UDC: 616.72-002:615.831

INDEX CHANGES QUALITY OF LIFE IN PATIENTS WITH OSTEOARTHRITIS IN THE ELDERLY AGE AFTER THE SANATORIUM STAGE OF REHABILITATION

T.G. BAKALYUK
HSEI "I.Ya. Gorbachevsky Ternopil State Medical University of Ministry of Public Health of Ukraine"

Resume. In the study quality of life in elderly patients with osteoarthritis using international EuroQol questionnaire were obtained substantiated data about positive impact of spa treatment on quality of life by given group of patients compared with outpatient treatment. Multidisciplinary nature of medical rehabilitation in spa conditions, using a wide range of rehabilitation methods promotes more complex influence on an organism and allows to save remission for murch longer term.

Key words: quality of life, spa treatments, osteoarthritis.

ИНДЕКС ИЗМЕНЕНИЯ КАЧЕСТВА ЖИЗНИ У БОЛЬНЫХ ОСТЕОАРТРОЗОМ В ПОЖИЛОМ ВОЗРАСТЕ ПОСЛЕ САНАТОРНОГО ЭТАПА РЕАБИЛИТАЦИИ

Т.Г. БАКАЛЮК
ГВУЗ «Тернопольский Государственный медицинский университет им. И.Я. Горбачевского МЗ Украины»

Резюме. В качестве исследования жизни пожилых пациентов с остеоартрозом с использованием международной анкеты EuroQoL были получены обоснованные данные о положительном влиянии курортного лечения на качество жизни по данной группе больных, по сравнению с амбулаторным лечением. Междисциплинарный характер медицинской реабилитации в определенных условиях, используя широкий спектр методов реабилитации способствует более комплексное воздействие на организм и позволяет сохранить ремиссии в долгосрочной перспективе.

Ключевые слова: качество жизни, процедуры, остеоартрит.

Introduction. Osteoarthritis (OA) is one of the most common disorders of the muscle-skeletal system, especially in the elderly age group (in every third elderly person, reaching 70% among those who have over 65 years). During the natural aging occurs involutional changes in the connective tissue, especially in the tendons, ligaments, cartilage, bone tissue, in the walls of blood vessels, muscles [2]. Thus aging of body contributes to the accumulation of diseases. During the examination in elderly and senile patients were diagnosed from three to five different diseases. Modern elderly person is - a unique clinical phenomenon from the point of view on availability and the combination of its diverse in character and course of diseases that are competing for their prognostic significance and impact on quality of life. OA attributed to diseases with high comorbidity, and founded that patients with OA have a significantly higher risk of comorbid conditions than patients who do not suffering from OA [4].

Clinical experience and numerous publications data suggest that OA is often associated with subsequent somatic disorders: hypertension, coronary heart disease, obesity, diabetes, lung diseases (chronic obstructive pulmonary disease) and gastro- intestinal tract diseases. The greatest burden on society observed in cases of combination OA and osteodeficiency (osteopenia, osteoporosis (OP)), which significantly decreses the quality of life [5].

Quality of life - integrated description of physical, psychological, emotional and social functioning of a person based on its subjective perception. Assessment of quality of life at modern stage have more increasing strong position in medicine, reflecting on the one hand, the presence of new medical technologies that do not affect the life expectancy, but significantly improve its quality, and from the other hand - expanding activity of the patient, increasing of its role in choice of methods of diagnostic and treatment [9].

When selecting the questionnaires it is important to consider that to be used in a clinical studying suitable only those that give results of the evaluation quality of life in a form of a single summary score from 0 to 1.0. These includes a generic questionnaire EQ-5D (EuroQol) [8]. This general questionnaire is easy to fill , widely used in different countries and gives during the processing

of collected data single score to measure the quality of life, represented by values between 0 and 1, which also provides the possibility of its using in clinical trials. This questionnaire is widely used in various clinical situations , including in assessing the quality of life patients with rheumatic diseases [7].

