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БІОМОРФОЛОГІЯ ХХІ СТОЛІТТЯ

ЗБІРНИК ТЕЗ ДОПОВІДЕЙ

**XIV Міжнародної наукової конференції присвяченої 100-річчю з часу
заснування кафедри анатомії, гістології і патоморфології тварин
ім. акад. В.Г. Касьяненка**

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Біоморфологія ХХІ століття. Збірник тез XIV Міжнародної наукової конференції, присвяченої 100-річчю з часу заснування кафедри анатомії, гістології і патоморфології тварин ім. акад. В. Г. Касьяненка Національного університету біоресурсів і природокористування України, Київ, 23–24 вересня 2021 року. – К., 2021. – 110 с.

Збірник тез укладено за матеріалами XIV Міжнародної наукової конференції, «Біоморфологія ХХІ століття», присвяченої 100-річчю з часу заснування кафедри анатомії, гістології і патоморфології тварин ім. акад. В. Г. Касьяненка Національного університету біоресурсів і природокористування України. Видання розраховане на науковців, викладачів, аспірантів, студентів та практичних фахівців.

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Тези подано в авторській редакції. За точність і достовірність викладеного матеріалу, правильне цитування джерел, посилання на них та інші відомості несуть відповідальність автори тез. Передруковувати опубліковані в збірнику наукові матеріали дозволяється тільки за згодою авторів.

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ARCHITECTONICS OF NERVOUS APPARATUS OF FIBROUS FORMATIONS IN CATTLE ACROPODIAL

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The knowledge of innervation and local topography of fibrous formations of acropodia in cattle plays an important role in the normal functioning of the locomotor apparatus, and also in the pathology associated with. Detailed knowledge of all morphofunctional aspects of the nerves destined to the fibrous formations may contribute in great parts to the choice and application of an adequate and effective treatment.

The current study was performed on 16 acropodia coming from healthy cattle, at Chisinau slaughterhouse. The nerves were isolated by usual dissection technique. A binocular magnifying glass MBI-9 was used for detailed macroscopic examination followed by histological (Schiff reactive attaining for fibrous formations and silver staining for the nerves) and interpretation.

The intraorganic ramifications of the nerves, independently of their provenience, are establishing intra and intersystem connections, creating two interconnected nervous network: a superficial and a deep one. These networks are located in all stratum of articular capsules and periosteum. The nervous network of fibrous formations of acropodia is formed by trunks, fascicules and nervous terminations which have a nest aspect. The superficial and deep nervous networks of the fibrous formations of accropodia present morphological and functional connections and they are considered as components of a unitary nervous complex. The highest concentration of nervous terminations of different structure was noted in the places of insertion of capsules, articular ligaments and muscular tendons.

The nervous apparatus of acropodal fibrous formations in cattle in cattle has a special importance for the regional trophic processes, ensuring the growth and the adaptation of local locomotor apparatus. The knowledge of innervation sources and their topography facilitate the understanding of mechanism of locomotor apparatus in normal and pathological conditions. The obtained results are also important for planning surgical interventions of the accropodia in the cattle.

THE PROLIFERATIVE PROCESSES IN THE POSTNATAL THYROID MORPHOGENESIS OF THE WISTAR RAT'S OFFSPRING AFTER INTRAUTERINE ACTION OF DEXAMETHASONE

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In clinical practice, synthetic glucocorticoids such as dexamethasone are used to accelerate fetal maturation in pregnant women at risk of preterm birth. In humans and other mammals, a surge of cortisol in the body causes structural and functional changes in the tissues of the fetus, preparing it for childbirth and extrauterine life, but they can have long-term consequences in the structural organization of organs remotely postnatally. Unfortunately, despite the large number of studies on the effects of glucocorticoids on the fetus, there is almost no data on the prenatal effect of dexamethasone on the processes of proliferation in the thyroid gland. Animals were divided into 3 groups of animals in each

group: Group I – intact rats; Group II – control – animals which, on the 18th day of the dated pregnancy transuterine, transdermal, subcutaneously in the interscapular area was injected with 0.9 % saline in the amount of 0.05 ml; III – experimental group – animals, which during laparotomy, by intrauterine, transdermal subcutaneous injection in the interscapular area was injected with a solution of dexamethasone at a dose of 0.05 ml at a dilution of 1:40 intrauterinely on the 18th day of pregnancy (Ukrainian patent №112288). In the experimental subgroups used the allowable, generally accepted number of animals for statistical processing and obtaining reliable results – 6 animals. The thyroid gland with the tracheal area was removed on the 21st, 30rd, 45th, 60th, 90th, 120th days of life. Immunohistochemical study was performed according to the protocol recommended for a particular antibody manufacturer. Used monoclonal antibodies ki-67 (Ki-67), Fox-1 Antibody (A-12) – to assess proliferative activity, the company Santa Cruz Biotechnology, Inc. (USA). The study found that the thyroid gland of rats of infantile period, which prenatally exposed to dexamethasone, is structurally represented by chaotically located follicles of different diameters with a predominance of large with desquamated cells in the lumen, and proliferative changes aimed at forming extrafollicular which is confirmed immunohistochemically by the presence of Ki-67 positive cells. Intracellularly, protein-synthesizing organelles of thyrocytes also proliferate, to which there is a clear cytoplasmic and nuclear reaction with Fox-1 antibodies. During the juvenile period, proliferative processes in the thyroid gland of animals of the experimental group are stabilized while maintaining the morphological structure of the hypofunctional type, and remain lower compared to the control and intact groups. Morphological signs of functional tension of the thyroid gland animals exposed prenatally to dexamethasone, which correlate with a decrease in proliferative activity, indicate a functional compensatory response of synthetic and hormone-producing function, but suppression of proliferative processes, despite the slight manifestations. The thyroid gland of morphological hypofunctional type after prenatal action of dexamethasone in young rats, indicates an adaptogenic compensatory response and morpho-functional immaturity of the organ during this period, which may be the basis for provoking the preservation of such morphogenetic factors under the influence of stressors.

ENERGY DEFICIT AND ESTRUS DISTURBANCES IN COWS

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An Energy deficit is when the body uses less energy than it requires. In the case of an excessive energy deficit (EED), the risk of negative health and production reactions increase. The effects caused by excessive energy deficit are most often inflammation of the uterus, disorders of the mammary glands and reduced reproductive success in the period from estrus to calving (Bacha K. D., et al., 2021). The uptake of feed products is a key factor on the reproductive aspect, mainly the hormonal relationship on the