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.

![Graded motor imagery performed with mirror box](image)

**Figure 1.** Graded motor imagery performed with mirror box

**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:**

**Acknowledgments:** The present work was supported by the Scientific Research Projects Coordination Unit of Istanbul University-Cerrahpasa (Project No. TDK-2019-33997).

**Disclosure of Interests:** None declared

**DOI:** 10.1136/annrheumdis-2020-eular.2660