Initial discussion post

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Inflammation is a powerful protective process through which our immune system works. In trauma, special pattern recognition receptors with inflammatory cytokines stimulate the production of immune cells, which, in turn, lead to a number of physiological processes - such as dilation of blood vessels, increasing their permeability, accumulation of leukocytes and plasma at the site of injury, increasing the number of pain receptors.

Modern pathophysiology and general pathology state: "Inflammation is a typical phase-developing pathological process formed in the process of evolution and arising in response to local tissue damage." Currently , inflammatory processes are studied at the cellular and molecular level, which requires a “clarification of the relationship” between inflammation and immunity - two forms of protection of the body against any foreign agent that has penetrated it

(Deretic & Klionsky, 2018).

Inflammation includes a number of well-known external signs and microstructural changes. The former include edema, pain, hyperemia, local or systemic rise in temperature, dynamic changes in the structure and function of the damaged organ. The second group includes an exudative-vascular reaction, migration of leukocytes to the inflammation center with the formation of cell infiltrates, and at the final stage fibroblasts and other cells involved in the process of post-inflammatory repair or sclerosis of damaged tissues.

The duration and severity of individual phases of the inflammatory process depends on the nature of the damage and related conditions, including the development of immunodeficiency. Despite the universality of the underlying mechanisms of inflammation in each case, the process is unique in its manifestations (Simbirtsev, 2012). The individual features of inflammation depend on its localization in various organs, the nature of the etiological factor, the phenotypic and genetic properties of the invading microorganism, the ratio of the duration and severity of individual phases and the particular mechanisms underlying it. Inflammation is not always good like last year my grandfather who is having asthma had an inflammatory cytokine that lead to an autoimmune reaction to the respiratory mucosa.

References

Deretic, V., & Klionsky, D. J. (2018). Autophagy and inflammation: a special review issue.

Simbirtsev, A. S. (2012). Cytokines as a new system, regulating body defense reactions.

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