

## PATHOLOGICAL ANATOMY OF THE ADRENAL GLAND IN CLOSED BRAIN INJURIES

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**Relevance of the topic:** Closed brain injuries (CBBi) are one of the most common conditions in medical practice today, leading to high mortality and disability as a complication. These injuries are a disease characterized by serious dysfunction not only of the central nervous system, but also of the neuroendocrine system. In general, the adrenal gland, which is the main effector organ of stress reactions, undergoes functional and morphological changes in traumatic brain injuries. As a result, the study of the pathologoanatomical features of the adrenal gland in BMJoJ is considered to be of significant scientific and practical value.

**The purpose of the work:** to determine macroscopic and microscopic pathologoanatomical changes that occur in the adrenal gland in closed head injuries and to evaluate them as a morphological expression of stress-reactions as a result.

**Results:** The results of the studies revealed hyperemia, stromal edema, microhemorrhages, and increased vascular permeability in the adrenal gland. Also, hypertrophy of adrenocorticocytes, vacuolization, reduction of lipid reserves and dystrophic changes were observed in the renal cortex, especially in the zona fasciculata. Signs of cellular disorganization were noted in the zona reticularis. In the medullary layer, morphological signs characteristic of functional tension of chromaffin cells and increased secretory activity were detected.

**Conclusions:** In conclusion, it can be said that the pathoanatomical changes that develop in the adrenal glands in closed head injuries are generally associated with a strong stress response in the body and activation of the hypothalamic-pituitary-adrenal axis.

The identified morphological changes are important in assessing the severity of BMJ, predicting complications, and improving comprehensive treatment tactics.

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