The aging process is controversial, because on the background of regression processes - atrophy, degradation, etc., develops progressive trends of creating the new compensatory-adaptive mechanisms to maintain homeostasis in an aging body, which, however, does not fully offset the growing phenomena of degradation [2]. It should be noted that the adaptive capacity of the aging body is reduced, the possibility of development various diseases increases. In this context, particularly important in cases of illness in the elderly patient is the role of sanogenetic mechanisms, their stimulation and support. A special interest belongs to the sanatorium stage of rehabilitation, whose mission is the prevention of disease progression, stimulation of compensatory capacity of the muscle-skeletal system and the possible restoration of joint function. Spa treatment has a special place in the treatment and preventive care of elderly patients, as a stage in the system of rehabilitation of many chronic diseases. Multi-disciplinary nature of medical rehabilitation in spa conditions, a wide range of rehabilitation methods can embrace patients of all age groups with the most common diseases [1]. Compared with medication treatment, natural and artificial physical factors, when they are properly used, characterized by the absence of allergies, lower incidence and severity of side effects, the ability of positively influencing on the number of pathological processes and the whole body, thus helping to improve the quality of life and are important in the prevention of premature aging [2]. In the resort conditions further rehabilitation is indicated for patients with initial stages of OA, disabled (groups I and II), patients with resistant synovitis and comorbidity with the possibility of self-servicing (including general contraindications for a spa treatment) [3].

The aim of the study. To investigate the quality of life in elderly patients with osteoarthritis using international EuroQol questionnaire to evaluate the effectiveness of spa treatment.

Materials and methods. In study were included 72 patients aged from 60 to 78 years, middle age was 67,6 ± 8,7 years. Among the patients predominates women - 88.4 %. I radiographic stage of osteoarthritis by J.H. Kellgren-Lawrence [6] was diagnosed in 23,3 % of patients , II stage - in 76,7 %. In the view of modern geriatric approaches applying of the physical factors in patients with OA who were in the spa rehabilitation stage in the appointment of balneotherapeutic procedures we gave preference to ultrasonic inhalation of mineral waters and baths, from physiotherapy usually prescribed magnetic-lazer therapy, interferential therapy, patients also performed massage and physical rehabilitation . In order to prevent climate-adaptational and reaclimate-adaptational reactions and optimization process of climate-adaptation were included into the treatment complex (based on established risk factors) adaptogens and treatment procedures that have adaptogenic action (phytoaeroionisation , singlet-oxygen therapy). In the process of rehabilitation treatment in sanatorium conditions , we have selected the most effective combination of different methods of rehabilitation, which caused the most significant treatment effectiveness: a combination of balneotherapy, physiotherapy and exercise therapy. To improve continuity during medical rehabilitation, at discharging from the sanatorium patients were given written (in the form of special attractions) recommendatitons about further treatment, lifestyle, physical activity, diet etc. By the method of randomization, patients were divided into two groups. A marked difference for the main source of clinical and functional parameters between the groups were not observed. The control group consisted of 14 patients of the same age without joint pathology. Treatment regimens differed between the studying groups the presence in one of the groups sanatorium stage of rehabilitation. In the first group (n=34) patients received Structum 500 mg 2 times a day (within 6 months of the year) and courses of NSAID, including mainly patients treated with meloxicam (at a dose of 7,5 mg/d) or nimesulide (in dose of 100-200 mg/d) for 7-10 days during worcening. The patients of the second group (n=38) during the 18-21 day were on spa treatment (once a year), in the scheme of rehabilitation were: sitting hydrogen sulfide baths, a concentration of 80 mg/L for 10 minutes at a temperature of 36^0C , the course of 8 procedures every other day or ultrasonic inhalation by hydrogen sulfide water, period of 5 minutes; blue clay applications every other day at 26^0C temperature; interferential therapy and magnet-lazer therapy on the affected joints to 8 treatments alternately every other day; pneumomassage; classes of physical rehabilitation therapy, aromatherapy, singlet -oxygen therapy . After the sanatorium stage of rehabilitation patients are taking drugs containing chondroitin sulfate (within 6 months of the year), at worcening of NSAIDs.

