

# The Pathophysiological Aspects of Lymphology of Critical Conditions

A.V. EFREMOV and A.R. ANTONOV

Department of Pathophysiology, Medical Academy, Novosibirsk, Russia

---

## ABSTRACT

In work on Wistar rats with experimental crush syndrome and acute alcohol intoxication shown that alterations of «metabolic profile» are stipulated by the lymphatic system, which emerges as an active component to urgent adaptation in critical situations. It is shown by the expressed infringements of an exchange of electrolytes in plasma, lymph and myocardium at the rats, that can make a part of a pathogenesis of traumatic damage of heart and others organs and reason of mortality in the acute period crush-syndrome and more serious current of the reduction period. On the example of hormones, endorphins, protein, electrolytes and trace elements exchange is shown integral reaction the lymphatic system, directed on the compensation of syndrome «endogenous starving». For the first time suggested a concept of «lymphatic resetting» as system reactions on the extreme influence and is described phenomenon an «lymphoattraction» - selective accumulation of certain metabolites by components the lymphatic system. For the first time suggested a theory of lymphatic system as functional stress-limited system. We found the syndrome of adaptive overload at the traumatic stress. Shown that crush syndrome end acute alcohol intoxication accompanied the «secondary trace elements disturbances». Drawn a conclusion about universality of described reactions for medicine critical conditions.

**Address correspondence to:** A.V. Efremov, Department of Pathophysiology, Medical Academy, Novosibirsk, Russia. E-mail: [patology@mail.ru](mailto:patology@mail.ru)

---