

(UIBC) ($\mu\text{M/L}$), a percent of transferrin saturation (%) were determined by an automatic biochemical analyzer PRESTIGE 24i (Japan) at the clinical diagnostic laboratory of Scifically-Educational Medical Center "University clinic" Zaporozhye state medical university.

Results. After administration to animals of blood serum taken from the animals of group R2, which did not contain erythropoietin (elimination half-life of erythropoietin was 1, 5 – 2 hours) at the background of unaltered quantity of reticulocytes was administered to the animals, we detected the significant growth of blood serum iron content, TIBC, UIBC and percentage of transferrin saturation since the 1st to the 3rd day after administration. From the 3rd to the 5th day we observed the tendency to decreasing in indicators of the total iron, TIBC, UIBC and percentage of transferrin saturation.

Conclusion. Analysis of the findings can assume with high probability that the serum of animals, which were administrated the serum from the group with modelled haemolytic anaemia contains humoral factor of mediated action, that affects the system of blood iron transport and does not affects the activity of erythropoiesis.

HYPOTHALAMUS AND ITS ROLE IN BLOOD PRESSURE REGULATION AND HYPERTENSION DEVELOPMENT

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Background. The etiology of essential hypertension is multifactorial and not completely understood. It is known central mechanisms of blood pressure maintenance play an important role in hypertension development. In this case we should consider the hypothalamus as one of the major sites of central blood pressure control.

The aim was to study hypothalamus and its role in blood pressure regulation and hypertension development.

Method and materials. Literature analysis based on the recent data from different authors.

The central nervous system (CNS) definitely plays an important role in the short term control of BP, but its contribution to the chronic control of BP is not yet clear. In fact, research in the past years has been directed to essential hypertension with possible neurogenic cause.

Apparently, the persistence of elevated sympathetic activity is one of the major contributors to the onset, development and maintenance of neurogenic arterial hypertension (AHT). From experimental models of hypertension and hypertensive patients data using microneurography and norepinephrine spillover techniques, there is evidence that the sympathetic influence upon the cardiovascular system is often increased when blood pressure is chronically elevated. The mechanisms responsible for the sympathetic activation in essential hypertension are complex and multifactorial and remained to be completely elucidated. However, several working hypothesis can be discussed, some of them stressing the role of humoral substances and others concentrated on brain mechanisms.

The most mentioned sympathetic excitatory regions are the paraventricular nucleus of the hypothalamus (PVN). The PVN has emerged as one of the major regulators of the coordinated autonomic and endocrine output. PVN projects to both rostral ventrolateral medulla (RVLM) and the spinal sympathetic intermediolateral nucleus, and PVN neurons stimulation increases RVLM activity and arterial blood pressure. Several PVN neurons that project to RVLM also display an intrinsic auto-rhythmicity, and the discharge frequency correlates closely with sympathetic discharge rate. The extensive projections of the PVN to central regions (RVLM, area postrema, NTS and intermediolateral nucleus of the spinal cord) indicate that PVN plays a significant role in modulating RVLM activity and sympathetic outflow.

The PVN receives input from a large number of regions in the brain, including those associated with osmotic control, appetite, energy metabolism, stress, emotions and other areas that exert effects on BP. Thus, it is clear that the role of the PVN is to integrate inputs from a variety of sources and modify RVLM activity according.

It was also showed that electrolytic lesions of the PVN in spontaneously hypertensive (SHR) rats elicited an acute reduction of sympathetic activity together with a decrease of blood pressure. Other acute animal studies, performed under general anaesthesia, showed that PVN muscimol injections lowered BP and renal sympathetic nerve activity both in SHR and Wistar-Kyoto rats, indicating that this region was tonically active in both animal strains to control BP and peripheral sympathetic activity. Moreover, the relation of PVN and RVLM neurons to sympathetic control suggests that the spontaneous discharge can be modified

through either changes to the intrinsic rate of depolarization or alterations in the balance of excitatory and inhibitory afferent input.

