Abstracts April 2023

Differences in Recovery of Tendon Health Explained by Midportion Achilles Tendinopathy Subgroups: A 6-Month Follow-up

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Journal of Orthopedic & Sports Physical Therapy March 20, 2023
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Abstract:

Objectives: To (1) evaluate whether the defining characteristics of previously reported Achilles tendinopathy subgroups were reproducible in a cohort with midportion Achilles tendinopathy and (2) compare recovery trajectories and outcomes.
Design: Prospective single cohort study.
Methods: Participants (n = 114; 57 women; age [mean ± standard deviation]: 47 ± 12 years) received the Silbernagel protocol and were evaluated at baseline, and at 8, 16, and 24 weeks. Subgroups were identified using mixture modeling. Main effects of group and time, and interaction effects were evaluated using linear mixed models for 23 outcome measures representing symptoms, lower extremity function, tendon structure, psychological factors, and patient-related factors. Recovery trajectories were reported descriptively to reflect clinically meaningful change for outcomes.
Results: Activity-Dominant (n = 34), Function-Dominant (n = 38), Psychosocial-Dominant (n = 27), and Structure-Dominant (n = 15) subgroups were identified. There were significant effects of group and time for all primary outcome measures, except heel-rise and viscosity limb symmetry indexes. The Activity- and Function-Dominant subgroups achieved functional recovery despite persisting symptoms. The Psychosocial-Dominant subgroup reported the greatest impairments in symptom and foot- and ankle-related quality of life at all time points. The Structure-Dominant subgroup experienced delayed improvement in symptoms and was the only subgroup to not achieve structural recovery. No subgroup met our criteria for complete recovery.
Conclusion: The defining characteristics of Achilles tendinopathy subgroups were reproduced in a cohort with midportion Achilles tendinopathy. The Activity- and Function-Dominant subgroups had superior outcomes compared to the Psychosocial- and Structure-Dominant subgroups for symptomatic, functional, and structural recovery.

Towards modern understanding of the Achilles tendon properties in human movement research

Taija Finni, Benedicte Vanwanseele
Journal of Biomechanics April 13, 2023
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Abstract:

The Achilles tendon (AT) is the strongest tendon in humans, yet it often suffers from injury. The mechanical properties of the AT afford efficient movement, power amplification and power attenuation during locomotor tasks. The properties and the unique structure of the AT as a common tendon for three muscles have been studied frequently in humans using in vivo methods since 1990′ s. As a part of the celebration of 50 years history of the International Society of Biomechanics, this paper reviews the history of the AT research focusing on its mechanical properties in humans. The questions addressed are: What are the most important mechanical properties of the Achilles tendon, how are they studied, what is their significance to human movement, and how do they adapt? We foresee that the ongoing developments in experimental methods and modeling can provide ways to advance knowledge of the complex three-dimensional structure and properties of the Achilles tendon in vivo, and to enable monitoring of the loading and recovery for optimizing individual adaptations.

Immediate neck hypoalgesia effects of craniometrical flexion exercises and cervical retraction exercises among individuals with non-acute neck pain and a directional preference for retraction or extension: preliminary pretest-posttest randomized experimental design.

Hiroshi Takasaki & Chisato Yamasaki
Journal of Manual & Manipulative Therapy April 13, 2023
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Abstract:

Background: Selective deep neck flexor muscle activation through craniometrical flexion exercises has been considered to be different from cervical retraction exercises.
Objective: To compare the immediate analgesic effect of craniometrical flexion versus cervical retraction exercises in individuals with nonacute, directional preference (DP) for cervical retraction or extension
Methods: A two-arm, assessor-blinded, pretest-posttest randomized experiment was conducted. Participants were randomly assigned to either craniometrical flexion or cervical retraction exercises and those who were confirmed at the post-intervention examination to have a DP for cervical retraction or extension were analyzed. The primary outcome measure was pressure pain thresholds at the C2 and C5-C6 levels.
Results: A total of 10 (mean age = 20.6 years) and nine participants (mean age = 19.4 years) undertook craniometrical flexion and retraction exercises, respectively. One-way analysis of variance demonstrated no statistically significant ($p > 0.05$)

interaction effect regardless of the neck level. In the pre-post change percentages, retraction exercises provided greater analgesic effects compared to craniometrical flexion exercises at the C2 (Hedges' g = 0.679) and C5-C6 levels (g = 0.637). **Conclusion:** This study showed a comparable or greater immediate neck analgesic effect from cervical retraction exercises compared to craniometrical flexion exercises in individuals with a DP for cervical retraction or extension.

