spleen. Meanwhile the value of F can vary in the spleen depending on the physiological state of the CFU population, whereas in the bone marrow it is stable. Differences in the value of F for CFU obtained from different sources were demonstrated.

LITERATURE CITED


FUNCTIONAL MORPHOLOGY OF THE ACCESSORY NEUROSECRETORY CELLS OF THE CAT HYPOTHALAMUS

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Accessory groups of neurosecretory cells were studied by staining serial paraffin sections of the hypothalamus by Gomori's method after stimulation of the supraoptic (SON) and postoptic (PON) nuclei, the preoptic region of the hypothalamus, the cervical sympathetic nerve (CSN) and afferent fibers of the vagus nerve in acute experiments on cats. Four paired accessory groups in the rostral hypothalamus were discovered (before the division of the chiasma into tracts); periventricular (along the walls of the third ventricle), preoptic (above the preoptic recess), parafornical (on both sides of the columns of the fornix), and fusiform (see: Byull. Èksp. Biol. Med., 1977, No. 2, p. 236). The fusiform group was found constantly in both control and experimental animals in all series of experiments. Stimulation induced an increase in synthesis of neurosecretory substance by its cells. In response to stimulation of SON and PON directly, and also of CSN and the vagus nerve, the direction of its reaction coincided with that in SON and PON, whereas to stimulation of the preoptic region of the hypothalamus activation of synthesis was observed against the background of an unchanged state of the neurosecretory nuclei by comparison with the control. Three other groups were found only during stimulation of the preoptic region. Accessory groups of cells can react in the same direction as the neurosecretory nuclei (mainly SON) or independently of them.

KEY WORDS: neurosecretion; hypothalamic-hypophyseal neurosecretory system; stimulation of hypothalamus

Steadily increasing attention has been paid in the recent literature to the neurosecretory centers. The study of serial sections through the hypothalamus has revealed accessory cells and groups in rats [7, 11], mice [3, 4], susliks [6], cats, dogs, and man [5]. They have been investigated in most detail in rats [11]. The workers cited describe the results of light- and electron-microscopic investigations of the morphological similarity between the accessory NSC and the NSC of the supraoptic nucleus (SON). However, their role in the neurosecretory process has not yet been completely explained.

Fig. 1. Topography of neurosecretory cells and tracts in anterior hypothalamus of cat. Schemes based on atlas. Frontal sections at levels: a) A 14, b) A 13.5, c) A 13, d) A 12.5, e) A 12, f) A 11.5. Legend: c.a) anterior commissure; c.F.) column of fornix; ch.o.) optic chiasma; SON) supraoptic nucleus; pv.gr.) periventricular group; pr.gr.) preoptic group; par.gr.) parafornical group; sp.gr.) fusiform group; PON) postoptic nucleus; PVN) paraventricular nucleus; tr.o.) optic tract; IIIv) third ventricle.

Fig. 2. Periventricular group of neurosecretory cells located along wall of third ventricle. Frontal section through hypothalamus A 14, magnification 42x. Stained with paraldehyde-fuchsin + azan.