

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<sub>1</sub> 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<sub>1</sub> by the 10<sup>th</sup> 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.<sup>1, 2\*</sup>, Vorobyev A. A.<sup>1</sup>, Solovev O. L.<sup>2</sup>, Soloveva G. A.<sup>2</sup>

<sup>1</sup> Volgograd State Medical University, Volgograd, Russia;

<sup>2</sup> 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.<sup>1, 2\*</sup>, Vorobyev A. A.<sup>1</sup>, Solovev O. L.<sup>2</sup>, Soloveva G. A.<sup>2</sup>

<sup>1</sup> Volgograd State Medical University, Volgograd, Russia;

<sup>2</sup> 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 the objective 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

of fistula was repeated like a second step of treatment. The patient underwent MRI within 1 year after the first assessment and the process of healing was indicated. On the MRI series the fibrosis and reducing of inflammation was detected. In other group of patients with complex anal fistulas we have good results of using of new non-invasive method. Recovery rate was 85.94% (55 patients), recurrence rate was 12,5% (8 patients). Only 14,06% (9 patients) were operated, but we noted during operations that inflammation of soft tissues was less after the sclerotherapy with ultrasound influence.

**Conclusions.** MRI is an effective and informative method for objective assessment of new non-invasive method of treatment of complex anal fistulas.

#### LONG-TERM RESULTS OF THE APPLICATION OF THE ORIGINAL METHOD OF SPHINCTER-LEVATORPLASTY IN THE TREATMENT OF RECTOCELE

Solovev A. O.<sup>1, 2\*</sup>, Vorobyev A. A.<sup>1</sup>, Solovev O. L.<sup>2</sup>, Soloveva G. A.<sup>2</sup>, Akinina O. A.<sup>2</sup>

<sup>1</sup> Volgograd State Medical University, Volgograd, Russia;

<sup>2</sup> Joint Stock Medical scientific association «Clinic «Movement», Volgograd, Russia

\* alex-sol@list.ru

**Key words:** rectocele, sphincter-levatorplasty, anatomy of pelvic floor, pelvic prolapse

**Background.** A lot of methods for surgical correction of rectocele are presenting today, but a high percentage of unsatisfactory results doesn't decrease. This is due to the desire for reliable tissue closure, which leads to ischemia, necrosis and unsatisfactory results.

**Aim.** To evaluate the long-term results of the using the original method of sphincter-levatorplasty in the treatment of rectocele.

**Material and Methods.** We analyzed the long-term results of surgical treatment of 134 women suffering from rectocele, who were treated by the new method of sphincter-levatorplasty. Follow-up period was 24 months. The effectiveness of surgical treatment was assessed in a comprehensive manner using questionnaires, clinical examination data and instrumental methods.

**Results and Discussion.** The results of treatment were assessed by anatomical and functional criterions — absence of relapse clinically at examination, influence of treatment on the quality of defecation and manifestation of dyspareunia. The postoperative period (6–24 months) was actively tracked in all patients. While 83 (61.9%) patients were examined, the rest of the patients did not come to the examination, assessing their condition as good. A good

and satisfactory functional result was obtained in 127 (94.7±1.9%) patients. Relapse of rectocele was detected in 7 women, which was 8.4±3.0% of the number of patients who agreed to undergo an examination in the long-term period.

**Conclusions.** The results of surgical treatment of patients with rectocele by using the original technique of sphincter-levatorplasty showed the effectiveness of the method in the long-term period.

#### THE DEPENDENCE OF THE ABNORMALITIES OF SPERMATOGENESIS ON THE TIMING OF RADIATION THERAPY

Solovyeva A. M., Kaitova Z. S., Kulchenko N. G.

Peoples' Friendship University of Russia, Moscow, Russia  
say.asya98@gmail.com

**Key words:** infertility, radiotherapy, pathospermia, cryoconservation, cell transplantation

**Background.** The use of modern methods of anti-cancer therapy leads to an increase in the life expectancy of patients

**Aim.** Analysis of the severity of spermatogenesis disorders depending on the timing of radiation therapy.

**Material and Methods.** A retrospective analysis of spermograms of patients (n=45) who received radiation therapy up to 2 Gr was carried out. All patients underwent standard laboratory methods (General blood and urine tests, blood biochemistry). Spermogram was performed in dynamics according to WHO standards (2010) in 3, 6, 9, 12, 24 months after radiation therapy. As part of the art program, 9 (20%) patients underwent testicular biopsy (micro TESE) followed by morphological examination of testicular tissue.

**Results and Discussion.** All patients (n=45) were aged 23±4.8 years. So they were men of reproductive age. Clinical data of the underlying disease (testicular cancer) we evaluated retrospectively. Stages of the disease were distributed as follows: stage T1 — in 13 (28.8%) patients, T2 — in 20 (44.4%), T3 — in 11 (24.4%), T4 — in 1 (2.2%) patients with histological examination, the following forms were established: seminoma (benign neoplasm) in 24 (53.3%) patients; non-hemic tumors in the first group in 21 (46.7%). The most pronounced changes in the spermogram (sperm concentration, total sperm count) are observed during 3–9 months after radiation therapy.

**Conclusions.** Patients after radiotherapy of oncological diseases it is necessary to appoint a drug therapy to restore spermatogenesis for min 6–9 months. Preliminary cryopreservation of sperm is required before radiation therapy in men of reproductive age.