Frozen shoulder

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Nature Reviews Disease Primers September 08.2022
https://doi.org/10.1038/s41572-022-00386-2

Abstract:

Frozen shoulder is a common debilitating disorder characterized by shoulder pain and progressive loss of shoulder movement. Frozen shoulder is frequently associated with other systemic conditions or occurs following periods of immobilization, and has a protracted clinical course, which can be frustrating for patients as well as health-care professionals. Frozen shoulder is characterized by fibroproliferative tissue fibrosis, whereby fibroblasts, producing predominantly type I and type III collagen, transform into myofibroblasts (a smooth muscle phenotype), which is accompanied by inflammation, neo angiogenesis and neoinnervation, resulting in shoulder capsular fibrotic contractures and the associated clinical stiffness. Diagnosis is heavily based on physical examination and can be difficult depending on the stage of disease or if concomitant shoulder pathology is present. Management consists of physiotherapy, therapeutic modalities such as steroid injections, anti-inflammatory medications, hydro dilation and surgical interventions; however, their effectiveness remains unclear. Facilitating translational science should aid in development of novel therapies to improve outcomes among individuals with this debilitating condition.

Self-reported physical function is strongly related to pain behavior and pain interference and weakly related to physical capacity in people with chronic low back pain.

Nicholas V. Karayannis, Matthew Smuck, Christine Law, Sean C. Mackey, James J. Gross, Beth D. Darnall, Julia Hush
Musculoskeletal Science and Practice January 23, 2023
https://doi.org/10.1016/j.msksp.2023.102721

Abstract:

Background: Inclusion of self-reported and capacity-based measures may help to further elucidate the interactive link between how people think and move.

Objective: To characterize the relationship between self-reported factors of physical function and pain with objective physical capacity measures.
Design: Cross-sectional study of 328 adults with chronic low back pain (CLBP).
Method: Spearman correlations assessed the relationship between pairs of measures. Multiple linear regression models assessed the association between self-reported measures of physical function and the grouping of physical capacity measures. Self-reported measures included Roland Morris Disability Questionnaire (RMDQ), PROMIS Physical Function, Pain Behavior, and Pain Interference; Fear-Avoidance Beliefs Questionnaire (FABQ), Pain Catastrophizing Scale (PCS), and Chronic Pain Acceptance Questionnaire (CPAQ). Capacity measures included walking speed and endurance, lower extremity functional strength, lumbopelvic range of motion, and trunk endurance.
Results: PROMIS Physical Function was directly and weakly correlated with walking speed (ρ = 0.26, 2-min walk) and inversely and weakly correlated with lower extremity strength (ρ = − 0.29, 5x sit-to-stand). RMDQ was not correlated with any of the capacity-based measures. PROMIS Physical Function was inversely and moderately correlated with Pain Interference (ρ = − 0.48) and Pain Behavior (ρ = − 0.43), PCS (ρ = − 0.36), and FABQ (ρ = − 0.31). The RMDQ was strongly correlated with PROMIS Physical Function (ρ = − 0.56), Pain Behavior (ρ = 0.51) and Pain Interference (ρ = 0.49); and moderately correlated with PCS (ρ = 0.37) and FABQ (ρ = 0.33). PROMIS Physical Function and RMDQ were not correlated with CPAQ. Lower scores on PROMIS Physical Function were weakly associated with lower measures of lower extremity strength (− 0.30, 95% CI: − 0.51 to − 0.09, p = 0.005). Higher scores on RMDQ were also weakly associated with lower measures of lower extremity strength (0.26, 95% CI: 0.11 to 0.41, p = 0.001).
Conclusions: A strong association emerged between self-reported limitations in physical function, pain behavior, and pain interference. A weak association emerged between self-reported physical function and lower extremity strength.

Classifying non-specific low back pain for better clinical outcomes: current challenges and paths forward

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Journal of Orthopedic & Sports Physical Therapy April 27, 2023
https://www.jospt.org/doi/10.2519/jospt.2023.11658

Abstract:

Synopsis: Low back pain classification systems are structured assessments used to guide choices of more specific treatments. Classification systems examined in randomized controlled trials have limited effects on pain intensity and disability compared to noncalcified interventions. Potential reasons for the lack of efficacy include (1) failing to assess multidimensional factors that contribute to pain, (2) relying on clinician judgement, (3) low accessibility, and (4) poor classification reliability. Overcoming these limitations is critical to deciding whether classification systems can improve clinical practice. Only once these limitations are addressed, can we feel certain about the efficacy, or lack thereof, of classification systems. This Viewpoint guides the reader through some limitations of common classification

approaches and presents a path forward to open-access, reliable, and multidimensional precision medicine for managing low back pain.

