**DOI** 10.29254/2077-4214-2018-1-1-142-163-167

UDC 616.37-002-08:616.89

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# TREATMENT EFFECT ON QUALITY OF LIFE AND PSYCHOEMOTIONAL STATUS IN PATIENTS WITH CHRONIC PANCREATITIS

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**Publication relation to planned scientific research projects.** Presented research work is a fragment of the initiative scientific-research study "Development of algorithms and technologies for implementation of healthy lifestyle in patients with non-infectious diseases based on the psychoemotional status investigation", State Registration No. 0116 U 007798.

**Introduction.** Currently, the tendency for the increase in the incidence of chronic pancreatitis (CP) both in Ukraine and in the world can be observed. Patients with CP constitute a quarter of all patients' visits to gastroenterologists and occupy more than 10% of inpatient hospital beds [20]. Most of the studies provide the analysis of the clinical course of disease and laboratory-instrumental examination data [1,11]. At the same time, the factors that are no less significant for patients, related to their physical and social activity, level of psychological comfort, and degree of psychological protection are highlighted insufficiently [10].

Chronic pancreatitis causes various changes in the psychoemotional sphere of patients: from situational responses to prolonged deep experiences, which can reach the clinical level [7,9]. Disease as a stressful situation in a patient's life activates the system of relevant relationships, the highest regulatory mechanisms, which are in conditions of illness and treatment, on the one hand, in particular ways of experience and evaluation perception, and on the other hand - in the adaptive behavior peculiarities [4,5,15]. Somatic distress, life-threatening complications of disease and disability are basic in the psychological impact of the disease. Somatic distress in CP is caused by the presence of pain syndrome, dyspeptic symptom-complex, restrictive measures (strict diet, alcohol refusal). The disease exacerbation and risk of severe complications form a multilevel layer of intrapsychological existential experiences; the changes in stable lifestyle and disharmonious aspects of personal functioning can be observed

Table

## Assessment of the quality of life in patients with chronic pancreatitis on the background of treatment

Clinical group according to VAS scale		Quality of life according to GSRS questionnaire in points				
		Abdominal pain	Reflux syndrome	Diarrheal syndrome	Dyspeptic syndrome	Obstipation syndrome
Igroup (n=10)	Before treatment	5.9 ± 1.0	10.9 ± 0.9	19.6 ± 1.0	23.6 ± 2.4	8.8 ± 0.6
	After treatment	4.0 ± 0.8	4.2 ± 1.2^^^	7.2 ± 1.2^^^	14.2 ± 1.4^^	6.8 ± 0.8
II group (n=12)	Before treatment	8.9 ± 1.2	9.8 ± 1.0	17.9 ± 1.4	21.4 ± 2.6	10.4 ± 0.8
	After treatment	6.2 ± 1.4	3.4 ± 1.2^^^	6.4 ± 1.0^^^	10.6 ± 1.8^^	8.2 ± 1.2
up (n=10)	Before treatment	12.6 ± 0.8***	10.8 ± 1.2	12.8 ± 1.6***	19.0 ± 1.9	9.8 ± 1.0
	After treatment	8.6 ± 1.2^^	4.6 ± 1.0^^^	5.2 ± 1.0^^^	9.7 ± 1.4^^^	7.2 ± 1.2
IV group (n=10) (n=10)	Before treatment	13.4 ± 0.6***	9.6 ± 0.8	10.9 ± 1.3***	17.6 ± 2.0	10.2 ± 0.9
	After treatment	7.8 ± 1.4^^	3.6 ± 1.2^^^	4.2 ± 1.2^^^	8.5 ± 1.6^^	7.8 ± 1.2

Note: \*\*\* – p <0.001 in comparison with I clinical group

 $<sup>^-</sup>$  p <0.05;  $^-$  p <0.01;  $^-$  p <0.001 in comparison with treatment initiation.

[9]. Emotional state is important not only as a component of mental health, but also as a background for reality perception and maintenance of essential activity and formation of therapeutic cooperation [2,5,9]. Currently, there is a small number of research works regarding the relationship of psychological manifestations with the course peculiarities of CP [7,19].

Prolonged course of CP leads to deterioration in the quality of life (QOL) in patients. Quality of life is an integral indicator that represents a comprehensive assessment of patient's health status based on the combination of objective medical data and subjective assessment of the patient himself. Therefore, this indicator is used to evaluate early and long-term results of treatment [3,6,13].

