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REMOTE RESULTS OF OBSERAVTION OVER THE PATIENTS WITH RHEUMATOID ARTHRITIS WITH COMORBID INTESTINAL DISBACTERIOSIS

Abstract. *Remote results of a comprehensive treatment of patients with rheumatoid arthritis with comorbid intestinal disbacteriosis after additional administration of Quercetin, Bifilact extra and Enterosgel to the standard therapy were analyzed. It was found that after administration of a comprehensive therapy including the above mentioned medicines the course of the disease of patients with RA and their general condition improved, the period or remission became longer, the necessity of repeated admissions to the hospital decreased.*

Key words: *rheumatoid arthritis, intestinal disbacteriosis, Quercetin, Enterosgel, Bifilact extra.*

Introduction. Rheumatoid arthritis (RA) is a disease of a great medical-social importance [2, 12]. Patients with RA have 3-7 years reduced life expectancy as compared with the general population [1, 4, 5]. This disease results in quick disability which in case of absent active therapy can occur in the first 5 years since the onset of the disease [9, 13].

The main sign of the therapeutic efficacy is remote results and their correct evaluation. Remote results enable to examine the dynamics of the therapeutic effect found while studying direct results, to determine its duration and stability.

Objective: to study remote results of a comprehensive treatment with administration of Quercetin, Bifilact extra and Enterosgel in patients with rheumatoid arthritis and comorbid intestinal disbacteriosis (ID).

Materials and methods. The observation was conducted during 1 year among 18 patients (the main group receiving a comprehensive therapy (CT)) and 23 patients (the comparison group receiving a standard therapy (ST)). The study was carried out keeping to the main regulations of GCP ICH and Helsinki Declaration on Biomedical Studies. The diagnosis was verified according the criteria suggested by ARA/EULAR (1987/2010) [8, 10], the Order of the Ministry of Public Health of Ukraine №263 dated 11.04.2014. An average age of patients was 44,7±9,4. Disease remoteness ranged from 1 to 12 years. women prevailed among the examined patients – 34 (82,93%), the majority of individuals were seropositive by rheumatoid factor – 26 (63,41%). Practically all the patients had polyarteritis form of the disease - 40 (97,56%). RA activity was estimated by disease activity status of 28 joints (DAS28) [6]. In 24 (58,54%) of them was the I degree of activity, in 17 (41,46%) – the II one. Half of the patients had radiological changes in joints: I stage – In 16 (39,02%) individuals, II – in 20 (48,78%), II-III degree – in 5 (12,2%) patients. Functional ability of the patients and disability index were determined by the Health Assessment Questionnaire (HAQ) [11]. The I (19 (46,34%)) and II (22 (53,66%) classes of functional disorders of joints prevailed.

By the results of clinical examinations indices were detected (painful, articulate, inflammatory), the time of morning joint stiffness was considered. The quality of life of patients and joint functional condition were analyzed on the base of Stanford Health Assessment Questionnaire (HAQ) [7]. Pain assessment was conducted by the visual analogue scale (VAS).

During out-patient-policlinic stage the patients from the main group additionally to a standard complex of treatment in order to consolidate achieved results were indicated to: Quercetin 1 packet twice a day up to 1 month in case of the I degree of activity; up to 1,5 month – with the II degree of activity; as well as Bifilact extra in the similar time regimen, but per 1 capsule twice a day, Enterosgel per 1,5 table-spoon after dinner for two weeks – in case of the I degree of activity, up to three weeks – in case of the II degree of activity. Conditional criteria of these indications were clinical signs of RA (concerning Quercetin) and the need in periodical intake of NSAIDs by patients due to articulate pain syndrome and their known negative effect on the intestinal microbiota, acquired comorbid digestive disorders promoting an increased susceptibility to relapses of ID as a trigger factor of a torpid course of RA and activation of rheumatoid process. The group of comparison received basic (standard) treatment according to the Order of the Ministry of Public Health of Ukraine №263 dated 11.04.2014. The results of treatment were controlled in 1, 6 and 12 months by means of questionnaire and objective examination considering the dynamics of the course of the disease, the necessity and volume of the complex of therapeutic agents, duration of their use.