Low-back related leg pain: is the nerve guilty? How to differentiate the underlying pain mechanism

Antoine Fourré, Félix Monnier, Laurence Ris, Frédéric Telliez, Jeff Michielsen, Nathalie Roussel & Renaud Hage
Journal of Manual & Manipulative Therapy June 23, 2022
https://doi.org/10.1080/10669817.2022.2092266

Abstract:

Low back pain (LBP) that radiates to the leg is not always related to a lesion or a disease of the nervous system (neuropathic pain): it might be nociceptive (referred) pain. Unfortunately, patients with low-back related leg pain are often given a variety of diagnoses (e.g., 'sciatica'; 'radicular pain'; pseudo radicular pain"). This terminology causes confusion and challenges clinical reasoning. It is essential for clinicians to understand and recognize predominant pain mechanisms. This paper describes pain mechanisms related to low back-related leg pain and helps differentiate these mechanisms in practice using clinical based scenarios. We illustrate this by using two clinical scenarios including patients with the same symptoms in terms of pain localization (i.e., low-back related leg pain) but with different underlying pain mechanisms (i.e., nociceptive versus neuropathic pain).

The impact of a new payment system on physiotherapeutic management of patients with low back pain in primary care

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Archives of Physical Medicine and Rehabilitation January 20, 2023
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Abstract:

Objective: To evaluate differences regarding the number of treatment sessions, costs, and outcomes (including relapses) between a regular payment-per-session system and the recently introduced product payment system.
Design: Prospective cohort study.
Setting: Dutch physical therapy practices in primary care over a 2-year period.
Participants: 16,103 patients with low back pain (LBP).
Intervention: The new product payment system is compared with the regular payment-per-session system.
Main Outcome Measures: Pain, disability, recovery, number of physical therapy sessions, therapy duration, costs (per episode), and LBP relapse.
Results: At baseline, we found greater pain and disability scores associated with an increased risk profile in both payment systems. Regarding the payment systems, we found greater costs (€283.8 vs €210.8) and a greater percentage of relapse (4.5% vs 2.8%) for the product payment system compared with the payment-per-session system. Comparing the 2 payment systems within each risk strata, we found no

significant differences, except for a decrease in pain in the medium-risk stratum. Concerning the therapy characteristics, we found that in the payment-per-session group, the therapy took 6 days longer for low-risk patients (median 27 vs 21 days) and 7 days shorter for high-risk patients (median 42 vs 49 days) compared with the product payment group. Moreover, the mean number of sessions in the payment-per-session group was greater for low-risk patients (5.4 vs 4.8 sessions) and lower for high-risk patients (7.7 vs 8.1 sessions) compared with the payment-per-session group. Finally, the costs were significantly greater in all strata of the product payment group compared with the payment-per-session group.
Conclusions: The 2 payment systems are largely comparable regarding patient outcomes, therapy duration, and treatment sessions. Both the average cost per patient per LBP episode and the number of relapses in the product payment system are statistically significantly greater than in the payment-per-session system.

Effects of Resistance Training on Pain Control and Physical Function in Older Adults with Low Back Pain: A Systematic Review with Meta-analysis

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Journal of Geriatric Physical Therapy February 21, 2023
DOI: 10.1519/JPT.0000000000000374

Abstract:

Background and purpose: Low back pain (LBP) has a high prevalence in older adults and is associated with elevated health care costs. This systematic review and meta-analysis examine the effects of progressive resistance training (PRT) interventions on physical function (PF) and pain control in community-dwelling older adults with chronic LBP.
Methods: A meta-analysis applying the quality effect method was performed by calculating the effect sizes (ESs) using the Cohen d with a 95% CI. A subgroup analysis was performed according to the participant and intervention characteristics. The statistical significance of differences between subgroups was calculated using a Z-test. Study bias was estimated using the version 2 of the Cochrane risk of bias tool for randomized trials (RoB 2.0) and quality of evidence (Qi) index. Small study effect/publication bias was estimated using the Doi plot and Luis Furuya-Kanamori (LFK) index. The systematic search was conducted in major databases for clinical trials published between January 1, 1990, and January 9, 2021. The inclusion criteria were articles that (1) were peer-reviewed; (2) had participants' mean age of more than 60 years; (3) studied PRT interventions; (4) had participants with LBP; (5) measured LBP or PF outcomes; (6) measured PF in terms of functionality; (7) were randomized controlled trials; (8) and non-randomized controlled trials. The exclusion criteria were (1) articles not written in English, (2) nonexperimental studies, and (3) repeated publications.
Results and discussion: Twenty-one studies were included (n = 1661). Clear improvements were found in PF (ES = 0.32 [95% CI, 0.05-0.58]; I2 = 75.1%; P < .001), but results on LBP decrease were inconclusive (ES = 0.24 [95% CI, -0.05 to 1.10]; I2 = 75.7%; P < .001). The overall evidence of this aggregated data meta-