Thus, the study of QOL and the psychological characteristics of patients with CP remains relevant.

**The aim of the study** is to assess QOL and anxiety level in patients with CP under the treatment effect.

**Object and methods of research.** The study involved 68 CP patients, including 36 women and 32 men. The average age was  $56.9 \pm 7.4$  years, the duration of the disease was  $9.5 \pm 4.9$  years.

The diagnosis of CP was made according to the Order of the Ministry of Health of Ukraine as of 10.09.2014 No. 638 "On approval and implementation of medical and technological documents on the standardization of medical care in chronic pancreatitis." All patients received standard therapy: proton pump inhibitors (pantoprazole 40 mg twice a day), spasmolytics (mebeverin 200 mg twice a day), enzyme preparations (pancreatin 40.000 IU three times a day during meals). At the beginning and after three weeks of treatment, the intensity of the pain syndrome, QOL and the level of anxiety disorders were studied.

The intensity of the pain syndrome was assessed by a visual analogue scale (VAS). The study of QOL in patients was carried out by specialized questionnaire for gastroenterological patient GSRS (Gastrointestinal Simptom Rating Scale). The study of the anxiety disorders level was performed using Ch.D. Spilberger-Yu.L. Khanin questionnaire.

The VAS scale is a common 10 centimeter ruler with the millimeter scale on one side, and a color line on the other: at the mark "0" it is intensely red, near the mark 50 it is yellow and up to 100 points it becomes green. After a brief instruction, the patient arbitrarily places the line on the figure perpendicularly at the point corresponding to the pain intensity, that is, chooses "grade" of health state. This place coincides with one or another numerical value on the ruler. That particular number is VAS value [14,21]. The intensity of the pain syndrome is determined according to distribution of points: pain is absent (0-4 mm), mild pain (5-44 mm), moderate pain (45-74 mm), severe pain (75-100 mm).

The GSRS questionnaire consists of 15 items forming 5 scales [11]:

- 1. Abdominal pain (1, 4 questions).
- 2. Reflux syndrome (2, 3, 5 questions).
- 3. Diarrheal syndrome (11, 12, 14 questions).
- 4. Dyspeptic syndrome (6, 7, 8, 9 questions).
- 5. Obstipation syndrome (10, 13, 15 questions).

The scale indicators range from 1 to 7. Higher values correspond to more severe symptoms and lower QOL.

Ch.D. Spilberger-Yu.L. Khanin questionnaire consists of 2 parts: items 1-20 evaluate reactive (situational) anxiety (RA), items 21-40 separately define personal anxiety (PA) – personality characteristics. The total number of points is calculated separately for each part. The total number of points is divided into 20. According to some studies, points are counted in the reverse order. These are the following items: 1, 2, 5, 8, 10, 11, 15, 16, 19, 20, 21, 26, 27, 30, 36, 39. The final indicator is considered as the level of corresponding anxiety type development. According to these indicators, different levels of anxiety are distinguished: 3.5-4.0 points – very high anxiety, 3.0-3.4 points – high anxiety, 2.0-2.9 points – average anxiety, 1.5-1.9 points – low anxiety, 0-1.4 points – very low anxiety [3].

Statistical processing of the obtained results was carried out using the variance analysis with the packages of licensed programs Microsoft Office 2003, Microsoft Excel Stadia 6.1 / prof and Statistica.

**Results and their discussion.** According to the pain syndrome intensity in patients with CP based on VAS scale, four clinical groups were identified: group I – 10 (14.7%) patients who did not experience pain, group II – 12 (17.6%) patients with weak pain, group III – 36 (52.9%) patients evaluating pain as moderate, and IV clinical group – 10 (14.7%) patients experiencing severe abdominal pain.

In the general group of patients with CP, the indicator of QOL according to "abdominal pain" scale was 10.2  $\pm$  3.6 points, "dispeptic syndrome" scale amounted to 20.4  $\pm$  3.2 points, "diarrhea syndrome" scale – 15.3  $\pm$  3.4 points, "reflux syndrome" scale – 10.2  $\pm$  2.8 points, the control group – 6.3  $\pm$  1.0 points, "obstipation syndrome" scale – 4.8  $\pm$  1.2 points.

The analysis of QOL in each clinical group has determined the significant QOL deterioration in groups III and IV caused by pain and dyspeptic syndromes severity and in groups I and II due to diarrheal and dyspeptic syndromes. When assessing the "obstipation syndrome" and "dyspeptic syndrome" scales, the significant differences between clinical groups were not observed **(table)**.

