Manual therapy for low back pain

I'm not robot!

Studies were categorised according to whether the intervention included spinal manipulation/mobilisation or massage/soft tissue manipulation. A total of seven RCTs on manipulation/mobilisation techniques, one systematic review and one RCT on massage therapy were included.Although systematic reviews on manipulation/mobilisation were identified and ordered for this question, they were ultimately excluded because of the heterogeneity between the included studies; studies varied on the patient population (mainly the duration of the low back pain episode), the interventions and comparators used. This meant that only a handful of RCTs within the systematic reviews were relevant to our population and guideline. The relevant RCTs were therefore instead extracted independently.The United Kingdom back pain exercise and manipulation (UK BEAM) trial (UK Back pain exercise and manipulation (UKBEAM) Trial Team., 2004) aimed to estimate the effectiveness of adding exercise, spinal manipulation to best usual care in general practice. Patients recruited from participating centres had to be aged 18–65 and have had pain everyday for the 28 days before randomisation (or 21 out of 28 days before randomisation and 21 out of 28 days before that). They also had to agree to avoid physical treatment other than trial treatments for 3 months. Exclusion criteria included cancer, osteoporosis, ankylosing spondylitis, cauda equina compression, previous spinal surgery, anticoagulant treatment and severe cardiovascular disease or inadequately controlled hypertension.A total of 1,334 patients were included in the study, with 353 randomised to a manipulation group and 338 to a ‘Best Usual Care’ control group. All patients received advice to continuing normal activities and avoiding rest, and copies of The Back Book were made available to them. Patients in the spinal manipulation package group received treatment using techniques agreed by professional representatives of chiropractic, osteopathy and physiotherapy following open consultation in the UK. Following initial assessment, manipulators chose from the agreed manual and non-manual treatment options. High-velocity thrusts were used on most patients at least once.Patients were invited to attend up to eight 20-minute sessions, if necessary over 12 weeks. Patients in the control group (the best care alone group) only received the advice everyone was given.Results showed that relative to “best usual care”, spinal manipulation improved back function by a small to moderate margin at 3 months and by a smaller but still significant margin at 1 year. It also improved disability and pain, and general physical health.This was a high quality RCT with a very low risk of biasOne randomised controlled trial aimed to determine whether osteopathic care, including manipulative therapy, would benefit patients with non-specific low back pain more than would standard allopathic care (Andersson, G. B., Lucente, T., Davis, A. M. et al, 1999). Triage nurses at a Health Maintenance Organisation in the USA identified eligible patients (i.e patients aged 20–59 years and with low back pain between 3 weeks and 6 months). Exclusion criteria included, but were not restricted to, nerve-root compression, systemic inflammatory disorder, cancer, known psychiatric or psychological illness, pregnancy, ongoing litigation and manipulative treatment in previous three weeks.A total of 178 patients were randomized into either the osteopathic treatment group (n=93) or the standard allopathic treatment group (n=85). Patients in the osteopathic treatment group received osteopathic manipulation to areas the osteopath determined to be related to the back pain. A variety of techniques were used, including thrust (manipulation), muscle energy, counterstrain, articulation, and myofascial release. The treating physician chose the techniques used. Treatment was given during four weekly visits and then through four more visits at intervals of two weeks. Standard care was provided by a physician. Treatment included analgesics, anti-inflammatory medication, active physical therapy, or therapies such as ultrasonography, diathermy, hot or cold packs, use of a corset, or TENS. No information was given on the frequency of use of the potential different interventions in the standard care group. All patients viewed a 10-minute educational video on back pain. The outcomes of interest were pain and function and patients were followed-up for 12 weeks.No significant difference in clinical outcome between standard care and osteopathic care was observed.This was a RCT with a high risk of bias.One randomised controlled trial included patients recruited from two Seattle-area primary care clinics (Cherkin, D. C., Deyo, R. A., Battié, M. et al, 1998). Patients had to have been aged 20–64 and have low back pain persisting 7 days after visiting their primary care physician. Information given in the paper suggested patients had recurring episodes of NSLBP, this is why this paper was included in the review despite patients only having pain for 7 days. A total of 321 patients were randomly assigned to the McKenzie method of physical therapy (n=133), chiropractic manipulation (n=122), or a minimal interventions (provision of an educational booklet) (n=66). In the McKenzie approach, patients were placed in one of three broad categories (derangement, dysfunction and postural syndrome). The most common method of chiropractic manipulation was used (short-lever, high velocity thrust); no other physical treatments were permitted. Patients in the chiropractic manipulation and physical therapy groups received up to 9 sessions over 5 weeks. The minimal intervention group received an educational booklet to minimise potential disappointment with not receiving treatment. The booklet discussed causes of back pain, prognosis, appropriate use of imaging studies and specialists and activities for promoting recovery and preventing recurrences. Patients were followed-up at four weeks, 12weeks, one year and two years. Results