tic approach, an accurate preoperative diagnosis was obtained in 97.2% of patients.

Conclusions. The possibility of treatment in outpatient settings and insignificant traumatic intervention make it possible to avoid postoperative complications and shorten the period of incapacity for work.

A NEW METHOD FOR SEALING THE IATROGENIC RUPTURES OF FETAL MEMBRANES IN THE PROCESS OF FETAL OPERATIONS

Shneiderman M. G., Fatkhudinov T. H., Kostyukov K. V., Shmakov R. G., Arutyunyan I. V., Gladkova K. A., Makarov A. V., Tetruashvili N. K.

National medical research center of obstetrics, gynecology and perinatology named after academician V. I. Kulakov, Moscow, Russia

Key words: *fetoscopic hanging, newborns, fetal membrane, sealing*

Background. The present study is aimed at developing a method for sealing iatrogenic ruptures of amniotic membranes in fetuscopic interventions.

Aim. The applied technique is safe and effective for hermetic sealing of fetal membranes in fetoscopy and allows to reduce the frequency of iatrogenic complications, expand the indications for fetal surgical operations.

Material and Methods. The research contributes to the transition of domestic fetal surgery to high-tech health care and technologies for preserving the health of newborns. In V. I. Kulakov National Medical Research Center of Obstetrics, Gynecology and Perinatology developed a method and created the main components for sealing iatrogenic ruptures: a tissue sealant from the blood components of the mother, plasma enriched with platelets, which can be injected into the region defect of the fetal bladder in the form of a gel and a new type of amniotic catheter. PRP+activator is injected consecutively for 30 seconds through a specially designed amniotic catheter for this procedure, followed by activation of platelet degranulation and polymerization of fibrin directly in the defect area, which effectively seals the trocar hole from the inner and outer surfaces of the membranes and does not cause premature rupture of the membranes.

Results and Discussion. A specially designed amniotic catheter is guided through the trocar into the amniotic fetal cavity and is retained in the latter by inflating the balloon of a round or semilunar shape at the proximal end of the device, thereby allowing it to closely adhere to the fetal membranes and the uterine wall, preventing detachment of the membranes and leakage into the uterine cavity of the inserted through a biological sealant catheter. Thus the sealant reliably closed the place of iatrogenic rupture of the fetal membrane. Thus, the developed technique for hermetic sealing of membranes with the algorithm for introducing sealant components (platelet degranulation activators) for regulating its transition from the liquid state to the solid state and the method of using the new amniotic catheter model make it possible to use this method in clinical practice.

VARIABILITY OF ARTERIES BRANCHING AS A FORM OF TRANSFORMATION OF EMBRYOLOGICAL PATTERN

Shvedavchenko A. I., Nikolenko V. N., Shestakov A. M., Klyeva L. A., Vasyanina K. A., Godi H. F.

Sechenov First Moscow State Medical University (Sechenov University), Russia, Moscow
moloko1978@gmail.com

Key words: *variability of arteries branching, classical variant of branching, artery*

According to the data of the literature and our investigation data, variability of arteries branching is revealed in 15–47% of cases. The classical variant of the coeliac trunk branching (branching into 3 branches), according to the nomenclature method of accounting for branches, is revealed in 72–98% of cases, according to the quantitative method of accounting — in 27–66% of cases. The classical version of the divergence of the branches from the aortic arch is revealed in 64–84% of cases. Some arteries, such as the internal carotid artery (in the neck), the common carotid as well as the external iliac arteries, according to the concept of branching of large paired arteries, as a rule, have no branches and any branching variability. We consider introducing the coefficient of arteries branching, which is calculated according to the usual scheme, for comparative characteristics of branching of different arteries. Arterial branching is genetically determined, but it is transformed into final variations according to the structural features of this region and the features of hemodynamic in the primary arterial vessels.

ARCHICORTEX AND PALEOCORTEX MORPHOGENESIS PECULIARITIES IN ALCOHOL INTOXICATION

Sokolov D. A., Alexeeva N. T., Ilicheva V. N., Kvaratskheliya A. G., Nasonova N. A., Minasyan V. V., Lopatina L. A., Pisarev N. N.

N. N. Burdenko Voronezh State Medical University, Voronezh, Russia
amare-caelum@yandex.ru

Key words: *archicortex, paleocortex, alcohol, neurons*

Aim. The purpose of our study was a comparative hystomorphological characteristic of archicortex and paleocortex in alcohol intoxication.

Material and Methods. The experiment was performed on white mongrel male rats, which were

injected intraperitoneally with a 15% solution of ethyl alcohol at a dose of 2.25 g/kg. The object of the study were the CA_1 hippocampal region and piriform zone of paleocortex, studied in 1 and 10 hours after exposure. Brain was fixed and stained using standard techniques.

