Comparative Study on the Extent of Damage to Life Quality in Rheumatoid Arthritis Patients with Different Therapeutic Strategies

DIANA IOANA MANUELA TEAHA1*, NICOLETA ANAMARIA PASCALAI2, FLORIN MIHAI MARCU2, LIVIU LAZAR1

1 Doctoral Studies Department, Biomedical Science, 1 University Str., 410087, Oradea, Romania
2 Faculty of Medicine and Pharmacy, Department of Medicine-Psycho-Neuroscience and Recovery, 10, 1 Decembrie Sq., 410068, Oradea, Romania

Rheumatoid Arthritis affects more than 17.6 million of people worldwide [1]. Along with the diagnosis of Rheumatoid Arthritis (RA) comes a big change in patients’ life. The aim of this study was to evaluate the impact of disease stage or evolution on the patients’ quality of life, comparing 4 different therapeutic strategies, pursuing HAQ score and VAS (visual analogue pain scale).

Keywords: Rheumatoid Arthritis, Quality of Life, Different Treatments, HAQ score, Biological therapy

Rheumatoid arthritis (RA) affects 1% of the general global population. The pathology is characterized as an erosive synovitis with chronic pattern that progresses into a systemic affection. The extraarticular events include: rheumatoid nodules, rheumatoid vasculitis, amyloidosis, osteoporosis, Sjogren syndrome or Felty syndrome [1-8]. RA leads to permanent damage of the cartilages and articulations, with a major impact on patients’ quality of life and maybe more important, life expectancy. Most patients reduce their daily activity to match their current capabilities, they withdraw from their social lives and isolate themselves. It’s easy to understand why the target of RA therapy must include an improvement of patients’ life quality besides obtaining clinical response in slowing down the progression of the disease or in best cases the state of RA remission [3, 5, 9, 10].

Experimental part
Material and method

The statistical analysis was done using the SPSS 19. Parametric mean values, frequency ranges, standard deviations, statistical significance tests by the Student method (t test).

Sensitivity to change can be assessed in various types of clinical research or long-term observational studies. To measure sensitivity to change, we used the statistical calculation system effect width (ES). ES is a method of standardizing the magnitude of changing a variable after a determined period of time. It represents the mean of change for a variable expressed in standard deviation units. This standardization allows the comparison of values of change of a variable in a study.

136 patients with rheumatoid arthritis were studied in the period 2015-2017. Patients were followed up for one year with 3 assessments: initially at 6 months and 12 months.

We followed the evolution of patients according to the type of treatment, as follows:
- Group 1 - MTx monotherapy - 34 patients
- Group 2 - MTx + Biological - 28 patients
- Group 3 - MTx + corticotherapy - 34 patients
- Group 4 - MTx + PKT - 40 patients

The groups were formed mainly by female individuals (85.29% MTX monotherapy, 85.71% MTX + Biological therapy, 88.24% MTX + Corticotherapy and 80% MTX + PKT), with an average age between 55 and 59 years old. Longest duration of disease is found in the MTX + Biological therapy group, approximately 5.02 years of treatment (Table 1).

Most cases with advanced stages of polyarthritis (stage III and IV) were recorded in patients with MTx + biologically active therapy (42.86%), insignificantly higher than in the corticosteroid group (23.53%, p = 0.108), but significantly higher than in the MTX and MTX + PKT monotherapy groups (14.71% and 15.00% respectively, p = 0.014 and p = 0.011 respectively) (Table 2, Fig. 1).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>GROUP CHARACTERISTICS</th>
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<tbody>
<tr>
<td></td>
<td>MTx monotherapy</td>
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<tr>
<td>Sex (female/male)</td>
<td>85.29%/14.71%</td>
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<tr>
<td>Average age (years)</td>
<td>57.76±5.70</td>
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<td>The average duration of the disease</td>
<td>2.15±1.39</td>
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* email:dteaha@yahoo.com, Phone: 0754542882  
All authors have the same contribution to this study.
Results and discussions

The evaluation of patients life quality was quantified following the HAQ score (the health assessment questionnaire) and VAS throughout an year of treatment.

HAQ is a questionnaire for the assessment of RA, which evaluates the index of disability showing the grade of dependence/independence of the patient. The patients autoevaluates it’s capabilities, most of the time with the doctor. There are 8 sections: dressing, arising, eating, walking, hygiene, reach, grip, and activities. There are 2 or 3 questions for each section. Scoring within each section is from 0 (without any difficulty) to 3 (unable to do) [11, 12].

One of the most essential and important stage in evaluating patient progress of RA is VAS (visual analogue function scale). In RA is used to evaluate patients amount of pain throughout the treatment and stages of disease. It usually presents as a scale from 0-100 or 0-10 in which the patient and the physician evaluates overall pain [13-15].

Evolution of HAQ score

In contrast to the initial assessment, at 12 months the effect of treatment on the HAQ score was moderate in all groups (MTx monotherapy - ES = 0.57, MTx + biological - ES = 0.71, MTx + corticotherapy - ES = 0.71 and MTx + PKT - ES = 0.58).

Regardless of the applied therapy, in all 4 groups the HAQ score improved significantly at 12 months (MTx monotherapy - p = 0.007, MTx + biological - p = 0.039, MTx + corticotherapy - p = 0.002 and MTx + PKT - p =0.001). (Table 3, fig. 2)

Evolution of VAS

As compared to the initial assessment, the treatment effect on the VAS score was very good in all groups (MTx monotherapy - ES = 1.15, MTx + biological - ES = 1.38, MTx + corticotherapy - ES = 1.20 and MTx + PKT - ES = 1.23).

Regardless of the therapy applied, in all 4 groups the VAS score decreased significantly at 12 months (p <0.001). (Table 4, fig. 3)
Conclusions

In contrast to the initial assessment, at 12 months the effect of treatment on the HAQ score was moderate in all groups of treatment, with best results in MTx + biological - ES = 0.71, respectively MTx + corticotherapy - ES = 0.71. Regardless of the applied therapy, in all 4 groups the HAQ score improved significantly at 12 months.

As compared to the initial assessment, the treatment effect on the VAS score was very good in all groups, with best results in MTx + biological - ES = 1.38, followed by MTx + PKT - ES = 1.23). Regardless of the therapy applied, in all 4 groups the VAS score decreased significantly at 12 months (p < 0.001).

The following study highlights the importance of clinical treatment in keeping the symptoms of RA under control and improving patients life quality on one hand, and proving the importance of biological and physiokinetotherapy in the overall outcome.

References


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