analysis of clinical trials is level C+. Main limitations are the use of aggregated data and the large heterogeneity between studies.
Conclusions: The Qi of this meta-analysis is level I (C+). We concluded that PRT interventions are useful for PF improvement in older adults with generalized LBP, LBP not arising from lumbar spinal stenosis, and having body mass index less than 27. In older adults with LBP not arising from lumbar spine stenosis, PRT interventions also decrease LBP. Interventions should have a frequency of at least 3 sessions per week. In addition, at a lower level of evidence IV (C+), we recommend that interventions with a duration of more than 12 weeks should be considered, whenever possible.

Low back pain of disc, sacroiliac joint, or facet joint origin: a diagnostic accuracy systematic review

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The Lancet April 06, 2023
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Summary:

Background: The accuracy of diagnostic tests available in primary care to identify the disc, sacroiliac joint, and facet joint as the source of low back pain is uncertain.
Methods: Systematic review of diagnostic tests available in primary care. MEDLINE, CINAHL, and EMBASE were searched between March 2006 and 25th January 2023. Pairs of reviewers independently screened all studies, extracted data, and assessed risk of bias using QUADAS-2. Pooling was performed for homogenous studies. Positive likelihood ratios (+LR) ≥2 and negative likelihood ratios (−LR) ≤0.5 were considered informative. This review is registered with PROSPERO (CRD42020169828).
Findings: We included 62 studies: 35 investigated the disc, 14 the facet joint, 11 the sacroiliac joint, and 2 investigated all three structures in patients with persistent low back pain. For risk of bias, the domain 'reference standard' scored worst, however approximately half the studies were of low risk of bias for every other domain. For the disc, pooling demonstrated MRI findings of disc degeneration and annular fissure resulted in informative +LRs: 2.53 (95% CI: 1.57–4.07) and 2.88 (95% CI: 2.02–4.10) and −LRs: 0.15 (95% CI: 0.09–0.24) and 0.24 (95% CI: 0.10–0.55) respectively. Pooled results for Medic type 1, Medic type 2, and HIZ on MRI, and centralization phenomenon yielded informative +LRs: 10.00 (95% CI: 4.20–23.82), 8.03 (95% CI: 3.23–19.97), 3.10 (95% CI: 2.27–4.25), and 3.06 (95% CI: 1.44–6.50) respectively, but uninformative −LRs: 0.84 (95% CI: 0.74–0.96), 0.88 (95% CI: 0.80–0.96), 0.61 (95% CI: 0.48–0.77), and 0.66 (95% CI: 0.52–0.84) respectively. For the facet joint, pooling demonstrated facet joint uptake on SPECT resulted in informative +LRs: 2.80 (95% CI: 1.82–4.31) and −LRs: 0.44 (95% CI: 0.25–0.77). For the sacroiliac joint, a combination of pain provocation tests and absence of midline low back pain resulted in informative +LRs of 2.41 (95% CI: 1.89–3.07) and 2.44 (95% CI: 1.50–3.98) and −LRs of 0.35 (95% CI: 0.12–1.01) and 0.31 (95% CI: 0.21–0.47) respectively. Radionuclide imaging yielded an informative +LR 7.33 (95% CI: 1.42–37.80) but an uninformative −LR 0.74 (95% CI: 0.41–1.34).

Interpretation: There are informative diagnostic tests for the disc, sacroiliac joint, and facet joint (only one test). The evidence suggests a diagnosis may be possible for some patients with low back pain, potentially guiding targeted and specific treatment approaches.