Results and Discussion. We identified that intraperitoneal administration of alcohol leads to typical nonspecific changes in archicortex and paleocortex, which are accompanied by the end of 1 hour by an increase in the number of normochromic nerve cells with chromatolysis, which indicates an evolving neuronodystrophy. The increase in pycnomorphic neurocytes and shade cells confirms the presence of necrobiotic processes and decreased functional activity of the hippocampus. In the pyriform zone there are also signs of neuronal dystrophy, however, according to the hypochromic type. Against the background of increased hypo- and hyperchromic forms of cellular destruction in CA_1 by the 10^{th} hour of alcohol intoxication, compensatory-adaptive changes have been observed, flowing on the type of hypochromic reparative regeneration, expressed in an increase in the volume of hypochromic neurons containing two nucleoli.

Conclusions. The morphological equivalent of compensatory-adaptive changes in paleocortex is the presence of hyperchromic neurons without signs of dystrophy with an increase of body and nucleus in the volume. Such changes indicate the processes of regenerative hypertrophy, characterized by intracellular hyperplasia of organelles of neuroplasma and nucleus.

PREVENTION OF COMPLICATIONS OF HEMORRHOID SCLEROTHERAPY WITH ULTRASOUND

Solovev A. O. [1, 2]*, *Vorobyev A. A.* [1], *Solovev O. L.* [2], *Soloveva G. A.* [2]

[1] Volgograd State Medical University, Volgograd, Russia;
[2] Joint Stock Medical scientific association «Clinic «Movement», Volgograd, Russia
* alex-sol@list.ru

Key words: *hemorrhoid, sclerotherapy with ultrasound influence, miniinvasive technologies*

Background. We have a lot of miniinvasive technologies for hemorrhoid's treatment, that's why an evaluation of their effectiveness is needed, especially when we are choosing the outpatient technology. Because one of the most important aspects of using miniinvasive technologies in outpatient is safety. We have the largest experience of using the method of hemorrhoid's sclerotherapy with ultrasound influence — the Russian scientist's invention, used in medical practice since 2005.

Aim. To evaluate the effectiveness of hemorrhoid's sclerotherapy with ultrasound influence and to develop measures to prevent complications.

Material and Methods. We evaluated the results of treatment of 4640 patients on the basis of our center — «Clinic» Movement «, Volgograd, between 2005 and 2015. The maximum follow-up period was 8 years. The procedure was carried out by ultrasound device «Prokson», which allows the introduction of a sclerosant solution with simultaneous ultrasound influence. Sclerosing treatment with ultrasound influence was performed in patients with stages I–III, and at stage IV with bleeding and anemia, as preparation for surgical intervention.

Results and Discussion. In the long-term period in patients with I–III st. stable remission was observed in 61.5%, the number of complications did not exceed 2.95%. The method is effective for stopping bleeding in anemia and IV st. hemorrhoids, as preparation for the second stage of treatment.

Conclusions. Evaluation of many years of experience in the use of hemorrhoid's sclerotherapy with ultrasound influence has shown high efficiency and safety. However, at III stage of the disease must be repeated after 2–6 months.

MRI IN THE OBJECTIVE ASSESSMENT OF NEW NON-INVASIVE METHOD OF TREATMENT OF COMPLEX ANAL FISTULAS

Solovev A. O. [1, 2]*, *Vorobyev A. A.* [1], *Solovev O. L.* [2], *Soloveva G. A.* [2]

[1] Volgograd State Medical University, Volgograd, Russia;
[2] Joint Stock Medical scientific association «Clinic «Movement», Volgograd, Russia
* alex-sol@list.ru

Key words: *pararectal fistula, sclerotherapy with ultrasound influence, ultrasound cavitations*

Background. Anal fistulas are one of the most widespread colon diseases, their frequency is from 15 to 30%, their treatment is very difficult and actual problem. Now there are a lot of non-invasive methods of treatment of this pathology, therefore an algorithm of objective assessment of results is needed.

Aim. To study possibilities of MRI in theobjective assessment of new non-invasive method of treatment of complex anal fistulas.

Material and Methods. We selected the patient with extra-sphincter recurrent anal fistula, which was treated by the new non-invasive method — sclerotherapy with ultrasound influence. We used MRI for the objective assessment of results of healing.

Results and Discussion. The reason of anal fistula's recurrence was identified due to MRI. We found retro-rectal cavity and used the new method of sclerotherapy with ultrasound influence. MRI was performed again after 1 month and the positive dynamic was registered. The sclerotherapy