upper limbs for many weeks results in changes in both the peripheral musculature and the central nervous system. It is well known that common complaints after upper limb fractures include weakness, pain, and stiffness; therefore, pain management is important in the early stages of the rehabilitation of upper limb fractures.

**Objectives:** This pilot study aimed to investigate the efficacy of graded motor imagery (GMI) on pain, range of motion (ROM), and function in patients with posttraumatic stiff elbow.

**Methods:** Fourteen patients with posttraumatic stiff elbow (6 women, mean age: 45.42 ± 11.26 years, mean body mass index: 24.29 ± 3.38 kg/m² and mean duration of immobilization: 4.75 ± 1.03 weeks) were randomly allocated to either GMI or control groups. The GMI group received GMI treatment in addition to a structured exercise program, and the control group received a structured exercise program (two days per week for six weeks) (Figure 1). The assessments included pain at rest and during activity using the visual analog scale (VAS), elbow active ROM with a digital goniometer (Baseline Evaluation Instrument, Fabrication Enterprises, Inc., White Plains, NY), and upper extremity functional status using the Disability of the Arm, Shoulder and Hand Questionnaire (DASH). The assessments were performed at baseline and after the 6-week intervention.

![Figure 1. Graded motor imagery performed with mirror box](image-url)

**Results:** After the 6-week intervention, there was a significant increase in elbow flexion-extension ROM and supination-pronation ROM, and improvement in DASH score in both groups (p<0.05). However, improvement in VAS-rest and VAS-activity was significantly higher in the GMI group than the control group (p=0.03 and p=0.01, respectively).

**Conclusion:** A conservative treatment program consisting of GMI treatment in addition to a structured exercise program applied twice a week for 6 weeks, has been found more effective in decreasing pain in the posttraumatic stiff elbow. It could be concluded that GMI is an effective treatment method for elbow fracture in patients with predominant elbow pain.

**References:**


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**Disclosure of Interests:** None declared

**DOI:** 10.1136/annrheumdis-2020-eular.2660
Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tr>
<td>Age (years)</td>
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<td>60</td>
<td>44.98</td>
<td>11.04</td>
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<tr>
<td>Height (cm)</td>
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<td>150.00</td>
<td>165.61</td>
<td>8.88</td>
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<tr>
<td>Weight (kg)</td>
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<tr>
<td>VKI (kg/m²)</td>
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<td>49.00</td>
<td>27.54</td>
<td>6.02</td>
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</tbody>
</table>

Table 2.

<table>
<thead>
<tr>
<th>PsAQoL</th>
<th>HADS-A</th>
<th>HADS-D</th>
<th>HAQ</th>
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<tbody>
<tr>
<td>BETY-BQ</td>
<td>r = 0.826**</td>
<td>r = 0.618**</td>
<td>r = 0.507**</td>
</tr>
<tr>
<td></td>
<td>p &lt; 0.001</td>
<td>p &lt; 0.001</td>
<td>p &lt; 0.001</td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Results: A significant decrease in walking pain (p = 0.002) and difficulty walking (p = 0.02) was found with the use of orthoses. The variations in 10 meter walk test and dynamic baropodometric parameters were not significant (p>0.05).

There were no significant correlations between pain and difficulty walking, the progression of RA, the duration of foot damage and the functional impact measured by the HAQ.

Conclusion: Thermoflexible foot orthoses significantly reduced pain and difficulty walking. The absence of factors associated with pain and difficulty walking could possibly be related to the small sample size.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.5698

Background:

Objectives: Our aim was to study the effect of biofeedback (BFB) training on the locus of control in patients suffering from rheumatoid arthritis (RA), and to justify the use of this method in the complex treatment of the disease.

Methods: 40 RA patients hospitalized in the rheumatology department were examined. The average age of patients was 48.6 years ± 7.73 years (from 30 to 70 years), women accounted for the majority = 26 (65.0%), the average duration of the disease was 12 years ± 3.44 years. We use J. Rotter’s Locus of Control Scale in E.F.Bazhin adaptation. RA patients were divided into two groups: the main (20 patients) and control (20 patients). Patients of the main group received complex therapy 12 sessions of BFB training, mainly based on the parameters of the brain's electrical activity — EEG relaxation using the ReaKor® psychophysiological rehabilitation complex manufactured by Medicom MTD (Targanroc).

Results: We revealed externality in RA patients in the general field (3.03 ± 0.3) as well as in the field of relation to the disease (3.86 ± 0.23) and in the field of production relations (3.43 ± 0.25). After BFB trainings, an increase in internal control was observed on the scales of the general sphere (p < 0.05) and attitude to the disease (p <0.01) in patients of the main group. In the group of patients receiving conventional treatment, the dynamics of the results was unreliable.

Conclusion: It should be noted that the locus of control (or subjective control) is a quality that characterizes a person’s tendency to attribute responsibility for the results of his activity to external forces, or to his own abilities and efforts. External control is manifested when people prefer to shift responsibility for important events of their life to external circumstances, and external forces (bosses, colleagues, etc.). In the field of the attitude to the disease, externality is manifested when patient behaves passively, and believes that he cannot influence the course of the disease in any way, shifting all responsibility for the treatment results to medical staff, which can lead to non-compliance with the treatment regimen and an increase in the level of anxiety and depression, decreased self-esteem. The onset of the disease and its associated social consequences (disability, loss of social roles, etc.) can cause a negative mental state of learned helplessness. Learned helplessness is defined as a condition that occurs as a result of uncontrollable, mainly negative events, which manifests itself in violations of emotional, motivational and cognitive processes. In other words, RA patient suffering from this condition expects treatment failures and reduces control over compliance with the treatment regimen. BFB therapy can be used in order to correct and prevent the state of learned helplessness by increasing the level of internality.

It is assumed that increasing internality in the BFB process is associated with teaching the patient the skills of self-regulation of physiological processes. The mechanisms of BFB therapeutic effect are not only changes in physiological parameters (improvement of cerebral and peripheral blood flow, muscle relaxation, and improvement of sleep) but also in a shift in the locus of control from external to internal, which can increase compliance, reduce neurotic complaints, mobilize volitional potential and improve patient self-esteem.

As a result of BFB course, an increase in the internality was noted in patients on the scales of the general sphere and the sphere of attitude to the disease. It is advisable to use the BFB to increase the compliance and effectiveness of complex treatment of RA patients.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.1571

FRIO622-HPR IMPACT OF A PHARMACIST’S INTERVENTION ON THE KNOWLEDGE OF BIOLOGICS AND ADHERENCE IN PATIENTS WITH SPONDYLOARTHRITIS: A Randomized, Open-label, Controlled Trial

L. Gutermann1, S. Dumas2, C. López-Medina3, L. Boissinot4, C. Cottereau5, V. Perret6, A. Motto7, O. Conort7, M. Dougados7, Hôpital Marie Lannelongue, Pharmacy, Le Plessis Robinson, France; 6Hôpital Cochin - APHP, Pharmacy, Le Plessis Robinson, France

Friday, 05 June 2020

DOI: 10.1136/annrheumdis-2020-eular.1571

Results: A significant decrease in pain (p = 0.002) and difficulty walking (p = 0.02) was found with the use of orthoses. The variations in 10 meter walk test and dynamic baropodometric parameters were not significant (p>0.05).

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Disclosure of Interests: None declared

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