suggest there are no clear advantages of chiropractic manipulation over physical therapy. Patients receiving these treatments had only marginally better outcomes than those receiving the minimal intervention of an educational bookletThis was a well conducted RCT with a low risk of bias.One randomised controlled trial randomly allocated patients to one of 4 treatments: manipulation (n=116), physiotherapy (n=114), corset (n=109) and analgesics (n=113) (Doran, D. M. and Newell, D. J., 1975). To be included, patients had to be aged 20–50 years, have painful limitation of movement in the lumbar spine and be suitable for any of the 4 treatments. Exclusion criteria included pregnancy, significant root pain in legs, abnormal reflexes, osteoarthrosis of the hip joint, osteoporosis, previous manipulation and spondylolysis, spondylolisthesis or systemic disease. The techniques used on patients in the manipulation group were at the discretion of the manipulator. Ancillary osteopathic procedures such as mobilising and soft-tissue techniques could be included. A minimum of two treatments were given each week, and an average of six treatments per patient was actually given. Patients in the physiotherapy group could receive any treatment within the usual practice of the department except manipulation. The therapist could vary the treatment in an attempt to give patients maximum benefit with a planned minimum of two treatments each week. This resulted in an average of 7.3 physiotherapy treatments per patient. For patients in the corset group, any corset applied on the day of entry to the trial was acceptable. Each hospital decided in advance which type it would use throughout the trial. Patients in the control group (analgesic group), were given a course of 2 paracetamol tablets every four hours. The main outcome was pain.Results showed no significant differences among the four groups of patients, and the authors concluded that there was no strong reason to recommend manipulation over physiotherapy or corset.This was a RCT with a high risk of biasOne randomised controlled trial compared the effectiveness of a spinal stabilisation rehabilitation programme, manual therapy and a minimal intervention package (an education booklet) acting as the control intervention (Goldby, Lucy. Jane., Moore, Ann. P., Doust, Jo. et al, 2006). Patients were recruited from a UK hospital physiotherapy department; they had to have chronic low back disorder with the current episode lasting a minimum of 12 weeks, had to be aged between 18 and 65 years and be able to read and write English. Exclusion criteria included nonmechanical pain, spinal stenosis, spondylolisthesis, inflammatory joint disease, present or past metastatic disease, pregnancy or over two past operative interventions for low back pain.A total of 213 patients received either manual therapy (n=89), a 10-week spinal stabilisation rehabilitation program (n=84), or a minimal intervention (n=40). Patients in the 10-week spinal stabilisation rehabilitation program received functionally progressive exercise class that emphasised the selective retraining of the transversus abdominis, multifidus, the pelvic floor and diaphragm muscles, while inhibiting global muscle substitution mechanisms. A video illustrating the effect of the muscles on the stability of the spine was shown at the beginning of each class. Each of the 10 weekly class lasted 1 hour. Patients in the manual therapy group were also treated by physiotherapists, who were not allowed to prescribe any exercise for the transversus abdominis, multifidus, the pelvic floor and diaphragm muscles. Nor were they allowed to prescribe any electrophysical methods. Any other form of exercise or manual procedure within the remit of musculoskeletal physiotherapy was allowed. They received a maximum of 10 interventions. Patients in the control group (educational booklet) were given the educational booklet “Back in Action” and explained the contents. They were then discharged and booked to attend the Back School, which patients in all groups attended and consisted of one group-specific three-hour questions and answer session.Results suggest that manual therapy provides pain relief, but not simultaneous reduction in disability and handicap. Both spinal stabilisation and manual therapy were significantly effective in pain reduction compared to an active control.This was a RCT with a high risk of bias because of high treatment dropouts and loss to follow-up.A randomised controlled trial compared the effectiveness of medical and chiropractic care for low back pain in patients in managed care (Hurwitz, Eric L., Morgenstern, Hal, Harber, Philip et al, 2002; Hurwitz, Eric L., Morgenstern, Hal, Kominski, Gerald F. et al, 2006). Those included had to be aged 18 or over, be a member of the health maintenance organisation, present with a complaint of low back pain with or without leg pain and not had received treatment for low back pain within the previous month.Patients were randomly assigned to either Medical care only (n = 170), Chiropractic care only (n = 169), Medical care with physical therapy (n = 170) or Chiropractic care and physical modalities (n = 172). Patients in the medical care only group received one or more of the following: instruction in proper back care and strengthening and flexibility exercises, prescriptions for pain killers, muscle relaxants, anti-inflammatory agents, and other medications use to reduce or eliminate pain or discomfort, and recommendations regarding bed rest, weight loss, and physical activities. Patients in the Chiropractic care only group received spinal manipulation or another spinal-adjusting technique (e.g. mobilization), instruction in strengthening and flexibility exercises, and instruction in proper back care. Medical Care with Physical therapy patients received medical care, instruction in proper back care plus one or more of the following: heat therapy, cold therapy, ultrasound, electrical muscle stimulation, soft-tissue and joint mobilisation, traction, supervised therapeutic exercise, and