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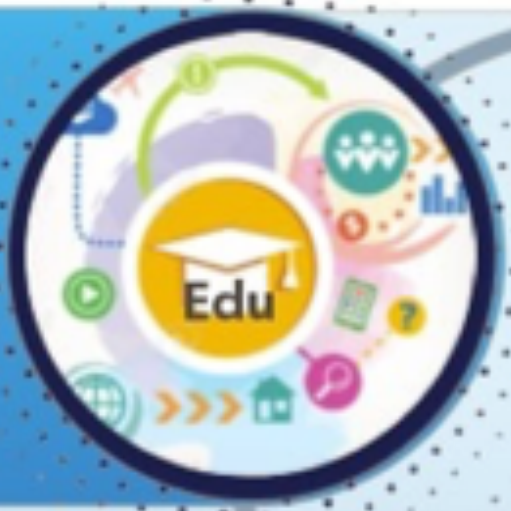

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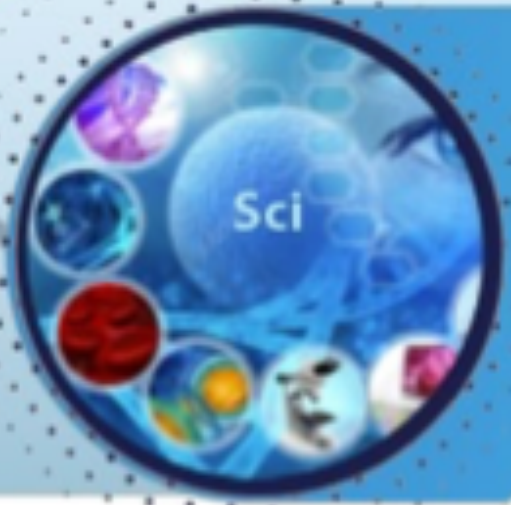

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Prognostication of Changes in the Quality of Life of Patients with Ulcerative Colitis

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ABSTRACT

Ulcerative colitis is the main form of inflammatory bowel disease. The exact cause of ulcerative colitis is unknown. However, genetically susceptible individuals appear to have an unregulated mucosal immune response to commensal intestinal flora, leading to inflammation. Inflammation in ulcerative colitis, as a rule, is limited to the surface of the mucous membrane. The disease begins in the rectum and usually spreads proximally continuously through the entire colon. However, some patients with proctitis or left-sided colitis may have cecum inflammation. The spread of the disease is stratified by the degree of colon involvement, from proctitis to left-sided colitis or extensive colitis or pancolitis. This scientific article is devoted to the possibility of predicting the severity of the course of ulcerative colitis by the indicators of the quality of life of patients.

Keywords: *ulcerative colitis, complications, prognosis*

INTRODUCTION

Among the spectrum of abdominal surgical pathology, ulcerative colitis is still one of the least studied diseases. According to available information, the prevalence of the disease in different geographical zones ranges from 5.3 to 505 per 100,000 population, and the incidence exceeds 20–28 people per 100,000 population. Currently, there are more than 4 million patients with ulcerative colitis worldwide. And every year, the identified trend becomes more and more stable [1].

It should be noted that quite a lot of attention is paid to this pathology. However, the recent introduction of new drugs into clinical practice has not had a significant impact on the results of treatment [2].

The frequency of disability in patients of working age exceeds 40%, and the level of postoperative mortality, according to the most conservative estimates, is more than 17%. The causes of the disease are associated not

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only with the insufficient effectiveness of therapeutic measures but also with the complexity of the pathogenesis of this disease. According to modern ideas, hereditary factors are of great importance in the development of ulcerative colitis [3].

There is evidence of the involvement and, to some extent, clinical significance of the frequency of gene polymorphism in various variants of the course of this pathology. However, the results of these studies, as a rule, are very uncertain and often contradictory. The degree of their evidence is often questioned. Their implementation will undoubtedly contribute to the improvement of a personalised approach to the treatment of this group of patients [4].

Questions regarding the scope of surgical aid, its frequency and optimality also remain unresolved. The results of surgical and conservative treatment of ulcerative colitis are very uncertain, especially in the remote period of the disease. As for predicting the course of the pathological process, it should be recognised that there are still practically no objective criteria in this regard. Ultimately, this does not allow timely preventive therapy, avoid recurrence of the disease and, as a rule, lead to a decrease in the quality of life of patients [5].

