❖ Neurosurgery in gynecology.

Professor A.S. Slepykh proposed a number of new methods of neurosurgical operations on the organs of the female reproductive system, such as radical resection of the upper submandibular plexus [2].

❖ Infertility.

The issues of treatment of tubal infertility are being raised. During plastic surgery on the fallopian tubes, the professor suggests using tubes made of heterogeneous peritoneum, which pursues the following goals: creating a frame to hold the operated organ in a position close to physiological, and stimulating regenerative processes in the damaged area [2].

A.S. Slepykh died in a car accident on April 16, 1984 at the age of 60. He was buried at the Bolsheokhtinsky Cemetery in St. Petersburg [3].

Alexey Semyonovich Slepykh made an invaluable contribution to the development of gynecology. His works are still professionally recognized today.

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Nutritive correction after extensive combined intestinal resection

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Abstract

The purpose is the tactics of nutritional rehabilitation after extensive intestinal resection. The metabolic characteristics of the short intestine syndrome and the consequences of combined fine-binding resections, as well as the adaptive and regenerative possibilities of the intestine. The optimal scheme of nutritional correction is given in consequences of intestinal combined resection.

Keywords: nutritional rehabilitation, tünduglutide, intestinal resection.

To stimulate adaptive regenerative processes in the intestine, it is advisable to use tünduglutide (analog GLP-2), surgical rehabilitation can be recommended for ineffectiveness.

The urgency of the subject is associated with epidemiological, etiopathogenetic, regenerative reasons. Epidemiological reasons indicate that the current level of development of surgery, anesthesiology-resuscitation and nutritiology ensures the survival of patients even with the minimum residual intestinal culture after resection. However, the metabolic correction of the effects of such operations requires efforts due to loss of body weight, a decrease in the concentration of albumin of blood plasma less than 30g/l, electrolyte disorders, organ failure, etc. The consequences

are distinguished in the form of a short small intestine syndrome (SBS), postcolectomic syndrome (PCES) and the consequences of combined fine-thick-current resection. According to the UK, the frequency of SBS is 2 cases per 1 million inhabitants per year. In Spain, the SBS meets with a frequency of 1.8 per 1 million people, in Germany - 2-3 per 100,000 population [1].

With the growth of oncological pathology in the world and its treatment increases the number of patients with a shot gut. Indications are expanding to the intestinal resection with heavy inflammatory bowel diseases. The need for semen resection after 5 years of the existence of Crown disease is 40% of cases, after 10 years - 70%, after 20 years - almost 90% [2]. Diffuse family polyposis, the probability of transformation of which is 100%, is also subject to surgical treatment, and it is often extensive intestine-colorectal resection [3].

The goal of the work is: - to raise the problem of an objective analysis of the effectiveness of nutritional treatment programs at a shortened intestine and characterize the paths of metabolic correction with it. These etiopathogenetic causes of the relevance of the study of metabolic status in the SBS are important to select the components of the nutritional correction. So, in the case of removal of the entire duodenum in the body, an insufficient amount of iron, calcium, magnesium, folic acid, fat-soluble vitamins (A, D, E, K), is enabled, since these nutrients are absorbed mainly in the duodenum and initial departments of the small intestine. When the iliac part is removed, the absorption of bile acids and vitamin B12 is disturbed. If the mucous membrane is inflamed or removed, then the salts of bile acids penetrate into the colon and stand out with a caliac masses, the fat is worse, steatheree appears, a loss the bile acids necessary to absorb fats and fat-soluble vitamins.

When involved in the process of the colon, the microbiotic components of the processing of the diet are disturbed, which is reflected on the enterogepatic circulation. Special attention to choosing nutritional tactics deserve adaptive and regenerative capabilities of the intestine itself. Of the existing types of regeneration (physiological, reparative, pathological), its reparative cellular form is the greatest interest after resection of the intestine.

Material and methods. Patients with a combined extensive resection of the small intestine and right-hand hemicolectomy (42 men and 46 women) are examined. Patients examined with the adhesive intestinal obstruction, mesenteric thrombosis, intestinal polyposis, gut cancer, Crown disease, traumatic illness. All patients described metabolic shifts, nutritional status, some adaptive reparative reactions that are increasing under the influence of nutritional correction.

