

**Hoeksma HL, Dekker J et al. Comparison of Manual Therapy and Exercise Therapy in Osteoarthritis of the Hip: A Randomized Clinical Trial. Arthritis Rheum 2004;51:722-729.**

Design: Randomized clinical trial

Purpose of study: To determine the effectiveness of a manual therapy program compared with an exercise therapy program in patients with osteoarthritis (OA) of the hip

Population/sample size/setting:

- 109 patients (76 women, 33 men, mean age 72) with American College of Rheumatology (ACR) defined osteoarthritis of the hip treated at a university hospital in Amsterdam

- Eligibility criteria were ACR assessment by referring physician
- Exclusion criteria were symptoms in both hips, fear of manipulative therapy, age <60 or >85, severe low back complaints, or severe cardiopulmonary disease

Interventions:

- Two treatment groups created by permuted block randomization: manual therapy (n=56) and exercise therapy (n=53)
- Stratification by severity of x-ray Kellgren-Lawrence OA scale was done prior to randomization; K-L grade 0 and 1 (n=22) and K-L grade 2 and 3 (n=87)
- Manual therapy was administered by 3 licensed manual therapists; sessions were twice weekly for 5 weeks (9 sessions); muscle stretching, traction of hip joint, and traction manipulation (high velocity thrust) were done each session
- Exercise therapy was adjusted to individual symptoms; sessions were twice weekly for 5 weeks (9 sessions); this included exercises for muscle function, length, joint mobility, pain relief, and walking ability

Outcomes:

- Primary outcome was general improvement reported by patient on a 6 point Likert scale from "much worse" to "complete recovery" at 5 weeks from start of study; later measures were not done due to concerns about recall accuracy
- SF-36 body pain, physical function, and role physical function were used to assess quality of life
- Hip function was evaluated with Harris Hip Score and walking time (time to walk 80 meters with 7 turning points), measured by lead author who was kept unaware of treatment group assignment
- 18 patients (9 in each group) had total hip arthroplasty during the study: 14 between weeks 5 and 17, and 4 between weeks 17 and 29
- Primary outcome at 5 weeks favored manual treatment group, which had success rate of 81% (free of complaints, much improved, or improved) vs. 50% for exercise group

- Harris hip score and walking speed also showed advantages in favor of manual treatment over exercise group

Authors' conclusions:

- Manual therapy seems to be a suitable treatment option for hip OA
- Amount of exercise treatment (9 sessions) may not have been adequate to achieve the full benefit of exercise; the number of sessions was constrained to be the same in both groups by the study protocol

Comments:

- A large number of secondary outcomes are reported; the primary outcome is the five-week self-report measure of global improvement
- Table 2 reports an odds ratio for improvement of 1.92 in favor of exercise; the crude odds ratio is actually greater (4.3); the odds ratio of 1.92 may be after adjustment for other variables, but the model is not fully specified and is not clear
- Design (randomization, analysis, and single blinding) are adequately done
- The Harris hip score was a secondary outcome but does add a consideration of a functional set of activities of daily living to the more global but nonspecific overall improvement scale which was the primary outcome

Assessment: adequate for some evidence that in the setting of hip OA with Kellgren-Lawrence grades 0 through 3, a short 5 week course of 9 sessions of manual therapy yields better overall improvement and hip function in daily activities than a supervised exercise program of similar duration and number of supervised sessions