After three weeks of therapy, the improvement in QOL in the general group according to three out of five scales was observed. Thus, the indicator of QOL according to "reflux-syndrome" scale was  $4.0 \pm 0.6$  points (p <0.05), "diarrhea syndrome" scale amounted to 6.0  $\pm 2.4$  points (p <0.05), "dyspeptic syndrome" scale represented 10.8  $\pm 2.4$  points (p <0.05). The "abdominal pain" and "obstipation syndrome" scales presented insignificant differences as compared to the treatment initiation: 6.7  $\pm$  1.8 points and 7.5  $\pm$  2.0 points.

The improvement in QOL of all the patients according to "reflux syndrome", "diarrhea syndrome" and "dyspeptic syndrome" scales was observed while analyzing the results of treatment for each clinical group. The positive dynamics was observed in clinical groups with mild and severe pain syndrome according to abdominal pain" scale.

Thus, QOL indicator in group III before treatment was  $12.6 \pm 0.8$  points, after treatment  $- 8.6 \pm 1.2$  points

(p <0.01), in IV clinical group, correspondingly, at the beginning of treatment it amounted to  $13.4\pm0.6$  points and  $7.8\pm1.4$  points after three weeks of therapy (p <0.01). The significant differences between clinical groups and on the background of treatment were not revealed according to "obstipation syndrome" scale (table).

According to Ch.D. Spilberger-Yu.L. Khanin questionnaire data the general group of patients with CP presented with a high level of RA –  $3.25\pm0.67$  points and PA level was up to high and amounted to  $2.95\pm0.29$  points. Considering the literature data, the high PA level increases the possible anxiety disorders in situations requiring competence assessment and can be evaluated as threatening. The previous studies make it possible to assume that, as far as disease progresses, PA becomes a direct factor for the pathological disorders aggravation, that is, a rigid stereotype of response to psychoemotional stress is formed, which is not typical of healthy individuals [16].

Carrying out a detailed analysis of clinical groups, a very high level of RA was observed in IV group patients, namely,  $3.6\pm0.32$  points, high level of RA in groups I and III accounted for  $3.3\pm0.3$  and  $3.4\pm0.3$  points, correspondingly, in II group the average level of RA amounted to  $2.7\pm0.28$  points. This can be explained by the fact that patients of III and IV groups experienced more severe pain syndrome, and I group patients – diarrheal syndrome. The high level of PA –  $3.0\pm0.27$  points and  $3.3\pm0.24$  points was observed in I and IV groups, patients of II and III groups experienced the average level of PA –  $2.6\pm0.29$  points and  $2.9\pm0.25$  points. According to the literature data, personal anxiety is the

factor facilitating the development of anxiety response, and, therefore, they are closely interrelated.

The decrease in the clinical symptoms severity on the background of performed treatment caused the decrease in RA level in the general group of patients with CP up to 1.58  $\pm$  0.48 points (p <0.05), the level of PA was not significantly changed and amounted to 2.9  $\pm$  0.32 points.

The decrease in the reactive anxiety level was observed in all clinical groups: in I group up to  $1.75\pm0.28$  points (p <0.01), in II group – up to  $1.5\pm0.22$  points (p <0.01), in IV group – up to  $1.6\pm0.34$  points (p <0.01). In III clinical group (with moderate pain and diarrheal syndromes) the most pronounced dynamics was observed and RA indicator amounted to  $1.45\pm0.40$  points (p <0.001). Dynamic changes in PA level on the background of treatment were not observed in all clinical groups.

#### **Conclusions**

- 1. Patients with CP experienced QOL deterioration caused by severity of pain, dyspeptic and diarrheal syndromes and significant changes in the psychoemotional status in the form of increased level of personal and reactive anxiety.
- 2. The more pronounced QOL deterioration and very high RA could be observed in patients with severe pain and diarrheal syndromes.
- 3. The improvement in QOL and the decrease in the level of RA were observed on the background of CP treatment during three weeks.

**Prospects for further development in given direction.** The study of the life quality and psychoemotional status in patients with anotherdigestive system pathology is planned further.

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### ВПЛИВ ЛІКУВАННЯ НА ЯКІСТЬ ЖИТТЯ ТА ПСИХОЕМОЦІЙНИЙ СТАТУС ХВОРИХ НА ХРОНІЧНИЙ ПАНКРЕАТИТ

Потяженко М. М., Кітура О. Є., Невойт Г. В., Настрога Т. В., Люлька Н. О.