To assess the nutritional status, used the parameters of the well-known Alimentary-volemic diagnosis [4], the assessment of metabolic shifts was also carried out in plasma indicators (general protein, albumin, electrolytes) and bioimpedancemetry of body composition, reparative processes were confirmed by morphological data and the results of the definition of Cathepsin L (product involved in the lysosomal oxidation, intracellular marker of metabolism) in serum using the ELISA (enzyme immunoassay analysis). For literary data, a comparative analysis method was applied. Statistical processing was performed by the Statistica-10 program.

Results and discussion.

Due to SBS, patients in the remaining intestine develop processes aimed at restoring functions and correction of metabolic disorders. Metabolic disorders, nutritional changes and shifts of adaptive reparative processes occurred. Attempting the body to restore lost functions is based on adaptation mechanisms and partly cell regeneration, as well as on the restoration of electrical activity.

It is known that the electromotor activity of the intestine determines its digestive and absorption processes [5-6]. However, it was not enough information about the electrical impulse after the gut resection through the anastomosis zone. Upon registering of electrical activity in this zone, it was noted that the electric wave from the departments underlying the rescue site, as if "jumps" to the departments below the anastomosis, without changing their amplitude-frequency characteristics (Table 1).

Table 1

The amplitude-frequency characteristics of the intestinal activity after extensive resection of the small intestine

Organ	Slow Waves			Spacious Activity			Pass-Sivic Activity
	Frequen-cy / min	Ampli-tude MV	Tonic Redu-Social Power	Frequency / min	amplitude MV	Power of phase contrac-tions	
<i>The intes-tine is above the cutting of</i>	19,3±0,6	0,15±0,008	2,895±0,18	4,3±0,2	0,04±0,002	0,172±0,02	16,5±0,9
<i>The intes-tine is below the cutken</i>	20,0±0,5	0,12±0,003	2,4±0,13	3,3±0,2	0,03±0,005	0,099±0,003	24±1,5
<i>p</i>	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	< 0.05

This is due to the presence of rhythm's own drivers in the intestines and therefore ensures the conditions necessary to restore suction processes in the available limits, which, nevertheless, are oppressed due to the lack of the estate of the intestine and depending on the preservation of rhythm drivers. Upon admission of himus directly into the underlying departments, following the remote segment and experiencing therefore increased digestive and transport load, adaptive restructuring of epitheliocytes are developed (confirmed by morphologically). In addition, in the area of the anastomosis at a distance of about 3-4 cm in both directions from the post-tech seam, the processes of cell regeneration are possible, additionally stimulating suction in these areas. In this regard, 65-90% of patients in the remote period (depending on the volume and level of resection) there is some restoration of epitheliocytes and their functions. In terms of year to year to 2 years, transient dyspeptic disorders could be observed, a decrease in disability, metabolic complications, and in terms of more than 2 years, are minor morphologically confirmed adaptations, mass stabilization. These symptoms correlated positive dynamics for metabolic status is associated with adaptive and regenerative capabilities of organs limiting the assimilation, their tendency to normalize functional and morphological status due to incl. cell regenerator processes Tabl.2).

Table 2

Clinical and laboratory parameters in patients in different periods after combined intestinal resection (M ± m)

№/ №	clinical manifestaions	Combined seed resection			
		Less of 4m bowel + Right-sided hemi-colectomy (RSH) (n=66)		More than 4m bowel + Right-sided hemi-colectomy(RSH) (n=26)	
		Less of 2 years (n=22)%	More than 2 years (n=44) %	Less of 2 years (n=20)%	More than 2 years (n=6) %
1.	<u>Pain in various abdomen departments</u>	36,6±7,0	13,6±5,0	10,0±7,0	16,7±15,0
2.	<u>Bloating and rumbling in the abdomen</u>	40,9±11,0	59,1±7,0	50,0±11,0	66,7±19,0
3.	<u>Polyvitamin and mineral failure:</u>	14,0±5,5	16,6±7,2	23,8±8,3	41,7±5,4
4.	<u>Diarrhea:</u>	47,4±3,6	25,0±6,0	28,3±4,0	41,7±12,0
5.	<u>constipation</u>	4,5±4,0	-	5,0±5,0	-