Assessment quality of life related to health , was conducted using an international EuroQol-5D-European Quality of Life instrument (EQ-5D),

which consists of two parts. At first part the patient self- assessed his condition by 5 parameters: mobility, self-care, usual activities, pain and discomfort, anxiety and depression. In each variant patients could give three possible answers : No problem - 1, there is some problem - 2, much of the problem - 3. In the second part of the questionnaire , patients assessed their health on a scale from 0 to 100 on the VAS, the so-called thermometer , where 0 means the worst condition , 100 - the best state of health of the patient. This part of the questionnaire is a quantitative assessment of general health. Statistical analysis of the results was done in the department of statistical system research at SHEE "Ternopil State Medical University by I.Y. Gorbachevsky Ministry of Health of Ukraine" in the software package Statsoft STATISTIC. To determine the reliability of the differences in the change of certain indicators were used parametric and non-parametric methods: criterion Wilkoksona, two-sided Fisher's criterion. A significant differences were considered when the degree of probability of error-free prognosis is (p) 95% ($p < 0.05$).

Table.

Dynamics of health status of patients with OA according to the EQ-5D questionnaire

Health status	The number of respondents of the first group (n = 34)				The number of respondents of the second group (n = 38)			
	At the beginning of the study		After 12 months		At the beginning of the study		After 12 months	
	абс.	%	абс.	%	абс.	%	абс.	%
Moving in space								
No problem	3	8,8	5	14,7	2	5,2	15	39,4
There are some problems	31	91.2	29	85,3	36	94,8	23	60,6
Not gets out of bed	0	0	0	0	0	0	0	0
Self-service								
No problem	21	61,7	20	58,8	26	68,4	29	76,3
There are some problems	13	38,3	14	41,2	12	31,6	9	23,7
Is unable to wash and dress	0	0	0	0	0	0	0	0
Everyday activity								
No problem	6	17,6	6	17,6	5	13,1	12	31,5
There are some problems	24	70,5	22	64,7	30	78,9	26	68,5
Can not perform daily activities	4	11,9	6	17,7	3	8,0	0	0
Pain and discomfort								
No pain or discomfort	0	0	0	0	0	0	7	18,4
There is some pain and discomfort	26	76,4	28	82,3	29	76,3	27	71,0
There is a lot of pain and discomfort	8	23,6	6	17,7	9	23,7	4	10,6
Anxiety and depression								
No anxiety and depression	11	32,3	12	35,2	12	31,5	18	47,3
There is little anxiety and depression	20	58,8	17	50,0	24	63,3	20	52,7
There are severe anxiety and depression	3	8,9	5	14,8	2	5,2	0	0
Health status changes during the year								
Improved	6		20,4		22		57,9	
Not changed	20		56,1		16		42,1	
Worsened	8		23,5		0		0	

Results and discussion. General description of the health status of patients studied with OA according to EQ-5D questionnaire is given in the table.

In all patients with osteoarthritis were found health problems of different severity degrees. Mostly suffers ability to travel and daily activity. This data confirms that the OA in the elderly age reduces quality of life. After 12 months, according to questionnaire, health status was different in two groups . Reliable positive trend was in patients from the second group 57,9 % ($p < 0,05$), as a result of improving the ability to travel in space, reducing pain and discomfort and increasing of daily activity.

According to the second part of the questionnaire EQ-5D, at baseline, most patients had reduced general health assessment: the first group to 51,91 ± 1,07 (median for «thermometer» EQ 52 points) in the second group to 50,65 ± 1,17 (median 48,5 points) in comparison with the best state of possible health.

12 months after the sanatorium stage of rehabilitation of patients with repeated testing were produced the following results : The average index quality of life on the "thermometer" EQ-5D questionnaire in the first group of patients was 54,76 ± 1,23 (median - 56 points), the second group was 69,28 ± 0,89 (median - 70 points), reliability differences is high : $p < 0,001$.

In the category quality of life most of all patients reacted on the presence of sanatorium stage of rehabilitation in the category "movement in space" (GPA retesting 1,60 ± 0,08, $p < 0,001$), "daily activity" (GPA retesting 1 68 ± 0,07, $p < 0,001$), " pain / discomfort "(GPA retesting 1,92 ± 0,08, $p < 0,001$)," anxiety / depression (GPA retesting 1 52 ± 0,08, $p < 0,05$).

