

**MODERN METHODS OF SHORT-TERM AND LONG-TERM REHABILITATION OF CHILDREN
WITH CONGENITAL ANOMALIES OF THE DIGESTIVE SYSTEM**

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Research objective: *To study morphological changes of the oral mucosa in various forms of oral lichen planus.*

Materials and methods. *Pathomorphological examination of lesion foci of the buccal mucosa was performed in 62 patients with oral lichen planus with various clinical forms. Biopsy material taken from the ulcerative lesion focus was fixed, processed, and stained according to conventional methodology.*

Conclusion. *Morphological studies of patients with oral lichen planus reveal dysregulation of epithelium and connective tissue in the form of morphofunctional transformations with compensatory proliferation of epitheliocytes, which allows considering this pathology as a local manifestation of an autoimmune reaction.*

Keywords: *congenital malformations of the gastrointestinal tract, rehabilitation, postoperative period, children, nutritional support, physiotherapy, psychological support.*

Цель исследования: *Изучение морфологических изменений слизистой оболочки полости рта при различных формах красной плоской лишая.*

Материалы и методы. *Патоморфологическое исследование из очагов поражения слизистой оболочки щеки выполнено у 62 больных КПЛ СОПР с различными клиническими формами. Биопсийный материал взятый с очага язвенного поражения фиксирован, обработан и окрашен по общепринятой методике*

Заключение. *При морфологических исследованиях больных КПЛ СОПР отмечается дисрегуляция эпителия и соединительной ткани в виде морфофункциональных трансформаций с компенсаторной пролиферацией эпителиоцитов, что позволяет рассматривать данную патологию как местное проявление аутоиммунной реакции.*

Ключевые слова: *врожденные пороки развития желудочно-кишечного тракта, реабилитация, послеоперационный период, дети, нутритивная поддержка, физиотерапия, психологическое сопровождение.*

Tadqiqot maqsadi: *Qizil tekis qotirning turli shakllarida og'iz bo'shlig'i shilliq qavatining morfologik o'zgarishlarini o'rganish.*

Materiallar va usullar. *Turli klinik shakllarga ega bo'lgan 62 nafar qizil tekis qotir kasali bemorlarda yonoq shilliq qavatining zararlanish o'choqlaridan patomorfologik tekshiruv o'tkazildi. Yarali zararlanish o'choqidan olingan biopsiya materiali fiksatsiya qilindi, qayta ishlandi va umumqabul qilingan uslubda bo'yaldi.*

Xulosa. *Qizil tekis qotir kasali bemorlarning morfologik tekshiruvlarida epiteliy va biriktiruvchi to'qimalarning disregulyatsiyasi epiteliotsitlarning kompensator proliferatsiyasi bilan morfofunksional transformatsiyalar ko'rinishida qayd etiladi, bu esa ushbu patologiyani autoimmun reaksiyaning mahalliy namoyon bo'lishi sifatida ko'rib chiqish imkonini beradi.*

Kalit so'zlar: *ovqat hazm qilish tizimining tug'ma rivojlanish nuqsonlari, rehabilitatsiya, operatsiyadan keyingi davr, bolalar, nutritiv yordam, fizioterapiya, psixologik kuzatuv.*

Introduction. Congenital malformations of the gastrointestinal tract (GI tract) occupy one of the leading places in the structure of pediatric surgical pathology and occur with a frequency of 1:300-1:1,500 newborns [1,2]. Despite the improvement of surgical techniques and an increase in the survival rate of children with this pathology, the issues of postoperative rehabilitation remain insufficiently studied [3,4]. Most of the research focuses on surgical correction methods, while the problems of early and long-term rehabilitation, especially in terms of their scientific justification, are considered in fragments.

Numerous studies show that children who have undergone surgery for GI disorders are at high risk of developing functional disorders such as chronic constipation, diarrhea, malabsorption syndrome, and intestinal motility disorders, which significantly affects the quality of life and social adaptation of patients [5,6]. According to Petrov V.A. and co-authors, up to 60% of children after surgical correction of esophageal atresia and up to 45% after operations for anal atresia need long-term rehabilitation [7].

Currently, there is no unified approach to the rehabilitation of children with GI disorders, and standardized protocols have not been developed that take into account the characteristics of various nosological forms, the age of patients, and concomitant pathology. The long-term results of various rehabilitation programs and their impact on the functional state of the digestive system and the quality of life of patients have not been sufficiently studied [8].

In this regard, the development of scientifically based approaches to the short- and long-term rehabilitation of children with GI disorders is an urgent problem of modern pediatric surgery and pediatrics.

Research materials and methods:

The study was conducted on the basis of the Pediatric Surgical Department of Samarkand State Medical University in the period from 2021 to 2024. The study included 120 patients aged 0 to 14 years (average age 4.2 ± 2.1 years) with various congenital malformations of the gastrointestinal tract who underwent surgical correction.

The patients were divided into 3 groups, depending on the complex of rehabilitation measures used:

Group 1 (n=40) - standard rehabilitation complex, including basic physiotherapy and diet therapy;

Group 2 (n=40) - an extended rehabilitation package, which includes, in addition to standard measures, specialized nutritional support and early physical rehabilitation;

Group 3 (n=40) is a comprehensive multidisciplinary rehabilitation program that includes standard and extended activities, as well as specialized physiotherapy procedures, psychological support for the child and family, parent education, and elements of telemedicine monitoring.