The McKenzie method for (sub)acute non-specific low back pain

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The Cochrane Library April 05, 2023
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Abstract:

Background: There is widespread agreement amongst clinicians that people with non-specific low back pain (NSLBP) comprise a heterogeneous group and that their management should be individually tailored. One treatment known by its tailored design is the McKenzie method (e.g. an individualized program of exercises based on clinical clues observed during assessment).
Objectives: To evaluate the effectiveness of the McKenzie method in people with (sub)acute non-specific low back pain.
Search methods: We searched CENTRAL, MEDLINE, Embase and two trials registers up to 15 August 2022.
Selection criteria: We included randomized controlled trials (RCTs) investigating the effectiveness of the McKenzie method in adults with (sub)acute (less than 12 weeks) NSLBP.
Data collection and analysis: We used standard methodological procedures expected by Cochrane.
Main results: This review included five RCTs with a total of 563 participants recruited from primary or tertiary care. Three trials were conducted in the USA, one in Australia, and one in Scotland. Three trials received financial support from non-commercial funders and two did not provide information on funding sources. All trials were at high risk of performance and detection bias. None of the included trials measured adverse events.
McKenzie method versus minimal intervention (educational booklet; McKenzie method as a supplement to other intervention - main comparison) There is low-certainty evidence that the McKenzie method may result in a slight reduction in pain in the short term (MD -7.3, 95% CI -12.0 to -2.56; 2 trials, 377 participants) but not in the intermediate term (MD -5.0, 95% CI -14.3 to 4.3; 1 trial, 180 participants). There is low-certainty evidence that the McKenzie method may not reduce disability in the short term (MD -2.5, 95% CI -7.5 to 2.0; 2 trials, 328 participants) nor in the intermediate term (MD -0.9, 95% CI -7.3 to 5.6; 1 trial, 180 participants).
McKenzie method versus manual therapy. There is low-certainty evidence that the McKenzie method may not reduce pain in the short term (MD -8.7, 95% CI -27.4 to 10.0; 3 trials, 298 participants) and may result in a slight increase in pain in the intermediate term (MD 7.0, 95% CI 0.7 to 13.3; 1 trial, 235 participants).
There is low-certainty evidence that the McKenzie method may not reduce disability in the short term (MD -5.0, 95% CI -15.0 to 5.0; 3 trials, 298 participants) nor in the intermediate term (MD 4.3, 95% CI -0.7 to 9.3; 1 trial, 235 participants).
McKenzie method versus other interventions (massage and advice)

There is very low-certainty evidence that the McKenzie method may not reduce disability in the short term (MD 4.0, 95% CI -15.4 to 23.4; 1 trial, 30 participants) nor in the intermediate term (MD 10.0, 95% CI -8.9 to 28.9; 1 trial, 30 participants).
Authors' conclusions: Based on low- to very low-certainty evidence, the treatment effects for pain and disability found in our review were not clinically important. Thus, we can conclude that the McKenzie method is not an effective treatment for (sub)acute NSLBP.

Physiotherapists' attitudes and beliefs about self-management as part of their management for low back pain

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Musculoskeletal Science and Practice February 14, 2023
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Abstract:

Background: Perceptually, there is a discrepancy between research evidence and clinical physiotherapy practice for supporting self-management in people with low back pain (LBP).
Objective: This study aimed to explore physiotherapists' understanding of LBP; ascertain their knowledge of self-management concepts; and explore their attitudes and beliefs about supporting self-management for LBP within present physiotherapy practice in private and hospital settings.
Design: Interpretive Description qualitative methodology, involving in-depth data interpretation to clinical practice, was used. Methods: Semi-structured interviews with physiotherapists throughout New Zealand were conducted via video conferencing. Data was analyzed and themes were defined.
Results: Seventeen physiotherapists (24–65 years old), with between one and 40+ years of experience, participated. Four main themes were defined: 1) Evolving understanding of LBP, 2) apportioning responsibility, 3) self-management is important, 4) understanding self-management.
Conclusion: Novel findings from this research demonstrate examples of attitudes and beliefs that determine when and how self-management for people with LBP is implemented. Due to these attitudes and beliefs, physiotherapy-rapists may not consistently provide supported self-management for people with LBP. Participants had good understanding of LBP but lacked a contemporary knowledge of the natural history and tended to apportion responsibility for persistent or recurrent episodes to the person with LBP. Physiotherapists should be encouraged to assimilate more contemporary research evidence into their expectations of recovery for LBP. Further education about the role of physiotherapists in supporting self-management, the core components of self-management, including engagement, and reflection upon individual unconscious bias should be encouraged.

