мальной и экспериментально измененной фотопериодики, логично было бы считать уровень мелатонина — гормона шишковидной железы, являющимся основным гуморальным медиатором организации циркадианных ритмов. Нами установлено, что уровень мелатонина представляет собой важный фактор, влияющий на показатели интенсивности экспрессии гена c-fos, но эти величины не связаны простой зависимостью. На фоне постоянного освещения инъекции мелатонина способствовали нормализации концентрации белка c-Fos в субъядрах ммПВЯ гипоталамуса в ночной промежуток исследований. При дневном этапе эксперимента наблюдали резкий подъем концентрации исследуемого протеина. Взаимоотношения упомянутых показателей, очевидно, достаточно сложные, и механизмы таких взаимоотношений требуют дальнейших исследований.

A CONDITION OF C-FOS GENE EXPRESSION IN THE MEDIAL SMALL-CELL SUBNUCLEI OF THE PARAVENTRICULAR NUCLEI OF THE RAT'S HYPOTHALAMUS UNDER CONSTANT ILLUMINATION

R.Ye. Bulyk, Yu.V. Lomakina, O.V. Timofey

Bukovinian State Medical University, Chernivtsi

E-mail: lomakinajulia@yahoo.com

Was studied the effect of constant light by immunofluorescent methods on the state of functional activity of early c-fos gene expression in the medial small-cell subnuclei of the paraventricular nuclei (msPVN) of the rat's hypothalamus at 02.00 p.m. and 02.00 a.m. Product expression of the c-fos gene — protein c-Fos — in rats msPVN neurons at 12.00L:12.00D light mode characterized clear circadian oscillations. At night, the concentration index of the protein in the neurons nuclei almost a third less than the corresponding value for this parameter in the afternoon, and the difference between the averages night and day values of the c-Fos index was about 30%. In the seven-day light conditions 24.00L:00D concentration index c-Fos protein in the neurons nuclei of msPVN at day and night is less than the corresponding values in normal lighting conditions. The main factor in determining the intensity of the observed shifts of gene c-fos in msPVN neurons in normal and experimentally photoperiodic modified, it would be logical to consider the level of melatonin — the pineal gland's hormone, which is the main organization of the humoral mediator of circadian rhythms. We have established that the melatonin levels is an important factor which affecting to data of intensity c-fos gene expression, but these values are not connected by the simple relation. On a background of constant light melatonin injections contributed to the normalization of c-Fos protein concentration in the msPVN of hypothalamus at night period. In daylight phase of the experiment was observed a sharp rise of the test protein concentration. Interrelations of these indices clearly quite complicated, and the mechanisms of these relationships require further research.