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CLINICAL PRACTICE GUIDELINES FOR PERIOPERATIVE REHABILITATION IN TOTAL KNEE ARTHROPLASTY BY SOFMER (FRENCH PHYSICAL MEDICINE REHABILITATION SOCIETY) AND SOFCOT (FRENCH SOCIETY OF ORTHOPAEDIC SURGERY)

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Purpose: Perioperative rehabilitation seems to be effective for final results of total knee arthroplasty, but clinical practice guidelines concerning this kind of rehabilitation are lacking. The aim of this study was to develop clinical practice guidelines concerning perioperative rehabilitation for total knee arthroplasty.

Methods: The SOFMER 3-stage method for developing guidelines involves systematic literature review, collection of information about professional practice and final scientific committee review, including patient opinion. Questions were asked about preoperative multidisciplinary rehabilitation, predictive criteria for transfer of patients to a rehabilitation ward after total knee arthroplasty and early postoperative rehabilitation.

Results: Preoperative rehabilitation for patients undergoing total knee arthroplasty has benefit in terms of length of hospital stay and discharge destination (to a rehabilitation ward or home). A preoperative rehabilitation program comprising at least physical therapy and education is recommended. Multidisciplinary rehabilitation, comprising occupational therapy and education, is desirable for the most fragile patients because of major disability, comorbidity, or social problems. The main criteria determining transfer to a rehabilitation ward are demographic criteria such as older age or female sex; psychosocial and environmental criteria such as living alone, feeling unable to return home directly (preoperative education could modify this criterion); and surgeon advice based on the patient's preoperative clinical and functional status. Early continued passive motion does not seem to increase the frequency of complications and seems to help with rapid recovery of the joint range of motion.

Conclusions: Complementary studies must be undertaken to define the minimum perioperative rehabilitation program for total knee arthroplasty. Economic criteria such as length of stay in hospital, rehabilitation costs and patient satisfaction must be considered.

EVIDENCE FOR THE EFFECTIVENESS OF BRACING IN LOWER-LIMB OSTEOARTHRITIS BY SFR (FRENCH SOCIETY OF RHEUMATOLOGY) AND SOFMER (FRENCH PHYSICAL MEDICINE AND REHABILITATION SOCIETY)

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Purpose: OARS1 and EULAR recommendations for knee and hip osteoarthritis recommend nonpharmacological treatment, particularly braces. The aim of this study was to develop clinical practice guidelines concerning the use of bracing – rest orthosis, knee sleeves and unloaded knee braces – for lower-limb osteoarthritis.

Methods: The SOFMER (French Physical Medicine and Rehabilitation Society) methodology, associating a systematic literature review, collection of everyday clinical practice, and external review by multidisciplinary expert panel, was used.

Results: Few high-level studies of bracing for lower-limb osteoarthritis were found. No evidence exists for the effectiveness of rest orthosis. Evidence for knee sleeves suggests that they decrease pain in knee osteoarthritis but their use is associated with fifty-five patients. These actions do not appear to depend on a local thermal effect. The effectiveness of knee sleeves for disability is not demonstrated for knee osteoarthritis. Short- and mid-term follow-up indicates that valgus knee bracing decreases pain and disability in medial knee osteoarthritis, appears to be more effective than knee sleeves, and improves quality of life. Proprioception, quadriiceps strength, and gait speed are improved, and decreases compressive loads in the medial femoro-tibial compartment. However, results of response to valgus knee brace remaining inconsistent; discomfort and side effects can result. Thrombophlebitis of the lower limbs has been reported with the braces. Braces, whatever kind, are

infrequently prescribed in clinical practice for osteoarthritis of the lower limbs.

Conclusions: Modest evidence exists for the effectiveness of bracing – rest orthosis, knee sleeve and unloaded knee braces – for lower-limb osteoarthritis, with only low level recommendations for its use. Braces are prescribed infrequently in French clinical practice for osteoarthritis of the lower limbs. Randomized clinical trials concerning bracing in lower-limb osteoarthritis are still necessary.

COST-EFFECTIVENESS OF HOME-BASED AND CLINICAL-BASED PHYSIOTHERAPY PROGRAMS IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Purpose: Osteoarthritis (OA) is the most common joint disorder in a larger number of people older than 65 years. Several recent longitudinal studies conclude that carefully controlled therapeutic exercise programs in OA designed primarily to address. The purpose of this study was to evaluate the cost effectiveness of home-based and clinical-based physiotherapy programs for patients with OA.

Methods: Patients were randomly allocated either home-based (n=29) (mean age: 54.3±8.1 years) or clinical-based (n=29) (mean age: 55.2±7.4 years) physiotherapy program. A total of 58 patients with bilateral knee OA were participated in the study. Clinical-based group received neuromuscular electrical stimulation (NMES), ice application, and exercises. Both groups were given an individualized exercise program for reducing pain, improve balance, and function. The patients in both groups also received 20 minutes of cold packs and muscle strengthening exercises. Treatment programs were composed of 5 times weekly for 4 weeks/20 sessions. Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Functional Squat System-Proprioceptive Test, peak torque (PT) measurements of the knee extensors and flexors at 180°/sec on an isokinetic dynamometer (ISOMED 2000), timed performance test (timed up&go) (TUG) and visual analogue scale for the intensity of pain were used to quantify the variables.

Results: The results of pre and post treatment for both group demonstrated the significant improvement in pain and function (p<0.05). No differences found in body weight, body mass index and body fat percent in both groups (p>0.05). In home-based group proprioceptive abilities were not changed significantly (p>0.05) and isokinetic muscle strength in both legs in clinical-based group were not showed any significance (p>0.05). When analysing differences between groups WOMAC (t=2.27, p=0.026), proprioception (t=−2.25, p=0.027), pain at right knee (t=2.94, p=0.04) and pain at left knee (t=2.01, p=0.04) results were significantly different and clinical-based group showed better results.

Conclusions: Both clinical and home-based programs were improved pain and function in patients with knee OA but the cost of delivering the exercise program is unlikely to be offset by any reduction in clinical based programs. In conclusion, home-based program was a cost-effective treatment strategy in patients with osteoarthritis pain.

PHYSIOTHERAPY AS A TREATMENT FOR KNEE OSTEOARTHRITIS

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Purpose: Patients with knee osteoarthritis (OAK), even in low grades and with minimum symptoms and signs, had muscle weakness and functional limitation in comparison with the matched healthy subjects. Quadriceps weakness is common in patients with OAK, and the American College of Rheumatology recommended strength training and aerobic exercise for the treatment of the OAK. The objective of the present study was to investigate the therapeutic effects of strengthening the quadriceps muscles in patients with symptomatic medial OAK, Kellgren y Lawrence grade II, using isometric and isokinetic exercise.

The patients were separated into two groups; the patients in Group 1 (n=25) were treated with isokinetic muscle-strengthening exercise and the patients in Group 2 (n=30) received isometric muscle-strengthening exercise. The instruments include an isokinetic dynamometer, a visual analog scale and an ambulation speed. Disease severity, pain, Lequesme index, WOMAC and walking time were compared before and after the treatments. The exercises were carried out three times a week for twelve weeks, starting with 15 minutes duration.

Results: Following before training quadriceps torque increased, isokinetic exercise (Group 1) caused the greatest increase of walking speed while isometric exercise (Group 2) had the greatest effect improving the function