Its everyone's responsibility: Responding to the global burden of musculoskeletal health impairment.

Laura M. Finucane, Emma Stokes, Andrew M. Briggs
Musculoskeletal Science and Practice March 08, 2023
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Key Message: 1. Musculoskeletal health matters Musculoskeletal (MSK) health is critical to physical function (e.g., mobility, dexterity), independence with social and work participation and consequent economic development of individuals and communities. Many MSK conditions share risk factors common to other noncommunicable diseases (NCDs), for example, obesity, poor nutrition and physical inactivity. In addition to enabling participation and work, some of the greatest benefits to populations and health systems of ensuring physical function through good MSK health include the prevention and control of other NCDs across the life course and supporting the physical and social development of children (Foster et al., 2020; Briggs et al., 2018; Simoes et al., 2017; Williams et al., 2018). Strengthening health systems to support good MSK health has the potential to unlock population health benefits in the prevention and control of NCDs, where global performance targets are lagging well behind agreed milestones for the Sustainable Development Goals (Bennett et al., 2018; NCD Countdown 2030 collaborators, 2022; World Health Organization, 2019). One critical example is supporting physical activity among people with and without disease, among children and adolescents, among older people and among vulnerable groups, such as those living with physical or mental disability (World Health Organization, 2020). A recent report from the World Health Organization (WHO) states that despite the clear benefits of physical activity in reducing the burden of NCDs, implementation of policies aimed at encouraging physical activity has been ‘slow and uneven’, resulting in ‘little progress’ (World Health Organization, 2022). The consequences of this ‘inaction’ are far reaching with communities failing to benefit from the wider social, environmental and economic benefits associated with more people being more physically active (Santos et al., 2023). Enabling good MSK function in those with, or at risk of, MSK impairments has the potential to enable greater participation in critical physical activity while also benefiting prevention and control of other NCDs.

Surgical versus non-surgical treatment for sciatica: systematic review and meta-analysis of randomized controlled trials

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BMJ March 13, 2023
http://dx.doi.org/10.1136/bmj-2022-070730

Abstract:

Objective: To investigate the effectiveness and safety of surgery compared with non-surgical treatment for sciatica.
Design: Systematic review and meta-analysis.
Data sources: Medline, Embase, CINAHL, Cochrane Central Register of Controlled Trials, ClinicalTrials.gov, and the World Health Organization International Clinical Trials Registry Platform from database inception to June 2022.
Eligibility criteria for selecting studies: Randomized controlled trials comparing any surgical treatment with non-surgical treatment, epidural steroid injections, or placebo or sham surgery, in people with sciatica of any duration due to lumbar disc herniation (diagnosed by radiological imaging).
Data extraction and synthesis: Two independent reviewers extracted data. Leg pain and disability were the primary outcomes. Adverse events, back pain, quality of life, and satisfaction with treatment were the secondary outcomes. Pain and disability scores were converted to a scale of 0 (no pain or disability) to 100 (worst pain or disability). Data were pooled using a random effects model. Risk of bias was assessed with the Cochrane Collaboration's tool and certainty of evidence with the grading of recommendations assessment, development, and evaluation (GRADE) framework. Follow-up times were into immediate term (≤six weeks), short term (>six weeks and ≤three months), medium term (>three and 12 months), and long term. (at 12 months).
Results: 24 trials were included; half of these investigated the effectiveness of discectomy compared with non-surgical treatment or epidural steroid injections (1711 participants). Very low to low certainty evidence showed that discectomy, compared with non-surgical treatment, reduced leg pain: the effect size was moderate at immediate term (mean difference −12.1 (95% confidence interval −23.6 to −0.5)) and short term (−11.7 (−18.6 to −4.7)), and small at medium term (−6.5 (−11.0 to −2.1)). Negligible effects were noted at long term (−2.3 (−4.5 to −0.2)). For disability, small, negligible, or no effects were found. A similar effect on leg pain was found when comparing discectomy with epidural steroid injections. For disability, a moderate effect was found at short term, but no effect was observed at medium and long term. The risk of any adverse events was similar between discectomy and non-surgical treatment (risk ratio 1.34 (95% confidence interval 0.91 to 1.98)).
Conclusion: Very low to low certainty evidence suggests that discectomy was superior to non-surgical treatment or epidural steroid injections in reducing leg pain and disability in people with sciatica with a surgical indication, but the benefits declined over time. Discectomy might be an option for people with sciatica who feel that the rapid relief offered by discectomy outweighs the risks and costs associated with surgery.