All this indicates the relevance and prospects of research in this direction, both in the therapeutic and preventive aspects. The above points were the starting point for this study.

Taking into account the above points, the problem of ulcerative colitis cannot be considered solved. In most cases, the diagnosis of this disease is made, as a rule, in a few days and sometimes weeks from the moment the first signs appear [6].

First of all, this is due to the variability of clinical manifestations in the acute stage of ulcerative colitis. Their informational significance cannot be considered exhausted, especially depending on the extent of the inflammatory process in the large intestine. The noted points are directly related to the high frequency of disability in this contingent of patients. Further research in this direction is very promising both in terms of improving diagnostics and the optimality of therapeutic tactics. Improving the results of treatment of patients with ulcerative colitis is associated not only with the improvement of therapeutic measures but also with the prognosis of the course of this pathology. This makes it possible to carry out a preventive pathogenetic theory and significantly improve the quality of life of patients. However, clinical criteria in this direction are currently not sufficiently defined. One of them can be genetic testing since the hereditary factor in the development of ulcerative colitis is beyond doubt. All this indicates the insufficient development of this problem and the need for further research in this field of surgery.

MATERIAL AND METHODS

The work was based on clinical observations and specially conducted studies in 144 patients with ulcerative colitis who were hospitalised in the colo-proctology, gastroenterological and surgical departments of clinics in Tashkent in the period from 2001 to 2020.

The diagnosis of ulcerative colitis was made based on a comprehensive assessment of clinical manifestations, ultrasound data, colonoscopy, laparoscopy, surgical manual, and morphological studies, as well as taking into account the monitoring of the course of the disease by a gastroenterologist and surgeon after discharge of patients from the hospital. At the same time, existing clinical guidelines were taken into account. Among the surveyed were 67 women (46.5%) and 77 men (53.5%). The age of the patients ranged from 14 to 87 years and averaged 45 years.

The highest incidence of the disease occurred at the age of 31 to 60 years (91 patients, 63.1%). In the older age group (age over 60 years), clinical manifestations were observed in only 24 patients (16.8%). In more than 20% of cases, the disease developed in young patients. In the overwhelming majority of cases, the duration of the disease did not exceed 5 years (61.8%). The duration of the disease up to 10 years was detected in 16.7%, up to 20 years in 17.4%, and more than 20 years in only 4.2% of cases. It should be noted that in more than 20% of cases, the disease developed in patients under 30 years of age.

Depending on the severity of the disease, mild severity was observed in 27.8%, moderate in 43.1% and severe severity in 29.2% of cases. The acute course of the disease occurred in 31.9%, chronic continuous in 36.8% and chronic relapsing in 31.25% of cases. When assessing the activity of the disease according to the Schroeder (1987) endoscopic classification, the minimum activity was found in 31.45%, moderate in 37.1% and expressed in 31.45% of cases. According to the localisation of the pathological process, predominant lesions of the rectum were observed only in 10 (7%), the left half in 31 (21.5%) patients, and total lesions of the colon in 103 (71.5%) patients. All patients underwent conservative treatment by clinical guidelines, as well as taking into account the severity of the ulcerative colitis attack. Only

conservative treatment was carried out in 76 patients aged 19 to 83 years. In this group, there were 39 men and 37 women.

The duration of the disease ranged from 10 days to 30 years. Mild ulcerative colitis was observed in 37.9%, moderate - in 50.6%, and severe - in 11.5% of cases. The acute course of the disease was detected in 17.2%, chronic continuous - in 38% and chronic relapsing - in 44.8% of cases. The pronounced activity of the disease was established only in 13.3% of patients. Conservative treatment was carried out in the specialised department by a gastroenterologist, if necessary, together with a surgeon.

Surgical treatment was performed in 68 patients or 47.2% of all examined patients. In this group, there were 36 men and 32 women. The ages of the patients ranged from 14 to 87 years. Patients over 40 years of age predominated.

In the surgical treatment group, pronounced activity (65.9%), severe severity of attack (58.8%) of the disease against the background of acute course (38.2%) and total lesion (72.1%) dominated.

