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EVALUATION OF QUALITY OF LIFE IN PATIENTS WITH OSTEOARTHROSIS

Abstract. *Resume. In 268 patients with osteoarthritis of knees I-III radiological stages was assessed the degree of functional failure, disease severity and quality of life of patients, studied the influence of duration and severity of osteoarthritis on the quality of peoples' life in gender, age, professional and medical aspects. Established that the deteriorating quality of life in patients with progression of radiographic changes in the musculoskeletal system, and their numbers depend on gender, age and occupational characteristics of patients and severity of osteoarthrosis.*
Key words: *osteoarthrosis, quality of life, treatment.*

Introduction. Osteoarthrosis (OA) is one of the most widespread decease that is associated with significant worsening of quality of life of patients and as consequence with a rise of costs for health care activities. The most meaningful clinical evidences and properly spent costs accrue to the last few decades of human's life. Increase of life expectancy and decrease of physical activity, almost naturally-determined increase of body weight are the most significant determinants of progression of OA. Taking into consideration this fact WHO and UN declared the first decade of the III millennium to be "Dacade of bones and joints". In accordance with forecasts, by 2050 near half of population will be suffering from the difficulties of functioning of musculoskeletal system, which predictors are unhealthy diet, hypodynamia, overstrain of joints and inexpedient strain of bones. That is why development of new and more efficient ways of treatment is an important goal of future [1].

Evaluation of quality of life (QL) of patients with osteoarthrosis is one of the assessment criteria of efficiency of different methods of their treatment [2, 3]. According to definition of WHO experts concept of quality of life is put across systemic medical and social characteristic that embraces physical and psychophysiological health of human, its spiritual and life values and also level of civilization of society and its economic status. In medical definition QL is an indicator of impact of primary decease and the results of its treatment for sweetness and light of the patient. In accordance to this the attention is paid at the personal definition by human of his/her own physical and psychoemotional health status. Using actual approach, disorders of patient's health status may be precisely assessed, the essence of the clinical issue may be deeper understood and the most rational treatment regimen and program of re-ablation including forecast of expected treatment outcomes according to criteria that lays on the frontier of scientific approach of physicians and personal patient's point of view may be determined [2].

Assessment of QL in patients with OA often depends on age, sex, occupation and requires the differentiated approach to exploration of efficient treatment-and-prophylactic measures.

Objective: To evaluate the impact of duration and severity of osteoarthrosis progression on indicators of quality of life of patients in respect of the gender-based, age-related, occupational and medical aspects.

Materials and methods. Investigation of 268 patients with osteoarthrosis of the knees I-III stages aged from 40 to 76 years old of which 204 (76,12%) are female and 64 (23,88%) – male was carried out. Duration of decease of examined patients fluctuated in the range of 4-19 years. Verification of OA diagnosis was carried out in line with recommendations of EULAR (2010) according to clinical, index and laboratorial methods of investigation. Evaluation of quality of life in patients with osteoarthrosis was carried out with the help of Ukrainian version of well-known enquirer Medikal Outkomes Study Short Form 36 (MOS SF-36) that patients had filled up

by themselves. Data of enquirer was evaluated in scores of eight scales and two categories: somatic (SHC) and psychic health components (PHC); indicators of each scale fluctuate in the range from 1 to 100 being 100 reflects perfect health status. Control group included 25 apparently healthy individuals of alike in age and sex.

Statistical analysis of collected data was being carried out with a use of PC software PaST Version 2.05. Analysis of filled data of enquirer SF-36 was being carried out with the technical tips regarding evaluation and estimation of data of actual enquirer.

Results and discussion. Analysis of division of 268 examined patients with OA by social status criterion showed that 42 (15,67 %) individuals were predominantly the office employees which were performing the moderate physical work for a long time, 164 (61,19 %) – employees which were performing hard physical work during their lives, the rest 62 (23,13 %) individuals – unemployed which were engaging in sedentary lifestyle. Thus in view of occupational aspect, more than ¾ of examined cohort of patients with OA were individuals whose professional activities were linked with long-lasting physical work.

In accordance with OA radiological stage through Kellgren and Lawrence the I stage was diagnosed in 28 (10,45%) patients, the II stage was diagnosed in 202 (75,37 %) individuals and the III stage was diagnosed in 38 (14,18%) patients. The first, less frequently the second stage of radiological abnormality within joints were detected in individuals aged up to 50-55 with incontinious (up to 5-7 years) OA anamnesis, moderate strain on joints, without signs of obesity. Predominantly second and third stages of such abnormalities were detected in patients over 55-60, often with accompanying signs of the obesity I-III degrees (in 132 individuals – 49,25%).