**Резюме.** Тривалий перебіг хронічного панкреатиту (ХП) призводить до погіршення якості життя (ЯЖ) та спричиняє різноманітні зміни у психоемоційній сфері пацієнтів.

Мета роботи. Оцінити ЯЖ та рівень тривожності у хворих на ХП під впливом лікування.

Об'єкт і методи дослідження. В дослідження було включено 68 хворих на ХП. На початку та через три тижні лікування вивчалася інтенсивність больового синдрому (за візуальною аналоговою шкалою), ЯЖ та рівень тривожних розладів.

Результати дослідження. За інтенсивністю больового синдрому хворих на ХП виділено чотири клінічні групи. У кожній клінічній групі, відмічено підвищення рівня реактивної та особистісної тривожності та погіршення ЯЖ: в ІІІ та ІV групах обумовлене вираженістю у хворих больового та диспепсичного синдромів, а в І та ІІ групах – з діарейного та диспепсичного синдромів. Через три тижні терапії відмічено покращання ЯЖ в усіх хворих за шкалами «рефлюкс-синдром», «діарейний синдром», «диспептичний синдром» та зниження рівня реактивної тривожності.

Ключові слова: хронічний панкреатит, якість життя, рівень тривожності.

#### ВЛИЯНИЕ ЛЕЧЕНИЯ НА КАЧЕСТВО ЖИЗНИ И ПСИХОЭМОЦИОНАЛЬНЫЙ СТАТУС БОЛЬНЫХ ХРО-НИЧЕСКИМ ПАНКРЕАТИТОМ

Потяженко М. М., Китура О. Е., Невойт А. В., Настрога Т. В., Люлька Н. А.

**Резюме.** Длительное течение хронического панкреатита (ХП) приводит к ухудшению качества жизни (КЖ) и вызывает различные изменения в психоэмоциональной сфере пациентов.

*Цель работы.* Оценить КЖ и уровень тревожности у больных ХП под влиянием лечения.

Объект и методы исследования. В исследование включено 68 больных ХП. В начале и через три недели лечения изучалась интенсивность болевого синдрома (по визуальной аналоговой шкале), КЖ и уровень тревожных расстройств.

Результаты исследования. По интенсивности болевого синдрома больных XП выделено четыре клинические группы. В каждой клинической группе отмечено повышение уровня реактивной и личностной тревожности и ухудшение КЖ: в ІІІ и ІV группах обусловлено выраженностью у больных болевого и диспепсического синдромов, а в І и ІІ группах – с диарейного и диспепсического синдромов. Через три недели терапии отмечено улучшение КЖ у всех больных по шкалам «рефлюкс-синдром», «диарейный синдром», «диспептический синдром» и снижение уровня реактивной тревожности.

Ключевые слова: хронический панкреатит, качество жизни, уровень тревожности.

### TREATMENT EFFECT ON QUALITY OF LIFE AND PSYCHOEMOTIONAL STATUS IN PATIENTS WITH CHRONIC PANCREATITIS

Potiazhenko M. M., Kitura O. Ye., Nevoit H. V., Nastroha T. V., Liulka N. O.

**Abstract.** Currently, the tendency for the increase in the incidence of chronic pancreatitis (CP) both in Ukraine and in the world can be observed. Prolonged course of CP causes deterioration in the quality of life (QOL) and leads to the various changes in psychoemotional state of patients.

The aim of the study is to assess QOL and anxiety level in patients with CP under the treatment effect.

Object and methods of research. The study involved 68 CP patients, including 36 women and 32 men. The average age was  $56.9 \pm 7.4$  years, the duration of the disease was  $9.5 \pm 4.9$  years. The research included evaluation of pain syndrome severity (according to a visual analogue scale), quality of life (by specialized questionnaire for gastroenterological patient GSRS) and the anxiety disorders level (using Ch.D. Spilberger-Yu.L. Khanin questionnaire) at the initial stage of treatment and after three weeks of treatment.

Results and their discussion. According to the pain syndrome intensity in patients with CP based on VAS scale, four clinical groups were identified: group I-10 (14.7%) patients who did not experience pain, group II-12 (17.6%) patients with weak pain, group II-36 (52.9%) patients evaluating pain as moderate, and IV clinical group II-10 (14.7%) patients experiencing severe abdominal pain.