Indications for surgery were ineffectiveness of conservative therapy (hormonal resistance, ineffectiveness of biological therapy) – 30.5%, intestinal complications of ulcerative colitis (toxic dilatation, intestinal perforation, intestinal bleeding, stenosis of the lumen of the large intestine) – 66.2%, as well as colon cancer or high risk of its occurrence – 3.3%. The extent of the surgical intervention was determined by the extent of the inflammatory process and was reduced to the removal of the affected colon.

Completion of surgical support with the application of primary anastomosis was performed in 8 (11.7%) patients: after colon resection — 5 (7.3%), colproctectomy — 2 (2.9%), subtotal colectomy — 1 (1.4%). In 41 (60.2%) patients, operations ended with the placement of an ileostomy, according to Brook: after subtotal colectomy — 7 (10.2%), colectomy — 13 (19.1%), colproctectomy — 21 (30.8%). Ileostomy reconstruction for stenosis was performed in 5.8% of cases. In 3 patients, the postoperative period was complicated by the development of peritonitis due to perforation of the small intestine. A complication from the wound in the form of suppuration occurred in 2.9% of cases. Lethal outcomes were observed in 19 patients (27.9%) and were mainly associated with progressive baseline multiple organ failure. In patients with a fatal outcome, the acute course of the disease and total lesions of the colon prevailed in 13 (27.1%) patients and 12 (30%) patients with severe attack. In these cases, the mortality rate reached 50%. The level of postoperative mortality was determined not only by the variants of the course of ulcerative colitis but also by the extent of the operation. In particular, high mortality rates prevailed in colproctectomy against the background of pronounced endoscopic activity and severe attack of the disease (28.6% and 23.8%, respectively). In the acute course of the disease, the maximum mortality rates were observed after colproctectomy and hemicolectomy (23.8% and 40%, respectively). The data presented should be considered as a starting point for choosing the volume of the operation and the optimal period of its implementation.

The research methods were aimed primarily at identifying disorders of the vital functions of the body. Homeostasis disorders were assessed by central hemodynamics, peripheral blood parameters, and variational pulsometry. The control group consisted of 40 people without concomitant somatic pathology. Upon admission and examination, all patients underwent abdominal ultrasound, and in 88.8% of cases, a diagnostic video colonoscopy was performed. If acute intestinal obstruction and perforation of the hollow organ were suspected, a radiopaque examination of the abdominal cavity was performed (65%). At the same time, stenosis of the colon of various localisation and extent was detected in 8 (6.25%) patients, and colorectal cancer was suspected in 6 (4.7%) patients. Ultrasound thickening of the colonic wall averaged 7,833±2,194 mm. Patients' quality of life was assessed using the SF-36 Health Status Questionnaire. Morphological studies of the resected colon were performed in 24 patients.

To assess the metabolism of connective tissue, the concentration of free hydroxyproline in blood plasma was determined in 21 patients with ulcerative colitis. The monitoring group consisted of 10 donors.

Data processing was carried out using Microsoft Excel 2016, STATISTICA 8.0. Of the parametric methods, the Student's t-test and the method of analysis of variance for dependent and independent samples were used. Of the methods of nonparametric statistics, the Mann-Whitney pair test was used, and the Kruskal-Wallis test was used to compare more than two independent samples. When estimating non-numerical values, the Fisher test and the χ test were used. The difference at $p<0.05$ was considered significant.

RESULTS AND DISCUSSION

The spectrum of clinical manifestations in ulcerative colitis is very diverse. The leading clinical symptom is diarrhoea, which is detected in 81% of all patients. The next most common

sign is blood in the stool, which appears against the background of diarrhoea in more than 69% of cases. The frequency of diarrhoea during the day can reach 8-10 times.

The appearance of persistent diarrhoea against the background of melena can largely be qualified as an early manifestation of non-specific ulcerative colitis with all the ensuing consequences.

Against this background, 57% of patients develop weakness malaise, and in 58% of cases, abdominal pain appears. It should be noted that the incidence of fever is relatively low (23.6%), as is nausea and vomiting (9.9%). A very important clinical symptom is weight loss (14.8%), apparently as a result of long-term stool dysfunction. During this period of the disease, the activity of the ulcer process is obvious, and a set of therapeutic measures is in great demand.

