

FEATURES OF PHAGOCYtic ACTIVITY IN PATIENTS WITH POST-TRAUMATIC GUNSHOT NEUROPATHIES AND PLEXOPATHIES

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Background and purpose

Phagocytes are one of the main components of innate immunity. As a highly sensitive indicator of the norm and pathology, the characteristics of phagocytes serve as a useful tool not only for immunological, but also for general clinical diagnostics.

Methods

We examined 93 men aged 21 to 59 years with neuropathies and plexopathies, which were divided into 3 groups: I-compression-ischemic neuropathies and plexopathies, II-post-traumatic non-gunshot neuropathies and plexopathies, III-posttraumatic gunshot neuropathies and plexopathies accompanied by chronic neuropathic pain. The phagocytic activity of granulocytic neutrophils was determined in a leukocyte suspension obtained from heparinized blood. For research, equal volumes of leukocyte suspension and a washed suspension of the yeast strain *Saccharomyces cerevisiae* were mixed.

Results

The number of cells that entered into phagocytosis did not exceed the reference values in all the studied groups. In patients of group I, the phagocytic number was 4.18[3.88;4.85] and the phagocytosis completion index was 1.15[0.95; 1.25]. In group II, the phagocytic number was 4.175[3.98;4.53], and the phagocytosis completion index was 1.05[0.92;1.15]. In patients of group III, an increase in the absorbing and a decrease in the digesting ability of phagocytes were revealed. In group III, the phagocytic number was 4.33[3.75;4.87], and the phagocytosis completion index was 1.01[0.9;1.08].

Conclusions

The greatest decrease in the digesting ability of phagocytes was found in patients of the III group, which in the intergroup comparison had statistical significance ($p < 0.05$), in this group there is also a high absorption capacity, which indicates a decrease of phagocytic activity of neutrophils in patients with post-traumatic gunshot neuropathies and plexopathies, which are accompanied by chronic neuropathic pain.

