Manual Therapy Journal Watch

COMPARISON OF EFFECTIVENESS OF MAITLAND'S MOBILIZATIONS AT END-RANGE VERSUS WITHIN PAIN-FREE JOINT RANGE OF MOVEMENT IN TREATMENT OF PATIENTS WITH FROZEN SHOULDER RCT. Khan Z, Akmal F, Asif M et al. British Journal of Multidisciplinary and Advanced Studies 2023;4(5):100–126

A total of 36 patients were divided into three groups of 12. They were between 30–50 years old, were diabetic and had symptoms that affected activities of daily living that had lasted for more than 3 months.

Group A received Maitland grade 3 or 4 mobilisations dependant on the patient's tolerance for 3 sets of 10 repetitions, with 1 minute rest between sets, 3 times a week for 4 weeks.

Group B received similar but at grades 1 or 2 plus passive proprioceptive neuromuscular facilitation patterns in a supine position during the final 3 minutes of each treatment session while operating in the pain-free zone and 2 minutes of Codman pendulum movements. Each of these exercises was done for 3 sets of 10 reps with a minute between sets.

Group C received an exercise regimen of wand, pulley, finger ladder, and Codman's pendulum activities, as well as active and active aided ROM exercises, isometric exercises, and pectoral stretching as a home exercise programme at least twice each day.

The results showed that the greatest improvement in post-intervention ROM was in group A, the high grade mobilisation group, although the ROM of all groups improved.

OPEN

Co-Kinetic comment

Manual therapy fans can take this as a win but the study is short on important details such as the exact exercise protocol and the directions of the mobilisation describing it only as "the therapist adjusts the direction or intensity of mobilization if pain negatively affects how the procedures are carried out", which is odd given that they devote pages to the statistical review of the data.

SPORTS MASSAGE THERAPY ON THE REDUCTION OF DELAYED ONSET MUSCLE SORENESS: A SYSTEMATIC REVIEW AND META ANALYSIS. Yanitamara DL, Perdana SS, Azizah AN. Malahayati International Journal of Nursing and Health Science 2023;6(4) doi: 10.33024/minh.v6i4.12370

OPEN

The aim of this study was to determine whether sports massage can reduce delayed onset muscle soreness (DOMS) and provide recovery effects. PubMed and ScienceDirect were searched using a PICO strategy. Population: people with DOMS. Intervention: sport massage. Comparison: control treatment. Outcome: pain reduction. Keywords in this article search were "DOMS" AND "Recovery" AND "Sport massage." The inclusion criteria in this study were full-text articles with a randomised control trial research design. Eight articles were rereviewed. The results showed that sports massage could not reduce DOMS effectively and significantly.

Co-Kinetic comment

Never let it be said that we only report studies that are positive towards our favourite techniques. This one isn't. The fact that it is the opposite finding to a load of previous studies does not affect our neutral stance.

REVITALIZING PERFORMANCE: EXPLORING THE INFLUENCE OF SPORTS MASSAGE AND PNF STRETCHING ON LACTIC ACID RECOVERY IN FEMALES FUTSAL ATHLETES. Zubaida I, Dhani DP, Anugrah SM et al. Journal Sport Area 2023;8(3):310–317

Twenty athletes aged 18 or 19 years were divided into two groups (*n*=10 for each group). Both were subjected to a 30-minute anaerobic exercise session followed by either a 15-minute sports massage session or a similar length session of proprioceptive neuromuscular facilitation (PNF) stretching. Blood samples were taken before and after the exercise and the interventions. The results showed an increase in lactic acid after anaerobic exercise in both groups. The massage group experienced a significant decrease in lactic acid compared to the PNF group which did not experience a significant decrease.

OPEN

Co-Kinetic comment

This paper is short on detail. There is no description of the massage or PNF protocol. The massage did remove lactic acid but this was proved years ago by earlier research. However, other studies have shown that graded exercise in the form of a cool down removes lactic acid much quicker than massage. Perhaps the last word on this should go to Albert Moraska, one of the leading researchers in the field of massage, who stated in a 2011 paper, "from a simple practical standpoint, lactate clearance after massage does not warrant investigation."

EFFECTS OF THE FOAM MASSAGE ROLLER ON VEGF-A AND FGF-2 BLOOD LEVELS IN YOUNG MEN. Roslanowski A, Partynska A, Ratajczak-Wielgomas K et al. in vivo 2023;37(5):2057–2069

The aim of this study was to examine whether the use of the foam roller massager for lower limb muscles affects VEGF-A and FGF-2 levels in young men. A total of 60 healthy military recruits were randomly divided into an experimental group (*n*=40) who performed self-massage of the lower limbs using a foam roller and a control group (*n*=20) who did not perform massage. Massage was applied to lower limb muscles 4 times a week for 7 weeks using a hard irregular ridged roller 33cm in length and 14cm in diameter. The sequence was massage of the posterior aspect of the lower leg (triceps surae muscle), massage of the posterior aspect of the thigh (biceps femoris muscle, semitendinosus muscle, semimembranosus muscle), massage of the medial aspect of the thigh (adductor longus, brevis and magnus), massage of the lateral aspect of the thigh (biceps femoris and quadriceps femoris muscles), massage of the gluteal region (gluteus maximus muscle), massage of the anterior aspect of the thigh (quadriceps femoris muscle) performed on each leg separately for 9 minutes.