In the group of patients who subsequently required surgical treatment, the frequency of diarrhoea increased by 11%, melena by 17%, fever by 30.4%, and nausea and vomiting by more than 3 times. At the same time, the frequency of pain syndrome and weight loss did not undergo significant changes. Depending on gender, it should be noted that in women, the frequency of pain syndrome (by 23%) and dyspeptic disorders (by 2 times) increases against the background of a decrease in the frequency of diarrhoea (by 9%).

Depending on the severity of the attack of ulcerative colitis, there is a clear pattern of an increase in the frequency of symptoms with the progression of the inflammatory process. In particular, the frequency of pain syndrome in a severe attack of ulcerative colitis increases by 6.1% compared to moderate colitis, nausea and vomiting by 3 times, fever by 3.2 times, diarrhoea by 11.5%, melena by 25.6%, weakness and malaise by 1.5 times and weight loss by 49%. A similar trend can be traced to an increase in the endoscopic activity of the disease. This is most significantly manifested by fever, weight loss and dyspeptic disorders. The degree of increase in these indicators with pronounced activity in comparison with moderate activity increases by 5.7 times, 2.7 times and 7.5 times, respectively.

The frequency of symptoms in ulcerative colitis acquires a certain clinical significance depending on the extent of the inflammatory process and its localisation in the colon.

With lesions of the rectum only, diarrhoea occurs in all cases, and melena manifests itself in half of the patients. When the left flank of the colon is involved in the process, the incidence of diarrhoea decreases to 83%. However, melena develops in more than 75% of patients and pain syndrome in 72.5% of cases. In total lesions of the large intestine, no significant changes in the frequency can be traced, but it should be noted that the incidence of fever up to 27.8% and dyspeptic disorders up to 13% increases.

Changes in the general blood spectrum manifested themselves mainly with the progression of the disease. In the severe course of the disease, compared to mild severity, the level of haemoglobin decreased by 26.5% ($p<0.05$), total protein by 26.1%, and potassium by 12.8% ($p<0.05$), with the relative stability of chlorides and sodium. It should be noted that the identified disorders developed against the background of the appearance and increase of intoxication. In the general group of patients, the level of the leukocyte index of intoxication averaged 2.335±0.05 conditions. With the progression of the pathological process, its increase is noted by more than 1.5 times ($p<0.05$). When assessing the hemodynamic parameters, the changes were quite significant. The level of systolic volume of the heart increased to an average of 110.1±1.75 ml, the minute volume of the heart to 6603.5±104.96 ml against the background of a decrease in peripheral vascular resistance by more than 3.6 times (568.9±12.27 dynes/s/cm, ($p<0.05$).

At the same time, the gradation of these indicators, depending on the course of the disease and gender differences, was insignificant.

Studies were carried out on 21 patients with ulcerative colitis. It has been established that in ulcerative colitis, there is a decrease in hydroxyproline in blood plasma to 15.9±0.97 μmol/l, or by 11.1% compared to the control. Depending on the course of the disease, significant differences occurred at a moderate severity of 17.0±1.3 μmol/l ($p<0.05$). The data obtained give reason to believe that in nonspecific ulcerative colitis, the activity of collagen biodegradation is insignificant.

An integral indicator of the general condition of patients with ulcerative colitis is, of course, the level of their quality of life. When analysing the quality of life in 80 patients with this disease over 30 years, it was found that the quality of life of patients is determined by the course of the disease, its duration, the nature of therapeutic measures, the age and gender of patients, as well as the localisation of the pathological process.

Depending on the duration of the disease, the indicators tend to decrease with the duration of the disease of 6-10 years and 21-30 years. Physical activity indicators for the duration of the disease from 11 to 20 years are 15.4% higher than for the duration from 6 to 10 years.

Similarly, the levels of role (by 38.6%) and social (by 5.2%) functioning due to physical condition increase. In addition to the physical component of health, the psychological status of patients improves over time. The levels of mental health and emotional state increase by 4.3% and 42.6%, respectively ($p<0.05$), with the duration of the disease from 11 to 20 years.

