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Letter to the Editor

Manual Therapy for Knee Osteoarthritis

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Osteoarthritis (OA) can be defined as degenerative articular disease that affects the cartilage, which is the underlying bone consisting of soft tissues and synovial fluids [1]. The changes occurring due to the OA result in alteration of the biomechanical properties. It also results in fluctuations in the tensile, compressive, shear properties as well as hydraulic permeability of the cartilage. Not only this but also it increases the stiffness of the subchondral bone [2]. There are so many advanced and highly effective suggestions to manage osteoarthritis. For example, guidelines presented by American College of Rheumatology, and European League of Associations of Rheumatology. The focus on relieving pain and stiffness is necessary. Also there is a need to improve physical function as important therapy goals [1, 3].

Now and then physical therapists use procedures of manual therapy as part of comprehensive rehabilitation programs. These procedures aim to help patients regain joint mobility and function. The American Physical Therapy Association [4] has defined mobilization/manipulation as a manual therapy technique that comprises of a continuum of skilled passive movements to the joints. It is also related to soft tissues and (or both) is applied with different speed and amplitude, including one of the smallest amplitudes/high velocities of therapeutic movement.

Not only this but also Haldeman [5] gave the definition of manual therapy as the therapeutic application of manual force which includes the processes of using hands to mobilise, adjust, manipulate, apply traction, massage, stimulate and influence the function of a patient's health. It is, thus, necessary to know that knee OA causes or aggravates by the loss of joint mobility. This results in manual therapy to be used as primary treatment for restoring normal joint mechanics. Therefore, the improvement of patient's symptoms of stiffness, joint hypomobility, chronic pain and joint impairment is necessary [6].

Several evidences reveal that a combined approach of active and passive mobilization results in better and more lasting outcomes.

Two trials of manual physiotherapy for knee OA were conducted by Deyle et al. [7, 8]. In the first trial, the group performed multimodal intervention of manual therapy plus stretching, strengthening, range of motion and home exercises showed clinically significant superior outcomes compared with placebo control group [7]. In the second (one year follow-up) trial, the finding that manual therapy with supervised exercise might lead to greater symptomatic relief was confirmed comparing the patients to the group which was only given a home exercise programme [8]. The two trails were found significant improvement in six-minute walks and the Western Ontario and McMaster Universities Osteoarthritis (WOMAC) scores. It was observed that the people in the first group were taking lesser medicines to reduce the rate of their pain, and were satisfied with the overall outcomes of treatment. Concluding the fact we can say that several additional clinical visits for the application of manual therapy and supervised exercise need to be included in the treatment. . It was concluded that the treatment along with the home programme should include additional clinical visits for the application of manual therapy and supervised exercise.

Fish et al. [9] examined the relative effectiveness of knee joint mobilization and capsaicin cream for knee OA. It is noticeable that capsaicin cream was demonstrated as an alternative to the placebo for treating the painful diseases such as knee OA, and general OA [10]. Fish et al. [9] showed favorable responses in both treatment groups, with no statistically significant difference between the results of them. According to the results presented by Fish et al. [9], it seems that the mobilisation of the knee joint is better than placebo for treating knee OA.

Alamri [11] reported that manual therapy might improve treatment outcomes, particularly in range of motion in a comparative study between a group receiving manual therapeutic techniques and supervised exercise for a period of four weeks and the other group receiving only supervised exercises. Although both groups showed significant improvements in WOMAC scores and the visual analog scale (VAS), larger significant results in range of motion was demonstrated in the group receiving passive mobilization.

In point of pain control, there is supportive evidence for passive oscillatory mobilization in the treatment of knee OA. Moss et a l [12] reported that accessory mobilization of a human osteoarthritis knee joint had both an immediate local and a more widespread hypoalgesic effect. In a study of 38 patients with knee OA and mild or moderate knee pain, those receiving passive accessory movements showed significantly higher pressure pain thresholds, locally in the knee but also more distally from the affected joints, compared with those receiving manual-contact and no-contact interventions.

Jansen et al [13] recommended that adding manual mobilization for optimizing supervised active exercise programs could be taken into account. Also, the literature review reveals that manual therapy of the knee and full kinetic chain (SI or foot) can be combined with multimodal/exercise therapy [14].

In conclusion, manual therapy is highly effective and useful treatments for knee osteoarthritis. It is a common observation that exercise therapy can be combined effectively with manual therapy. In knee OA (exterior or interior), mobilization of the tibia-femoral joint, patella, and manual traction can be taken into consideration.

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