Blood was collected before the experiment and after weeks 1, 3, 5 and 7.

The results showed that there was a significant increase in VEGF-A serum levels in the massage group compared to the control. No significant changes in serum FGF-2 levels were found.

Co-Kinetic comment

Although the massage protocol is well described, there is no mention of what the control group did other than to say no massage. Vascular endothelial growth factor A (VEGF-A) stimulates a range of actions that promote angiogenesis – and thus muscle regeneration – so increasing it is a good thing. Fibroblast growth factor 2 (FGF-2) is involved in cell growth and tissue repair.

A COMPARATIVE STUDY OF THE EFFICACY OF INSTRUMENT-ASSISTED SOFT TISSUE MOBILISATION AND MASSAGE TECHNIQUES IN PATIENTS WITH PATELLOFEMORAL JOINT PAIN. Liu Y, Wang Y. Frontiers in Medicine 2023;10:1305733

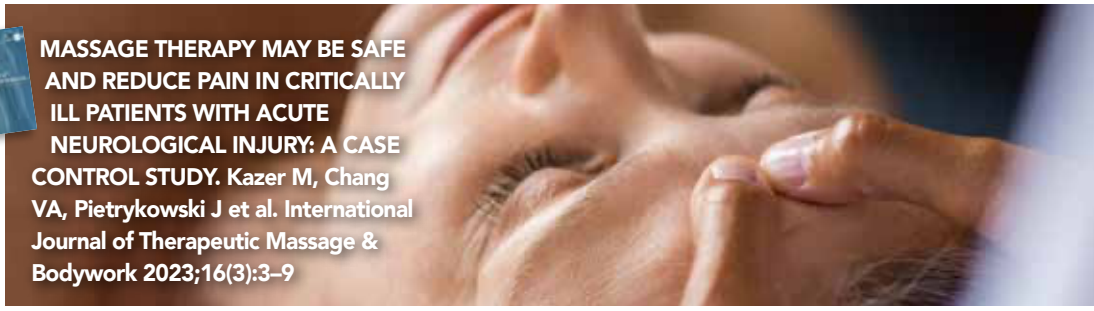
This study set out to compare the clinical efficacy of instrument-assisted soft tissue mobilisation (IASTM) and manipulative therapy. It is a randomised double-blind controlled intervention design whose subjects had been diagnosed with patellofemoral pain syndrome.

The intervention group (*n*=13) underwent IASTM treatment, while the control group (*n*=12) received Tui na manipulation therapy for twice a week, with a 2–3 day interval between each session, for a total of 4 weeks.

There was no significant difference in the basic information of the two intervention groups. After the first treatment and 4 weeks of treatment, the Lysholm knee function score in both groups significantly improved indicating that both interventions can improve the function of patients' lower limbs. The score was greater in the IASTM group after 4 weeks of treatment, indicating that its improvement in functional performance is superior. Both groups showed significant improvement in knee joint pain after the first treatment and 4 weeks of treatment, with the IASTM group having a lower VAS pain scale and better pain improvement after 4 weeks of treatment. The strength of the two intervention groups significantly increased after the maximum isometric muscle strength test of the lower limb extensor muscles before and after four weeks of treatment. On a modified Thomas test, the extension angle, deviation angle and hip abduction angle of the tested legs in the two intervention groups were significantly reduced indicating an improvement in lower limb joint mobility.

Co-Kinetic comment

Tui na manipulation is an ancient Chinese body work system which incorporates both a philosophy of energy imbalance and manual pressure techniques using similar points to acupuncture along with rubbing and kneading of the tissue. IASTM is often used to treat musculoskeletal conditions by using tools to apply friction type techniques across the skin. In this study both interventions work, with IASTM coming out better in the short- to medium-term post-trial period. Give them a go, the paper is detailed so you can follow the treatment plan but don't spend a fortune on tools. The things in your cutlery draw will work just as well.