strengthening and flexibility exercises. Patients in the 4th group received chiropractic care plus one or more of following: heat or cold therapy, ultrasound and electrical muscle stimulation. Frequency of medical, chiropractic and physical therapy visits were at the discretion of the medical provider, chiropractor or physical therapist assigned to the patient.Results suggested that medical and chiropractic care alone yielded similar improvements in pain severity and disability after 6 months (and 18 months) follow-up. No significant difference between treatments was observed.This was a RCT with a high risk of biasA randomised controlled trial compared manipulation, a manipulation mimic and a back education programme (Triano, J. J., McGregor, M., Hondras, M. A. et al, 1995). Patients with low back pain for over 50 days or with over 6 episodes in the previous year were included. Exclusion criteria included neuropathy, severe osteoporosis, fracture, osseous pathology of the spine, receiving other treatment intended to relieve back pain, workers compensation or litigation claims.A total of 209 patients were randomised into the High-Velocity Low Amplitude group (HVLA), a High Velocity Low Force group (HVLF a HVLA mimic) or a Back Education programme. The exact number of patients assigned to each group is not clear but it was around 40 in each group. Patients receiving HVLA manipulation were placed in a lateral decubitus posture close to the leading edge of the treatment table. The free leg was flexed at the knee and pelvis to cause a relative flexion of the lumbar spine. Patients receiving the mimic manipulation, HVLF, were also manipulated at the lumbar and pelvic sites. The HVLF procedures were intended to balance the study design to account for physician contact and the physical handling of the patient. The third group, the Back Education Programme (BEP) was intended as a contrast for the physical contact between provider and patient that is offered by HVLA and HVLF. Elements of BEP included attractive colour graphics couples with common anatomic and biomechanical information of spinal function and hygiene. Each treatment session consisted of didactic presentation conducted with physical separation between patient and provider. Exercise was described in general terms, but none were specifically recommended.Treatment sessions were scheduled during a 2-week interval, and were held daily on the basis of a 6-day/week clinic schedule. Adherence to the scheduled interval within a 72-hour window was required for inclusion.Results suggest the existence of clinical value to treatment according to a defined plan using manipulation. Immediate reduction of reported pain after individual treatment sessions was observed at the end of 2 weeks of treatment. Self-reported functional levels were similarly enhanced in the HVLA group versus the HVLF and BEP groups.This was a RCT with a high risk of biasA systematic review (Furlan, A. D., Brosseau, L., Imamura, M. et al, 2002) assessed the effects of massage therapy for non-specific low back pain. The following were searched for randomised controlled trials and controlled clinical trials: MEDLINE, HealthSTAR, CINAHL, EMBASE, dissertation abstract, Cochrane Controlled Trials Register. Patients had to be aged 18 or over, have acute (12wks) non-specific low back pain. Low back pain was defined as pain localised from costal margin or 12th rib to inferior gluteal fold. Exclusion criteria were the following: infection, neoplasm, metastasis, osteoporosis, rheumatoid arthritis, fracture, inflammatory process or radicular syndrome.Eight RCTs were identified, four conducted in the USA (466 patients), three in Canada (235 patients) and one in Germany (190 patients). The population included in the trials was similar regarding the diagnosis of LBP but differed with respect to duration of pain, previous treatments and distribution of age. One RCT comparing massage to inert treatment (sham laser) showed that massage was superior. The other studies compared massage to different active treatments. They showed that massage was equal to corsets and superior to self-care education. The beneficial effect of massage in patients with chronic low back pain lasted at least a year after the end of treatment.This was a high quality systematic review with a very low risk of biasOne randomised controlled trial assessed the clinical effectiveness of Alexander technique lessons, exercise prescription and massage for chronic and recurrent back pain (Little, P., Lewith, G., Webley, F. et al, 2008) Participants were recruited from 64 general practices in the UK. Participants (aged 18 to 65) had to have presented in primary care with low back pain more than 3 months previously, score 4 or more on the Roland Morris Disability Questionnaire, have current low back pain for more than 3 weeks. Exclusion criteria included previous experience of Alexander Technique, clinical indicators of serious spinal disease, current nerve root pain, previous spinal surgery, pending litigation, history of psychosis or major alcohol misuse, and perceived inability to walk 100m.A total of 579 participants were included in the study: of these 72 received normal care; 75 received six sessions of massage; 73 received six lessons in Alexander Technique; 73 received 24 lessons in Alexander Technique; 72 received exercise prescription; 72 received exercise prescription and massage; 71 received exercise prescription and 6 lessons of Alexander Technique; 71 received exercise prescription and 24 lessons in Alexander Technique. The Alexander Technique and Exercise prescription treatments were compared to each other and to normal care. Outcomes were the RMDQ, number of days of pain in the past four weeks, quality of life, Von Korff scale and the Deyo ‘troublesomeness’ scale. These outcomes were measured at baseline, 3 months and 1 year.Results showed significant changes in the RMDQ score and days in pain at three months for all groups compared to the control group (P =0.002 and P

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