Thus, the data suggested that in elderly patients with OA who were once a year on a spa treatment and took over 6 months structure-modification drugs significantly upgraded quality of life during 12 months.

Conclusions: 1. Based on the analysis were founded that elderly patients with OA who underwent rehabilitation treatment in sanatorium-health resorts have continued improving quality of life in comparison with patients who were treated only in outpatient conditions.

2. Availability sanatorium stage of rehabilitation in the treatment of elderly patients with OA contributes more complex influence on the human organism.

3. Multi-disciplinary nature of medical rehabilitation in spa conditions, a wide range of used restorative treatment methods can affect the quality of life and maintain remission for more longer period in comparison with outpatient treatment.

4. Monitoring the quality of life can not only control the functional state of the organism in the elderly aged people at various stages of treatment , but also to properly evaluate the effectiveness of treatment, and, if necessary, to carry out the correction of rehabilitation activities.

Perspectives for future research. Aimed at studying the impact of rehabilitative and preventive measures on the quality of life in elderly patients with osteoarthritis at other stages of rehabilitation. Further work in this direction is reasonable and economically justified.

References:

1. Golyachenko A.O., Martynyuk V.I., Bakalyuk T.G. Medical rehabilitation in the spa conditions // Journal of research. - 2007 . - № 4. - P. 8-9.
2. Kazymyrko V.K., KovalenkoV.N., Flehontova V.V. Involutional osteoarthritis and osteoporosis. - Donetsk: Publisher Zaslavsky A.J., 2011. - 724 p.
3. Kovalenko V.N., Bortkiewicz A.P. Osteoarthritis . Practical guidance . - K.: Moryon , 2005. - 592 p.
4. Mendel O.I., Naumov A.V., Alekseeva L.I. et al Osteoarthritis as a factor of risk in cardio-vascular catastrophes // Ukrainian Journal of Rheumatology . - 2010 . - № 3. - P. 68-73.
5. Povoroznyuk V.V. Osteoarthritis // Art of treatments. - 2004 . - № 3. - P.16 -23.
6. Altman R., Asch E., Bloch D. et al. The American College of Rheumatology criteria for the classification and reporting of osteoarthritis of the knee // Arthritis Rheum. - 1986 . - № 29. - P. 1039-1049 .
7. Harrison M.J., Davies L.M., Bansback N.J. et al. The comparative responsiveness of the EQ-5D and SF-6D to change in patients with inflammatory arthritis // Qual Life Res. - 2009 . - № 18. - P. 1195-1205.
8. Herdman M., Gudex C., Lloyd A., et al. Development and preliminary testing of the new five-level version of EQ-5D (EQ-5D-5L) // Qual Life Res. - 2011 . - № 20 . - P. 1727-1736.
9. Langley P., Muller-Schwefe G., Nicolaou A., Liedgens H., Pergolizzi J., Varrassi G. The societal impact of pain in the European Union: health-related quality of life and healthcare resource utilization // J. Med Econ. - 2010 . - № 1. - P. 571-581.

РЕАБИЛИТАЦИЯНИНГ САНАТОР БОСҚИЧИДАН СЎНГ ОСТЕОАРТРОЗ БИЛАН ОҒРИГАН ҚАРИЯЛАР ХАЁТ ТАРЗИНИНГ ЎЗГАРИШ ИНДЕКСИ

Т.Г. БАКАЛЮК

Украина ССВ И.Я. Горбачевский номидаги Тернополь Давлат медицина университети

Резюме. EuroQoL халқаро анкетасини қуллаган холда остеоартроз билан оғриган қариялар хаёти текширилди. Бунинг натижасида, ушбу гуруҳдаги беморлар хаёт тарзи амбулатор даволаниш билан таққосланганда курорт даволанишнинг ижобий таъсири тўғрисида асосланган маълумотлар олинди. Тиббий реабилитация маълум бир шароитида ребилитация усулларини кенг доирада қуллаш орқали организмга комплекс таъсир кўрсатади ва узоқ вақтга ремиссия босқичини сақлаб қолади.

Калит сўзлар: хаёт тарзи, муолажалар, остеоартрит.