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EFFECTIVENESS OF THE INTRODUCTION OF PROPRIOCEPTIVE TRAINING IN THE EXERCISE PROGRAMS FOR KNEE OSTEOARTHRITIS

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Rheumatic diseases are a major social and economic problem, with increasing negative impact on public health. The prevalence of Knee Osteoarthritis among older people is increasing and it seems to be associated with proprioceptive deficits.

OBJECTIVE

To investigate the effectiveness of the introduction of proprioceptive training in the current program guidelines-eight week duration (Arthritis Foundation, 2009), on range of motion, pain and stiffness of the knee, as well as in physical function and quality of life of clients with knee

METHODS

- Design of quasi-experimental study with independent samples;
- Controlled study without randomization, with a convenience sample of 42 subjects, and "single-blind" (Hicks, 2009);
- Subjects in the experimental group (n = 21) underwent the current exercise program guidelines (Arthritis Foundation, 2009) with the additional proprioceptive training, whilst the control group (n = 21) attended the current exercise program guidelines (Arthritis Foundation, 2009).

Population and sample

- Subjects with clinical and radiological diagnosis of knee OA and aged ≥ 50 years.

RESULTS

The sample consisted of 42 caucasian subjects, mostly females (83.3 %) with an average age of 72.1 years (SD=7.23).

Table 1: Evolution of Variables

Outcomes	Median (Week 0)	Median (Week 8)	Min±Máx (Week 0)	Min±Máx (Week 8)	Mean±standard deviation (Week 0)	Mean±standard deviation (Week 8)	Value p
Goniometer							
ROM Flexion (degree)	115,00	120,00	70±135	85±140	110,24±16,92	114,52±14,82	**0,001(*)**
ROM Extension (degree)	-10,00	0,00	-20±0	-10±0	-7,14±6,04	-2,62±3,75	**0,002(*)**
KOOS (0-100)							
Pain	50,00	67,00	25±64	39±86	46,48±12,14	68,14±10,06	**0,000(**)**
Stiffness	43,00	68,00	18±75	39±93	48,86±18,74	66,90±17,26	**0,000(**)**
Function Activity of daily living	38,00	65,00	24±76	44±96	42,14±13,36	65,57±14,90	**0,000(**)**
Function Sport / leasure	0,00	20,00	0±15	0±50	3,81±4,98	22,62±13,93	**0,000(**)**
Quality of life	25,00	44,00	0±81	0±88	25,33±17,43	43,95±20,72	**0,002(*)**

ROM - "Rang Of Motion"; KOOS - Knee Injury and Osteoarthritis Outcome Score; Min – minimum; Máx – maximum; (*) p<0,01; (**) p<0,0001.

Comparison of the evolution of groups

There was a significant improvement, compared to the exercises in the soil, the level of KNEE EXTENSION ROM (p <0.05) and FUNCTION IN SPORTS / LEASURE (p <0.0001).

CONCLUSION

- The results obtained suggest that exercise training introduces a positive effect on the most relevant symptoms, function and quality of life of subjects with knee osteoarthritis.
- The introduciton of of proprioceptive trainning appears to additionally improve some of the most relevant outcomes for patients with KO, according to the Arthritis Foundation, 2009: knee extension range of motion, sports and leasure and quality of life. For this reason we suggest that its introduction in the exercise plan should be considered.

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