MASSAGE THERAPY MAY BE SAFE AND REDUCE PAIN IN CRITICALLY ILL PATIENTS WITH ACUTE NEUROLOGICAL INJURY: A CASE CONTROL STUDY. Kazer M, Chang VA, Pietrykowski J et al. International Journal of Therapeutic Massage & Bodywork 2023;16(3):3–9

This was a case control study; 'cases' included patients with acute neurological injury who received massage therapy at least once during their admission to the University of California—San Diego (UCSD) Health Medical Center. Any adult patient (age >18 years) with acute brain or neurological injury (including ischemic stroke, intracerebral haemorrhage, spinal cord injury, subarachnoid hemorrhage, traumatic brain injury, brain abscess and status epilepticus) who did not meet exclusion criteria were offered massage therapy at no cost to the patient or family. Specific exclusion criteria included: (1) clinically suspected intracranial hypertension without intracranial pressure monitor in place; (2) cervical instability; (3) pregnancy; (4) hemodynamic instability requiring active titration of pressors; (5) patient agitation where safety of therapists could not be assured; (6) incarceration with inability to remove shackles; and (7) clinical or radiographic instability of the primary neurological process.

Treatment modalities were at the discretion of the massage therapist and included passive and active joint mobilisation, acupressure point activation, reflexology and Tui na. Massage therapy was variable in its application and included palm circles, gentle rubbing and Swedish massage to the back, shoulders, arms, thighs, legs and feet. The passive and active joint mobilisation was used on the wrists, hands, fingers, ankles, feet and toes. Reflexology included thumb walk on the spine and head reflexes of the big toes. Tui na kneading was used over the upper and lower extremities. Sessions lasted between 10 and 30 minutes and were tailored to the patient's level of comfort and mobilisation ability. Clinical outcomes extracted included pre- and post-massage vital signs (eg. heart rate, mean arterial pressure) with pain score. These values were measured immediately before and immediately following massage therapy. Additional clinical information extracted included delirium incidence (and if delirious, longest continuous duration of delirium during hospitalisation), ICU length of stay (LOS), hospital LOS, in-hospital adverse (eg. pneumonia) and serious adverse (eg. cardiac arrest, death) events, and discharge destination (ie. home, long-term acute care, rehabilitation, skilled nursing facility, or death/hospice). In patients with intracranial pressure monitors, pre- and post-massage measurements of intracranial pressure were noted.

'Control' patients (patients admitted to the neurocritical care service who did not receive massage therapy) were matched to the intervention group so that there were 21 pairs of patients. The mean age of the cohort was 57 years (range, 28–85 years). Females represented 52.4%.

The results showed that there was a statistically significant reduction in pain scores among patients who received massage therapy. There was no statistical difference in hospital LOS, discharge destination, in-hospital mortality, adverse events, or incidence/duration of delirium between patients who received massage therapy and those who did not. No adverse events were ascribed to the massage therapy when evaluated by blinded neurocritical care specialists.

Co-Kinetic comment

This is a major finding for massage in an acute hospital setting. It adds to other research that confirms that if nothing else, soft tissue work reduces pain in various populations. Sadly it is almost as if the medical profession doesn't believe it, hence the "may be safe and reduce pain". There is no "may" about it. It does reduce pain and it is safe because no adverse events were reported.

EFFECTIVENESS OF NEURO MOBILISATION ON PAIN, RANGE OF MOTION, MUSCLE ENDURANCE AND DISABILITY IN CERVICAL RADICULOPATHY: - A SYSTEMATIC REVIEW. Rafiq S, Zafar H, Gillani SA et al. Journal of the Pakistan Medical Association 2023;73(9):1857–1861

This is a systematic review of the usual medical databases for studies published between 2012 and 2022 looking for randomised controlled trials involving patients diagnosed with cervical radiculopathy. The diagnosis was based on clinical criteria, such as pain, numbness, tingling sensation, weakness, or through the Spurling's test. Outcome measures included at least one of assessment of neural mobilisation, pain, ROM, muscle endurance and disability. Studies comprising any diagnosis other than cervical radiculopathy and those using any treatment technique not related to physiotherapy were excluded. Methodology of the studies was assessed using the PEDro scale.

The initial search revealed 1563 studies of which 8 met all the criteria and were reviewed. Of these, 4 had a good overall quality score (6 or more on the PEDro scale), 3 had a moderate score (4–5) and 1 received a low score (<4). The conclusion was that no matter the approach or dosage used, manual therapy was successful in treating cervical radiculopathy symptoms in all investigations. However, the greatest success came from multimodal strategies that incorporate neural mobilisation treatment in the short term.

Co-Kinetic comment

As so often with systematic reviews, the final comment is along the lines of more research is needed and/or the variation in methodology between the studies does not allow for comparison. In this one, the authors complain about (among other things) concealment of data, intention of treatments analysis, lack of comparison with baseline values, inadequate follow-up and variability, and poor blinding. One did not even mention the age of the subjects. Come on researchers, follow the PEDro guidelines or similar scales and don't inflict any score under 6 on us.