AQUATIC EXERCISE FOR THE TREATMENT OF KNEE AND HIP OSTEOARTHRITIS

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A B S T R A C T

Background

Clinical experience indicates that aquatic exercise may have advantages for osteoarthritis patients.

Objective

To compare the effectiveness and safety of aquatic-exercise interventions in the treatment of knee and hip osteoarthritis.

Criteria for considering studies for this review

We searched MEDLINE from 1949, EMBASE from 1980, CENTRAL (Issue 2, 2006), CINAHL from 1982, Web of Science from 1945, all up to May 2006. There was no language restriction.

Selection criteria

Randomised controlled trials or quasi-randomised clinical trials.

Data collection and analysis

Two review authors independently selected trials for inclusion, assessed the internal validity of included trials and extracted data. Pooled results were analyzed using standardized mean differences (SMD).

Main results

Thre is a lack of high-quality studies in this area. In total, six trials (800 participants) were included. At the end of treatment for combined knee and hip osteoarthritis, there was a small-to-moderate effect on function (SMD 0.26, 95% confidence interval (CI) 0.11 to 0.42) and a small-to-moderate effect on quality of life (SMD 0.32, 95% CI 0.03 to 0.61). A minor effect of a 3% absolute reduction (0.6 fewer points on a 0 to 20 scale) and 6.6% relative reduction from baseline was found for pain. There was no evidence of effect on walking ability or stiffness immediately after end of treatment. No evidence of effect on pain, function or quality of life were observed on the one trial including participants with hip osteoarthritis alone. Only one trial was identified including knee osteoarthritis alone, comparing aquatic exercise with land-based exercise. Immediately after treatment, there was a large effect on pain (SMD 0.86, 95%CI 0.25 to 1.47; 22% relative percent improvement), but no evidence of effect on stiffness or walking ability. Only two studies reported adverse effects, that is, the interventions did not increase self-reported pain or symptom scores. No radiographic evaluation was performed in any of the included studies.

Authors' conclusions

Aquatic exercise appears to have some beneficial short-term effects for patients with hip and/or knee OA while no long-term effects have been documented. Based on this, one may consider using aquatic exercise as the first part of a longer exercise programme for osteoarthritis patients. The controlled and randomised studies in this area are still too few to give further recommendations on how to apply the therapy, and studies of clearly defined patient groups with long-term outcomes are needed to decide on the further use of this therapy in the treatment of osteoarthritis.