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ANATOMICAL PECULIARITIES OF THE CERVIX UTERI LIGAMENTS IN POSTNATAL HUMAN ONTOGENESIS

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According to literature data, the ideas of morphologic organization of connective tissue of the female pelvis are contradictory. From this point of view the necessity in system investigation of connective tissue around uterine and vagina in different age stages arises.

Objective: to ascertain the peculiarities of uterine cervix ligaments, their macro- and micro-structure during the 1st and the 2nd adult, elderly and senile periods of ontogenesis.

Investigations have been performed in 35 anatomical specimens. Following investigational methods as macroscopy, microscopy of consecutive histological sections series, conventional and thin preparations have been used in the research. Statistical data were processed by means of the licensed program "Statistica".

In 1st and the 2nd adult, elderly and senile ages the uterine cervix transverse ligament is a mesenteric-like structure 8,0-10,0 cm long, anteriorly and posteriorly it is covered by visceral pelvic fascia, and contains vessels, loose connective tissue and separate nerve fibers, and has cervix, intermediate and distal departments. Rectal-uterine ligament consists of two symmetric peritoneal folds along posterior uterine surface, forms curve around rectum and reaches pelvic surface of the sacral bone. Rectal-uterine ligament are laid down in the form of fan-shaped fibers close to the sacral bone at the level S1-S3, sometimes at S4, proximally narrowing to cervix uteri. In the cervix end of the rectal-uterine ligament there is a large number of available vessels, which are branches of uterine arteries and veins; they contain smooth muscles, dense connective tissue, blood and lymph vessels, and nerves; in the intermediate one third of the vessel their moderate number is present, the main tissue component is the connective tissue; and in the sacral one – even less, it consists of loose connective tissue and fatty inclusions.

Pubic-cervical ligament (anterior ligament) consists of vesical-uterine fold of the peritoneum, which is projected on to the urinary bladder from the anterior part of uterus, at the border of cervix uteri and the body, and changes during human ontogenesis are almost absent.

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DETECTION OF OPTICAL DENSITY OF THE IMMUNOHISTOCHEMICAL STAINING ON THE von WILLEBRAND FACTOR IN THE PLACENTAL STRUCTURES IN CONNECTION WITH THE INFLAMMATION AND IRON DEFICIENCY ANEMIA IN GRAVIDAS

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The von Willebrand factor is often used as an activation marker or marker of endothelial dysfunction. In recent years, other functions of von Willebrand factor have been identified, which suggests that this protein is involved in several other vascular processes: angiogenesis and vascularization, proliferation of leiomyocytes.

The objective of the research was to determine the optical density quantitative parameters of the immunohistochemical staining of the von Willebrand factor in the endothelium and fibrinoid of the placenta in combination with the secundines inflammation and iron deficiency anemia in gravidas.

The total number of 198 placentas was studied, including the placenta of physiological pregnancy and the observation of iron deficiency anemia in gravidas without inflammation. The immunohistochemical technique was performed on paraffin sections using the primary antibodies against the von Willebrand factor with the visualization of the primary antibodies with a diaminobenzidine dye polymer system. The optical density of the histochemical staining was measured by means of computer microdensitometry after the digital copies of the image had been obtained.

All the cases of inflammation and the structures under study were found to have a significant increase in the optical density of the immunohistochemical staining of the von Willebrand factor in the endothelium of the blood vessels as compared to the physiological pregnancy. IDAG contributes to an increase in the indices of inflammation, the highest data pertaining to the endothelial cells of the placental basal plate in chronic basal deciduitis.

The optical density of the staining in the fibrinoid of the chorionic and basal plate is higher than the optical density inherent in physiological pregnancy only in chronic forms of chorioamnionitis and basal deciduitis. In comparison with non-inflammatory iron deficiency anemia in gravidas the indices increase in the chorionic plate of the placenta in chronic chorioamnionitis only. The intensity of staining increases in all the forms of inflammation of the iron deficiency anemia in gravidas in comparison with physiological pregnancy and inflammation of the placenta. Comparing with non-inflammatory iron deficiency anemia in gravidas only chronic inflammatory processes reveal a change in indices.

Consequently, in the endothelium of blood vessels, in all forms of inflammation the optical density of the staining significantly increases in comparison with the physiological pregnancy, whereas in fibrinoid the same process is traced only in chronic course. In this case, iron deficiency anemia in gravidas is accompanied by maximum levels of optical density in the endothelium and fibrinoid, whereas in chronic inflammation, the average indices are higher than those in acute forms.