The groups were comparable in age, gender, nosological forms of GIT and severity of the condition. All patients were examined using clinical, laboratory and instrumental research methods. The effectiveness of rehabilitation was assessed in the following periods: the early postoperative period (up to 1 month), the medium-term period (3-6 months) and the long-term period (12-24 months).

The following methods were used to assess the functional state of the gastrointestinal tract:

- pH-measurement of the esophagus and stomach;
- manometry of various parts of the gastrointestinal tract;
- coprological research;
- Ultrasound of the abdominal organs;
- Gastrointestinal scintigraphy to assess motor skills.

PedsQL4.0 Generic Core questionnaires adapted for different age groups of patients and their

parents were used to assess the quality of life.

Statistical processing of the results was carried out using the SPSS Statistics 25.0 program. Descriptive statistics methods, Student's *t*-test, criterion χ^2 , and correlation analysis were used. The differences were considered statistically significant at $p < 0.05$.

The results of the study:

An analysis of the results showed that the use of various rehabilitation programs has a significant impact on the restoration of gastrointestinal function and the quality of life of patients in both the immediate and long-term postoperative period.

In the early postoperative period (up to 1 month), the restoration of peristalsis and the possibility of complete enteral nutrition were achieved in group 1 on an average of 8.2 ± 1.4 days, in group 2 - on 6.4 ± 1.2 days, in group 3 - on 5.1 ± 0.9 days ($p < 0.05$ when comparing 1 Groups 2 and 3). The incidence of early postoperative complications (intestinal paresis, infection of the surgical area) was 22.5% in group 1, 15.0% in group 2, and 7.5% in group 3 ($p < 0.05$ when comparing groups 1 and 3).

Assessment of the functional state of the gastrointestinal tract in the medium term (3-6 months) showed that normalization of gastrointestinal motility according to manometry and scintigraphy was observed in 45% of patients in group 1, 62.5% in group 2 and 80% in group 3 ($p < 0.01$ when comparing group 1 and 3-th group). The average weight gain over 6 months was 2.1 ± 0.4 kg in group 1, 2.8 ± 0.3 kg in group 2, and 3.4 ± 0.3 kg in group 3 ($p < 0.05$ for all intergroup comparisons).

In the long-term period (12-24 months), the frequency of functional disorders of the gastrointestinal tract (constipation, diarrhea, malabsorption syndrome) was 55% in group 1, 37.5% in group 2, and 22.5% in group 3 ($p < 0.01$ when comparing groups 1 and 3). The need for repeated hospitalizations over a 24-month period was observed in 42.5% of patients in group 1, 27.5% in group 2, and 12.5% in group 3 ($p < 0.01$ when comparing groups 1 and 3).

Assessment of quality of life using the PedsQL™ questionnaire 4.0 24 months after surgery showed statistically significant differences between the groups. Correlation analysis revealed a strong positive relationship between the indicators of normalization of gastrointestinal motility and the quality of life of patients ($r = 0.78$, $p < 0.01$). It has also been established that the following factors have the greatest impact on the effectiveness of rehabilitation:

1. Early initiation of rehabilitation measures (in the first 3-5 days after surgery);
2. A comprehensive multidisciplinary approach involving a surgeon, pediatrician, gastroenterologist, nutritionist, physiotherapist and psychologist;
3. Individualization of the rehabilitation program, taking into account the type of GI tract injury, the age of the child and concomitant pathology;
4. Active involvement of parents in the rehabilitation process;
5. Long-term dynamic monitoring and timely correction of the rehabilitation program.

Based on the data obtained, an algorithm for individualized rehabilitation of children with GI disorders has been developed, including 4 stages:

1. Early postoperative stage (before discharge from the hospital);
2. Outpatient stage (the first 3 months after discharge);
3. Sanatorium-resort stage (3-12 months after surgery);
4. The stage of long-term follow-up and supportive rehabilitation (more than 12 months).

This algorithm has been implemented in the practice of the pediatric surgical department and has shown high effectiveness in the rehabilitation of children with various forms of gastrointestinal disorders.

Conclusions:

1. Rehabilitation of children with congenital malformations of the gastrointestinal tract

requires a comprehensive multidisciplinary approach covering both the immediate and long-term postoperative periods.

2. The use of a comprehensive multidisciplinary rehabilitation program can significantly improve the functional outcomes and quality of life of patients compared to standard rehabilitation measures.

3. Early physical activation, specialized nutritional support, physiotherapy procedures and psychological support are key components of effective rehabilitation of children with GI disorders.

4. Individualization of the rehabilitation program, taking into account the type of GI tract infection, the age of the child and concomitant pathology, allows optimizing treatment results and reducing the frequency of long-term functional disorders.

5. The active involvement of parents in the rehabilitation process and their training in the necessary skills of caring for a child with GI disorders is an important factor in successful long-term rehabilitation.

6. The developed algorithm of individualized rehabilitation of children with GI disorders can be recommended for implementation in clinical practice of pediatric surgical hospitals and rehabilitation centers.

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