Thus, it become clear the paraventricular nucleus plays an important role in cardiovascular regulation both in normal and pathological conditions. This information allows us to note that further studies of the functional state of this nucleus is an important aspect of modern pathophysiology and cardiology.

FORMATION OF THE LOCAL HUMORAL IMMUNITY IN THE STOMACH OF RATS IN NORM AND AFTER INTRAUTERINE ANTIGENIC INJECTION.

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The aim of this study is to study the effect of intrauterine injection of the antigen on the pace and timing of the formation of the local immune system and the establishment of morphological and functional units of the gastric mucosa. **Material and Methods.** Microscopic, morphometric methods were studied 64 rats stomachs intact group and after antigen challenge postnatally aged between 1st to 90th day of postnatal development. **Results.** Formation of the breeding centers of lymphoid nodules in the stomach of rats begins after the 45th day of postnatal period in the experimental group, in the future they occur cell proliferation, leading to an increase in the size of the breeding center and the formation of other zones of lymphoid structures. Changes in the cellular composition of perivascular lymphoid nodules after antigen challenge in many respects similar to those in lymphoepithelial nodules. In the past there is a fairly homogeneous picture: in a dark area (and it is the embryo of the developing breeding center) is dominated by the blasts, only slightly different from each other in size. Some of them are divided mitotically. Due to the proliferation of lymphoid formations grow in the direction of the glandular epithelium. Increased content of reticular cells and lymphoblasts, plasma cells appeared. As part of the the subepithelial zone increased the number of phagocytic macrophages in the cytoplasm of lymphocytes which are the remnants of the nuclei were. The subepithelial zone, compared with the control, the percentage of small lymphocytes increased and decreased lymphocyte medium, reticular cells appeared, and the number of macrophages grew.

Conclusions. After intrauterine injection of the antigen is observed qualitative and quantitative changes in the cellular elements of the breeding centers of lymphoid nodules.

ОСОБЛИВОСТІ РОЗПОДІЛУ РЕЦЕПТОРІВ ДО ЛЕКТИНУ ІКРИ ОКУНЯ (PFA) В КАПСУЛІ МЕДІАСТЕНАЛЬНОГО ЛІМФАТИЧНОГО ВУЗЛА В НОРМІ ТА ПІСЛЯ ВНУТРІШНЬОПЛІДНОЇ ДІЇ АНТИГЕНУ

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Імунна система плоду вважається найбільш чутливою до впливу антигенів різної природи, тому дослідження структурно-функціональних особливостей лімфатичних вузлів має надзвичайну актуальність.

В процесі розвитку та функціональних змін у клітинних структурах тканин послідовно змінюється і перерозподіляється синтез та накопичення рецепторів глікокон'югатів, що відображає гістогенетичні процеси, хронологію клітинних реакцій при формуванні органів та становленні їх функцій.

Вуглеводна специфічність може бути використана у якості критерію функціональної класифікації рецепторів до лектинів і, відповідно, морфофункціонального стану лімфоцитів та інших імунокомпетентних клітин.

Мета дослідження. Вивчити розподіл рецепторів до лектину ікри окуня (PFA) в капсулі медіастенального лімфатичного вузла в нормі та після внутрішньоплідної дії антигену.

Матеріали та методи. Об'єктом дослідження став медіастенальний лімфатичний вузол 96-ти лабораторних щурів лінії Вістар. Тварин поділено на дві групи: I – інтактні тварини, II – тварини, яким на 18-у добу внутрішньоплідного розвитку вводили антиген. В якості антигену використовували гамма-глобулін людини нормальний. Забір медіастенального лімфатичного вузла у складі органокomплексу здійснювали на 1-у, 3-ю, 7-у, 11-у, 14-у, 21-у, 30-у, 45-у, 60-у добу після народження. Приготування гістологічних препаратів здійснювалося відповідно до загальноприйнятих методик. Препарати обробляли із застосуванням стандартних наборів НПК «Лектинтест» (м. Львів) у