6.	<i>Отеку: Edema:</i>	4,5±4,0	4,5±3,0	5,0±5,0	13,9±1,8
7.	<i>Appreciation of ability to work</i>	50,1 ±4,7	50,2±7,3	50,0 ±9,8	50,1 ±13,0
8.	<i>Reducing body weight over the past year</i>	18,1± 8,0	4,5±3,0	32,5 ±8,2	-
9.	<i>Disps phenomena</i>	10,2± 3,5	25,8±6,3	25,0 ±1,2	16,7 ±5,3

* $p < 0.05$ ($p = 0.007$), ** $p < 0.05$ ($p = 0.039$), *** $p < 0.05$ ($p = 0.021$), ^ $p < 0.05$ ($p = 0.004$)

In other limiting digestion and nutritional status of the organs (liver, pancreas, biliary tract) also identified a number of dysfunctional shifts, pronounced immediately after extensive intestinal resection and persistent up to 1.5-2 years with a gradual trend towards normalization. In patients who have undergone combined resection of the intestine (less than 4m small intestine and right-sided hemicolectomy) in the relatively early adaptation time after surgery (up to 2 years), mostly prevailed: diffuse changes in the liver and pancreas, cholelithiasis was rarely quite rare (in 4, 5% of cases), in a later dates after surgery (more than 2 years) there was a pronounced tendency to an increase in gallstone and urolithiasis. The described changes in the functions of organs limiting the absorption of nutrients also were confirmed under laboratory studies. Clinical and biochemical blood parameters were comparable to integral characteristics reflecting nutritional status. So, in the nutritional correction in a group with resection of less than 4 meters and right-hand hemicultomy in terms of less than 2 years after surgery, 41% of patients needed (on the NRS -2002 scale), and in a later period (over 2 years), - only 7%, What is due to the adaptation mechanisms of the digestive system (Fig. 2).

Figure 2. Distribution of patients depending on the need for the appointment (need) of nutritional support in different times passed after the intestinal resection (with a removal of less than 4 meters of the small intestine +(RSH) and more than 4 meters of the small intestine + RSH)

Based on the data and analysis of traditional SBS-SYNDROME treatment algorithms with intestinal insufficiency, we proposed modified schemes, taking into account the degree of intestinal insufficiency and a functional reserve limiting the absorption of organs. They included: **a)** parenteral correction of protein-energy homeostasis, taking into account the liver functional reserve -FR (aminosteril-hep + omegaven + glucose 10%), kidney FR (aminosteril-nephro + omegaven + glucose 10%); with a stored or partially saved liver fed -Smofkabiven or cabiwen, **b)** amplifiers: omega-3, arginine, glutamine, according to readings – extracorporeal detoxication, c) additional use of pharmaconutrients in the alimentation structure, incl. wide repertoire of pharmaconutrients, cytokines, peptides, as well as extracellular vesicles. For the characteristics of intracellular markers of metabolism, the products involved in the lysosomal oxidation were determined.

After combined treatment under the cover of the nutritional correction, the Cathepsin L-specific Cathepsin L in 69% of cases corresponded to the target values, in 25% there was a downward trend, and 6% remained elevated. With normal or reduced Cathepsin L after treatment, the stabilization of the nutritive status was noted. Patients with an increased content of Cathepsin L at 86% had an unfavorable forecast [7].

In the case of bioimpedansometry of the body composition, the growth of general and extracellular water, active body weight, phase angle, spoke about the correlation of Cathepsin L with the metabolic activity of lysosomes, followed by the collapse of cellular components and a decrease in protein synthesis. Cathepsin L turned out to be a prognostifier of negative rehabilitation processes, which seems to determine the indications for the stimulation of intracellular regeneration, in particular, the drugs of enteroglucagon-2 (teduglutide). According to the literature data, it contributes to the restoration of the intestinal mucosa (vie intestine, providing suction) and is involved in the regulation of energy production [8-10]. However, regenerative and adaptive processes in the transplant until now continue to be studied. In addition, the 3D seal of the intestine, which is available in a number of the clinics of the world (for example, in Cornell University), makes it possible to understand how cells are developing under the influence of fluid and food movement, which is very important when evaluating the possibilities of drugs that stimulate regenerative and adaptive processes in particular, Teduglutide. Elements of cell regeneration make it possible to improve the condition of the body during its adaptation period to new anatomical conditions. If it is impossible to maintain homeostasis conservative way, it is recommended to resort to an attempt to operational correction. The restoration of the lost part of the intestine is possible and by transplantation [11]. In world practice, the question of both the transplantation of the artificial body is solved (scientists have already tried to print the intestines in 3D printer). STEPs are also used, the operation of the Bianchi, less often - antiperistaltic anastomoses, etc. [12].