The analysis of QOL in each clinical group has determined the significant QOL deterioration in groups III and IV caused by pain and dyspeptic syndromes severity and in groups I and II due to diarrheal and dyspeptic syndromes.

When assessing the "obstipation syndrome" and "dyspeptic syndrome" scales, the significant differences between clinical groups were not observed.

After three weeks of therapy, the improvement in QOL of all the patients according to "reflux syndrome", "diarrhea syndrome" and "dyspeptic syndrome" scales was observed. The positive dynamics was observed in clinical groups with mild and severe pain syndrome according to "abdominal pain" scale. The significant differences between clinical groups and on the background of treatment were not observed according to "obstipation syndrome" scale.

According to Ch.D. Spilberger-Yu.L. Khanin questionnaire data the general group of patients with CP presented with a high level of RA –  $3.25 \pm 0.67$  points and PA level was up to high and amounted to  $2.95 \pm 0.29$  points. Carrying out a detailed analysis of clinical groups, a very high level of RA was observed in IV group patients, high level of RA – in I and III groups and the average RA level – in II group. The decrease in clinical symptoms severity on the background of performed treatment has caused RA decrease in the general group of CP patients up to  $1.58 \pm 0.48$  points (p<0,05), PA level did not change significantly and amounted to  $2.9 \pm 0.32$  points. The decrease in the level of reactive anxiety was observed in all clinical groups. Dynamic changes in PA level on the background of treatment were not revealed in all clinical groups.

#### Conclusions

- 1. Patients with CP experienced QOL deterioration caused by severity of pain, dyspeptic and diarrheal syndromes and significant changes in the psychoemotional status in the form of increased level of personal and reactive anxiety.
- 2. The more pronounced QOL deterioration and very high RA could be observed in patients with severe pain and diarrheal syndromes.
- 3. The improvement in QOL and the decrease in the level of RA were observed on the background of CP treatment during three weeks.

Key words: chronic pancreatitis, quality of life, level of anxiety.

Рецензент – проф. Скрипник І. М. Стаття надійшла 26.12.2017 року

**DOI** 10.29254/2077-4214-2018-1-1-142-167-171

УДК 618.11-006.2: 615.361.013.85.014.41

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### ВПЛИВ КРІОКОНСЕРВОВАНИХ ЕКСПЛАНТІВ ПЛАЦЕНТИ НА ПЕРЕБІГ ЕКСПЕРИМЕНТАЛЬНОГО СИНДРОМУ ПОЛІКІСТОЗНИХ ЯЄЧНИКІВ

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Зв'язок публікації з плановими науково-дослідними роботами. Робота виконана в рамках державної наукової теми «Дослідження геропротекторної та геротерапевтичної дії кріоконсервованих плацентарних біооб'єктів» № ДР 0114U001319.

Вступ. Синдром полікістозних яечників (СПКЯ) – найбільш розповсюджений гінекологічний ендокринний синдром, на який страждають 5-15 відсотків жінок репродуктивного віку. СПКЯ діагностують при наявності одного с трьох симптомів: ановуліція, гіперпродукція андрогенів, полікістозні зміни в яечниках [5,10]. Етіологічно СПКЯ в 70% випадків є спадковою патологією, пов'язаною з інсулінорезистентністю, ожирінням, або гіперандрогенією. Патогенез захворювання пов'язаний з функційною гіперандрогенією яечникового або наднирникового походження, різною чутливістю до інсуліну ячників та периферійних тканин, що в свою чергу призводить до дисбалансу гіпофізарних гормо-

нів, підвищення співвідношення лютинизуючого та фолікулостимулюючого гормонів, гіперестрогенії. Окрім ановуляції цей механізм призводить до таких ускладнень, як непліддя, гіперплазія і злоякісні новоутворення ендометрію, молочних залоз, ожиріння, метаболічного синдрому, артеріальної гіпертензії, гіперглікемії, дисліпидемія, тромбофлебітів, тромбемболії, інсулінорезистентності, цукрового діабету 2-го типу, серцево-судинних захворювань [14].

Сучасна терапія СПКЯ має включати дієту з низьким вмістом вуглеводів, інсулінзнижуючі препарати (метформін, піоглітазон), модифікатори естрогенних рецепторів (кломфіен цитрат, тамоксифен), прогестини з антиандрогенною активністю (ципротерону ацетат). Хірургічне лікування застосовується все рідше. Пошук нових методів лікування СПКЯ є актуальним, що пов'язано з нео-