Estimated results of indicators of quality of life in patients with OA depending on the stage are provided in Table.

As the data of Table 1 shows, when the OA I stage the quality of life almost does not suffer except of emotional state: decrease of Role-Emotional indicator (RE) by 13,8%, ($p<0,05$). However in patients with OA II stage indicators of QL in all parameters including integral indicators of somatic and psychic components of health, are probably ($p<0,05 – 0,001$) reduced in comparison with indicators of individuals from the control group: physical functioning (PF) by33,65%, Role-Physical (RP) by 40,88%, amount of pain (AP) by 45,5%, general state of

Table

Indicators of quality of life of patients with acne depending on OA stage (M±m; n)

Investigated indicators	Control group, n=25	Patients with OA depending on radiological stage, n=268		
		I stage, n=28	II stage, n=202	III stage, n=38
Physical functioning	96,0±1,42	91,1±2,56	63,7±2,12*	45,3±3,51*#
Role-Physical	91,0±3,76	84,3±3,25	53,8±3,86*	39,4±3,16*
Amount of pain	100	95,1±3,16	54,5±4,88*	32,4±3,84*
General state of health	87,4±3,44	76,2±3,54	52,4±4,66*	42,1±3,42*#
Vitality	76,4±2,54	70,5±2,66	54,6±4,24*	36,8±2,92*#
Social functioning	95,8±1,16	88,4±3,52	64,7±3,82*	41,6±3,14*#
Role-Emotional	81,3±2,52	70,8±2,14*	54,2±3,14*	41,4±2,58*#
Mental health	77,6±1,64	72,8±2,84	51,8±3,16*	39,2±2,93*#
Integral indicators of health				
Somatic component of health	61,2±0,52	54,6±2,84	39,6±3,26*	30±3,54*
Psychic component of health	51,3±0,53	48,4±1,22	39,1±1,14*	31,4±2,12*#

Notes: * - probability of data deviation in comparison with healthy individuals ($p<0,05 – 0,001$);
- probability of data deviation between groups of patients with OA the first and the third radiological stages ($p<0,05-0,001$).

health (GSH) by 49,94%, vitality by 28,54%, social functioning (SF) by 32,5%, RE (by 33,44%), mental health (MH) by 33,25%, PhCH (by35,3%) and PsCH (by 23,8%).

At the same time the most essential changes of investigated indicators of QL were detected in patients with AO III stage in which their probable decrease as regarding QL parameters of individuals from control group as the patients with OA II stage in relation to following indicators – PF (decrease respectively by 52,82% and 29,9%), GSH (by 56,7% and 26,77%), AP (by 77,6% and 40,65%), vitality (by 51,8% and 29,7%), SF (by 56,6% and 25,7%), RE (by 49,1% and 23,6%), MH (by 49,5% and 24,3%), PhCH(by 50,5% and 20,7%) and PsCH (by 48,8% and 20,1%), which characterize predominantly Psychic component of health was figured out.

Collected indicators reflect only general characteristics of QL in patients with different OA stages, but assessment of QL indicators in respect of the gender aspect showed that QL indicators, especially of affection (SF, RE, MH, Vitality), in patients with OA of a high duration of decease, more severe progress, of female with OA II and III stages, occurrence of accompanying obesity are majorly decreased in comparison with indicators of individuals of the control group. Tendency to more significant changes of indicators also pertained to the physically working patients aged from 40 to 60, and also to patients of the both sexes aged above 60-70.

During two month period of conventional management of patients with OA I and II stages the fact of probable bettering of major indicators of QL (PF, AP, GSH, RE, MH, PhCH) was figured out, however they did not achieve the level of indicators of apparently healthy individuals' status and tended to their bettering only in patients with OA III stage.

Estimated indicators of somatic and psychic components of health of QL in patients with OA require the necessity of improvement of the program of treatment-and-prophylactic approaches for these patients and control of QL parameter variations during more long-lasting periods of monitoring.

Conclusions. 1. In patients with osteoarthrosis of knees I-III stages the probable changes of indicators of quality of life, determined by using of enquirer SF–36, which depended on the stage of decease, gender-based, age-related, occupational aspects of patients were figured out.

2. Estimation of indicators of quality of life in patients with osteoarthrosis of knees by using of enquirer SF-36 is an important aspect of evaluation of physical and mental health of patients, and also the fail-safe criteria of efficiency of their treatment.

Prospects for further research. The further improvements of the direct care, assessment of efficiency of comprehensive treatment of patients with osteoarthrosis, especially directed on correction of integral indicators of health in respect of stage of decease, age of patients, their sex and severity of decease progress are prospective.

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