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The objective of this research was to analyse the basal and inducible level of HSP71 in peripheral blood lymphocytes in heat-induced illness and control soldiers, and to explore the mechanism of heat induced illness. Flow Cytometry was used for detecting HSP71 in peripheral blood lymphocytes. In the basal condition, the level of HSP71 was low, and no significance was found between the control and heat-induced illness soldiers (268.10, 390.05). After being cultured at 37°C for 5h, the level of HSP71 in both the heat illness and control soldiers remarkably increased compared with the basal condition. The level of HSP71 of heat-induced illness soldiers was much higher than control (1405.08 and 931.16, $P<0.01$). HSP71 in control soldiers increased slightly after stressed at 41°C for 1h (955.99), while in heat-induced illness group, HSP71 declined instead of reaching a high level (1148.92). It may be concluded that the inducibility of HSP71 changed in the cases with heat-induced illness. This suggests that the individual differences of the HSP71 gene and expression may play a role in the occurrence of heat-induced illness. The threshold of thermotolerance decreased and the ability of thermotolerance could not normally formed.

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