Conclusion

To select the optimal algorithm for nutritional correction, it is advisable to use AVD as the most fully reflective method of assessing metabolic disorders after extensive intestinal resection of various levels and volume. At the same time, the algorithm of an individual optimized program must be chosen, taking into account the intestinal insufficiency, the severity of the state and functional reserve of the organs, using Teduglutide in the cases shown.

Conclusions. 1. After intestine-colorectal resection we observed a relatively long process of structural and functional adaptation. Structural adaptation affects all the layers of the intestinal wall and implies the proliferation of cells in the composition of the crypt, an increase in the height of the viles, the ratio of the crypt length to the length of the villus, the area of the suction surface and the mass of the mucous membrane, as well as the increase in the lumen diameter and the thickening of the intestine walls. Intracellular adaptive regenerative capabilities based on lysosomal mechanisms are also manifested. 2. The process of adaptation begins almost immediately after the extensive rectification of the intestines and can last for more than 2 years.

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Optimization of diagnosis of breast cancer and metastatic lymphonic diseases

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Abstract

The survey data of 115 patients with breast cancer and metastatic lymph node lesions were used. The main group included 14 (20.0%) patients of relatively young age (30-40 years), 29 (41.4%) of average age (40-50 years), 26 (37.1%) of elderly age (50-60 years) and 1 (1.4%) patient older than 60 years. The main group included, respectively, 5 (11.1%) young patients, 18 (40.0%) – middle-aged, 23 (46.7%) – elderly, 1 (2.2%) patient older than 60 years. The control group included 30 premenopausal patients, the remaining 40 were postmenopausal. In the main group of premenopausal patients there were 12 and 33 postmenopausal patients.

The results of the survey of patients with the QLQ-B23 questionnaire adopted by the EORTC (European Organization for Research and Treatment of Cancer) were obtained. There was no significant difference between the groups in the domains of the questionnaire "Assessment of future prospects" ($p=0.003$). At the same time, in the main group, compared with the control group, there were significantly significant and high results according to the "Side effects of systemic therapy" scale (22.9 ± 1.20 points and 16.1 ± 0.82 points, $p=0.001$). Patients with diagnosed breast cancer without metastatic lymph node lesions had significantly fewer complaints according to the profile "Side effects from the hand" (14.3 ± 0.82 points, versus 30.6 ± 1.91 , in patients with metastatic lymph nodes, $p=0.001$).

The positive dynamics in the picture of the patients' state of health and higher scores of the questionnaires in the control group were revealed. Patients in the main group noted an increase in indicators such as a deterioration in emotional status and a higher level of anxiety.

Patients with metastatic lesions of the lymph nodes on the background of breast cancer have lower self-esteem compared to the control group of patients without lymphastasis due to rejection of the body image, decreased sexual activity.

Keywords: quality of life, breast cancer, lymphastasis, EORTC questionnaire QLQ-BR23.

Аннотация

Были использованы данные анкетирования 115 пациенток, больных раком молочной железы и метастатическими поражениями лимфоузлов. В основную группу было включено 14 (20,0%) пациенток сравнительно молодого возраста (30-40 лет), 29 (41,4%) среднего (40-50 лет), 26 (37,1%) пожилого возраста (50-60 лет) и 1 (1,4%) пациентка старше 60 лет. В основную группу было включено соответственно 5 (11,1%) пациенток молодого возраста, 18 (40,0%) – среднего, 23 (46,7%) – пожилого возраста, 1 (2,2%) пациентка старше 60 лет. В контрольную группу было включено 30 больных в пременопаузе, остальные 40 находились в