Arithmetic mean and its error were calculated. Comparison between the groups of the study was conducted by means of non-

Table

Effect of a comprehensive treatment on the functional parameters in patients with RA of the I degree of activity in dynamics (x±Sx)

Index	Group	Before treatment	After treatment	In 1 month	In 6 months	In 12 months
Stanford Health Assessment Questionnaire, score	ST (n=13)	1,58±0,13	1,32±0,087 $p<0,05$	1,30±0,045 $p<0,001$	1,33±0,098 $p<0,001$	1,53±0,78
	CT (n=11)	1,61±0,54	1,04±0,096 $p<0,05$	1,08±0,035 $p<0,001$ $p_1<0,001$	0,98±0,058 $p<0,001$ $p_1<0,001$	0,92±0,023 $p<0,001$ $p_1<0,001$
Morning stiffness, min	ST (n=13)	65,72±3,67	48,43±4,5 $p<0,05$	60,41±4,12 $p<0,05$ $p<0,001$	63,12±4,31	63,85±3,64
	CT (n=11)	67,12±4,78	32,32±3,7 $p<0,05$ $p_1<0,001$	27,48±1,94 $p<0,001$ $p_1<0,001$	24,15±1,12 $p<0,001$ $p_1<0,001$	25,45±1,84 $p<0,001$ $p_1<0,001$
Painful index by Ritchie, points	ST (n=13)	2,38±0,073	1,83±0,12 $p<0,05$	1,75±0,35 $p<0,001$	1,99±0,28 $p<0,001$	2,23±0,17
	CT (n=11)	2,46±0,089	1,4±0,132 $p<0,05$	0,84±0,05 $p_1<0,001$	0,65±0,12 $p_1<0,001$	0,61±0,03 $p_1<0,001$
Articulate index by Ritchie, points	ST (n=13)	2,76±0,193	1,78±0,16 $p<0,05$	1,98±0,18 $p<0,001$	2,08±0,09	2,22±0,16
	CT (n=11)	2,82±0,097	1,77±0,097 $p<0,05$	1,34±0,04 $p_1<0,001$	0,82±0,05 $p_1<0,001$	0,68±0,03 $p_1<0,001$
Inflammatory index by Ritchie, points	ST (n=13)	2,32±0,159	1,66±0,097 $p<0,05$	1,75±0,15 $p<0,001$	1,98±0,1 $p<0,001$	2,17±0,24
	CT (n=11)	2,34±0,167	1,2±0,086 $p<0,05$	0,78±0,05 $p<0,001$ $p_1<0,001$	0,55±0,04 $p<0,001$ $p_1<0,001$	0,52±0,04 $p<0,001$ $p_1<0,001$

Notes. *p – in comparison of indices concerning the initial data, p_1 – significance level of indices difference with basic and comprehensive treatment; ST – standard therapy, CT – comprehensive therapy.*

parametric Mann-Whitney criterion in the computer program medium PAST [3]. The results were considered reliable with the significance level $p<0,05$. For statistical estimation of remote results of the study the method of odds ratio detection was used. To check the statistical hypothesis concerning the equality of the unit odds ratio ($\omega=1$) the criterion χ was applied.

Results and discussion. The findings of the dynamics of remote results are presented in the table. It was found that under the influence of a comprehensive therapy the indices of Stanford Health Assessment Questionnaire in patients with RA of the I degree of activity in 1, 6 and 12 months did not differ much from those fixed in 1 month, they were 1,7 times less as much in the group of comparison. The time of morning stiffness in patients with a comprehensive treatment was no longer than 27,15 min, while in case of a basic treatment it lasted for about an hour. At the same time a negative dynamic was found with painful, articular and inflammatory indices, the number of points gradually increased and in a year it was by 1,2, 1,2 and 1,3 times more respectively and was close to the initial level. The difference between the groups in this period was 72,6 %, 69,4% and 76,0 % in favour of the patients from the main group.

In patients with RA of the II degree of activity the analogical dynamics was observed.

At the same time it was found that in 11 patients with RA with the I degree of activity the period of remission was (103,4±12,3) days against (47,12±14,1) days in the group of comparison, the frequency of relapses was (1,18±0,43) cases against (2,65±0,62) cases in the group of comparison. There was no need for repeated admissions, while there was 1-2 admissions in the group of comparison. In 7 patients with RA of the II degree of activity the period of remission was (82,4±10,43) days against (47,12±15,5) days in the group of comparison, relapse frequency was (1,83±0,83) cases against (2,78±0,62) in the group of comparison, 1-2 times a year repeated admission to the hospital was required, 2-3 admissions in the group of comparison.

Therefore, with indication of a comprehensive therapy including Quercetin, Enterosgel and Bifilact extra patients with RA admitted improved course of the disease, general condition, the periods of remission became longer, the necessity in repeated admissions to the hospital decreased. A considerable difference of the examined indices in the dynamics between the groups was indicative of certain advantages of the improved comprehensive treatment.

Conclusions. 1. A combined administration of Quercetin, Enterosgel and Bifilact extra in a comprehensive treatment of patients with rheumatoid arthritis with comorbid intestinal disbacteriosis improves direct and remote results of treatment. 2. Additional use of these medicines in a comprehensive therapy of such patients is safe and promotes reduced needs in repeated admission to the hospital and relapse frequency, longer remission period.

The prospects of future studies include further examination of Quercetin effect on the signs of the cardio-vascular system in patients with rheumatoid arthritis as one of the most frequent causes of death in case of rheumatoid arthritis.

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