

USEFULNESS OF EXERCISE PROGRAM WITH THE HUBER SYSTEM – COMPARISON WITH CLASSIC EXERCISE PROGRAM FOR PATIENTS WITH CHRONIC LOW BACK PAIN

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BACKGROUND

Chronic low back pain (CBLP) is a common complaint in general population. A variety of therapies are used in CBLP including exercise therapy(1). Different exercise programs are used in CBLP but there is insufficient evidence to support the efficacy of a certain program. HUBER® is a new rehabilitation device with complex actions on different muscular groups, postural equilibrium and mobility improvement. During exercises, HUBER® records variations of effort and co-ordination performance(2).

OBJECTIVES

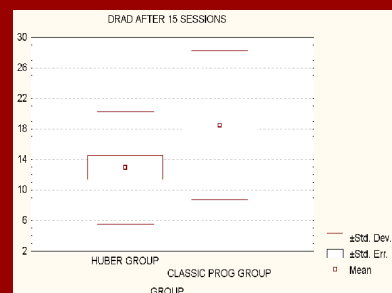
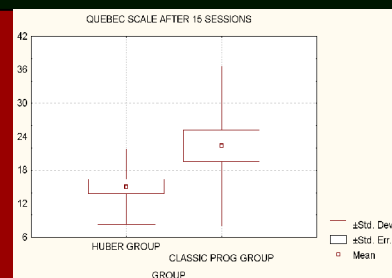
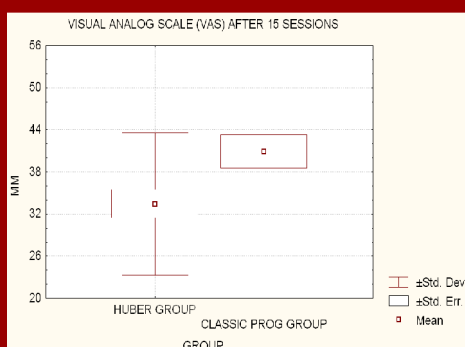
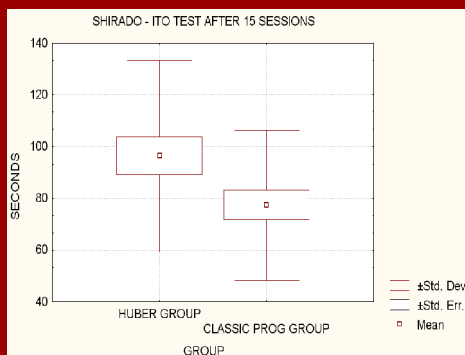
To compare the program of exercises performed with the Huber system with the classic exercise program in patients with chronic low back pain.

METHODS

We studied 50 patients with CLBP (28 women and 22 men). The patients were randomly assigned in two groups of 25 patients. One group performed the classic exercise program and the other group used the Huber device. The patients were evaluated at the beginning of the study, after 8 exercise sessions, after 15 exercise sessions and 2 months after finishing the exercise program using physical examination, visual analogue scale (VAS) for pain, Schober test and finger – floor distance for spinal mobility, Biering – Sorensen test and Shirado – Ito test for the strength of trunk muscles, the Quebec scale for functional status and DRAD scale for life quality. We used a variant of SPSS11 program for statistical analysis.

RESULTS

The mean age was 39.64 +/- 10.85 years for the Huber group and 41.16 +/- 9.31 years for the control group (p = NS). The evaluation after 8 exercise sessions and also after 15 sessions showed significant improvement in both groups (p < 0.05) according to pain, Biering – Sorensen test, Shirado – Ito test, Quebec scale and DRAD scale. The Huber group had a more important improvement for VAS, Shirado – Ito test, Quebec scale and DRAD scale compared to control group (p < 0.05) after 15 sessions and also for Quebec scale and DRAD scale at the 2 months follow-up. There were not significant adverse reactions in the two groups.



CONCLUSIONS

The exercise program with the Huber device was effective, well tolerated, and induced significant improvement in patients with chronic low back pain. Compared with classic exercise program, the program using the Huber device induced significant more improvement for pain, trunk flexors muscles strength, functional status and life quality during the program and at the 2 months follow-up. This new technique could be an useful tool in rehabilitation programs for patients with CBLP.

REFERENCES

1. Joines J. Chronic low back pain: progress in therapy. *Curr Pain Headache Rep.* 2006 Dec; 2006;10(6):421-5.
2. Maertens de Noordhout B. Utilisation of Huber system in Rehabilitation Medicine. In: *Congress of French Society of Rehabilitation Medicine*, ed. Dijon; 2005.