Physical activity rates with minimal activity are 26.9% higher than with a pronounced degree of activity. In the same way, the level of role (by 49.8%) and social (by 34.7%) functioning due to physical condition decreases. With a decrease in the endoscopic activity of the disease, the psychological status of patients improves over time by 16.8%.

As for the type of treatment performed, the pain intensity index prevailed by 17.2% in patients after surgical treatment.

To improve the results of treatment of ulcerative colitis, it is certainly important to predict the course of the disease [7, 8].

This makes it possible to prescribe preventive therapy promptly and thereby reduce the possibility of recurrence of the disease, and if indications for surgical treatment, to perform surgical assistance in a more favourable period. In this regard, a study was carried out using the methods of multivariate statistics. For this purpose, the method of logistic regression was used. The applied multifactorial system for predicting the effectiveness of the choice of treatment method for ulcerative colitis was based on taking into account such significant predictors as the patient's gender, anamnestic features, endoscopic activity, defecation frequency, coded data on the acuity of the course.

CONCLUSION

Thus, the results of the study showed a significant decrease in the quality of life of patients with ulcerative colitis, both in the immediate and detached periods and a high level of postoperative mortality. Improving treatment for this pathology will certainly be associated with predicting the course of the disease. This will allow you to start preventive therapy promptly and perform surgical assistance in a more optimal period.

Conflict of interest - The author declares no conflict of interest.

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Compliance with patient rights and principles of bioethics: All patients gave written informed consent to participate in the study.

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NOSPETSIFIK YARALI KOLIT BILAN OG'RIGAN BEMORLARNING HAYOT SIFATI O'ZGARISHLARINI BASHORAT QILISH

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ABSTRAKT

Nospetsifik yarali kolit ichak kasalligining yallig'lanish asosiy shaklidir. Nospetsifik yarali kolitning kelib chiqishini aniq sababi noma'lum. Biroq, genetik jihatdan sezgir shaxslar kommensal ichak shilliq qavat florasiga tartibga solinmagan immunitetga ega bo'lib, ichak yallig'lanishiga olib keladi. Nospetsifik yarali kolitidagi yallig'lanish, qoida tariqasida, shilliq qavatning yuzasi bilan chegaralanadi. Kasallik tug'ri ichakda boshlanadi va odatda butun yo'g'on ichak bo'ylab doimiy ravishda tarqaladi. Biroq, proktit yoki chap tomonli kolit bo'lgan ba'zi bemorlarda ko'r ichakning yallig'lanishi ham mumkin. Kasallikning tarqalishi yo'g'on ichakning ishtiroki darajasiga ko'ra, proktitdan chap tomonli kolit yoki tarqoq kolit yoki pankolitga qadar tabaqalanadi. Ushbu ilmiy maqola bemorlarning hayot sifati ko'rsatkichlari bo'yicha nospetsifik yarali kolitning og'irligini bashorat qilish imkoniyatlariga bag'ishlangan.

Kalit so'zlar: nospetsifik yarali kolit, asoratlar, bashorat qilish

ПРОГНОЗИРОВАНИЕ ИЗМЕНЕНИЯ КАЧЕСТВА ЖИЗНИ БОЛЬНЫХ С НЕСПЕЦИФИЧЕСКИМ ЯЗВЕННЫМ КОЛИТОМ

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АБСТРАКТ

Неспецифический язвенный колит является основной формой воспалительных заболеваний кишечника. Точная причина язвенного колита неизвестна. Однако генетически восприимчивые люди, по-видимому, имеют нерегулируемый иммунный ответ слизистой оболочки на комменсальную кишечную флору, что приводит к воспалению кишечника. Воспаление при язвенном колите, как правило, ограничивается поверхностью слизистой оболочки. Заболевание начинается в прямой кишке и, как правило, распространяется проксимально непрерывно через всю толстую кишку. Тем не менее, у некоторых пациентов с проктитом или левосторонним колитом может быть воспаление слепой кишки. Распространение заболевания стратифицировано по степени поражения толстой кишки, от проктита до левостороннего колита или обширного колита или панколита. Данная научная статья посвящена возможностям прогнозирования тяжести течения неспецифического язвенного колита по показателям качества жизни больных.

Ключевые слова: неспецифический язвенный колит, осложнения, прогнозирование