University Hospitals Bristol NHS
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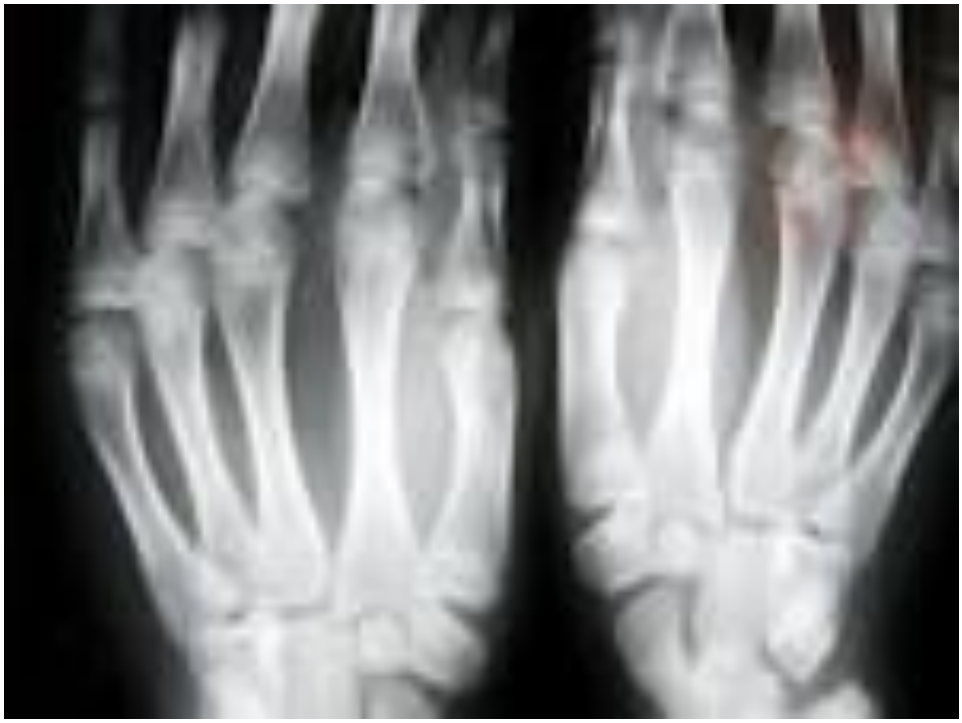
Rheumatology

Current Awareness Newsletter

June 2017 (Quarterly)



Respecting everyone
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Training Sessions 2017

All sessions are one hour

June (12.00-13.00)

8th (Thurs) Interpreting Statistics
13th (Tues) Critical Appraisal
29th (Thurs) Literature Searching

July (13.00-14.00)

3rd (Mon) Interpreting Statistics
12th (Wed) Critical Appraisal
21st (Fri) Literature Searching
26th (Wed) Interpreting Statistics

August (12.00-13.00)

4th (Fri) Critical Appraisal
9th (Wed) Literature Searching
15th (Tues) Interpreting Statistics
24th (Thurs) Critical Appraisal

Your Outreach Librarian – Jo Hooper

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Literature searching: We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a one-to-one session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence. Please email requests to library@uhbristol.nhs.uk

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Cochrane Library

Multidisciplinary biopsychosocial rehabilitation for subacute low back pain
Online Publication Date: June 2017

Gabapentin for chronic neuropathic pain in adults
Online Publication Date: June 2017

Celecoxib for rheumatoid arthritis
Online Publication Date: June 2017

NICE National Institute for Health and Care Excellence

The British Society for Rheumatology guideline for the management of adults with primary Sjögren's Syndrome
28 June 2017 - Publisher: Rheumatology
Read Summary

2017 American College of Rheumatology/American Association of Hip and Knee Surgeons Guideline for the Perioperative Management of Antirheumatic Medication in Patients With Rheumatic Diseases Undergoing Elective Total Hip or Total Knee Arthroplasty
16 June 2017 - Publisher: Arthritis & Rheumatology
Read Summary

2017 American College of Rheumatology Guideline for the Prevention and Treatment of Glucocorticoid-Induced Osteoporosis (GIOP)
06 June 2017 - Publisher: Arthritis & Rheumatology
Read Summary

Musculoskeletal ultrasound for diagnosis to confirm or rule out a diagnosis of rheumatoid arthritis: Evidence note 69
Source: Healthcare Improvement Scotland - 06 June 2017

Vocational rehabilitation in relation to health outcomes and non-health outcomes for people with inflammatory arthritis: Evidence note 68
Source: Healthcare Improvement Scotland - 06 June 2017

The effects of resistance training on muscle strength, joint pain, and hand function in individuals with hand osteoarthritis: a systematic review and meta-analysis
Source: PubMed - 13 June 2017 - Publisher: Arthritis Research & Therapy
Read Summary

Genetic effects of rs3740199 polymorphism in ADAM12 gene on knee osteoarthritis: a meta-analysis
Source: PubMed - 20 June 2017 - Publisher: Journal Of Orthopaedic Surgery And Research
Read Summary

Effect of physical activity and dietary restriction interventions on weight loss and the musculoskeletal function of overweight and obese older adults with knee osteoarthritis: a systematic review and mixed method data synthesis
Source: PubMed - 08 June 2017 - Publisher: Bmj Open
Read Summary

UpToDate®

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Pathogenesis of rheumatoid arthritis
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Biologic markers in the diagnosis and assessment of rheumatoid arthritis
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UpToDate is the leading evidence-based clinical decision support system, designed for use at the point of care.

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- Adult and paediatric emergency medicine
- Allergy and immunology
- Cardiovascular medicine
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- Drug therapy
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- Family medicine
- Gastroenterology and hepatology
- General surgery
- Geriatrics
- Haematology
- Hospital Medicine
- Infectious diseases
- Nephrology and hypertension
- Neurology
- Obstetrics and gynaecology
- Oncology
- Paediatrics
- Primary care internal medicine
- Psychiatry
- Pulmonary, critical care and sleep medicine
- Rheumatology

How to access UpToDate

You can access UpToDate from any computer via www.uptodate.com.
You will need your NHS Athens username/password (register through http://openathens.nice.org.uk/).

Current Awareness Database Articles

Below is a selection of articles recently added to the healthcare databases,

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: library@uhbristol.nhs.uk

Influence of periodontal treatment on rheumatoid arthritis: a systematic review and meta-analysis.

Author(s): Calderaro, Débora Cerqueira; Corrêa, Jôice Dias; Ferreira, Gilda Aparecida;

Source: Revista brasileira de reumatologia; 2017; vol. 57 (no. 3); p. 238-244

Publication Type(s): Journal Article

Abstract:OBJECTIVETo evaluate the influence of periodontal treatment on rheumatoid arthritis activity.METHODSMEDLINE/PUBMED, The Cochrane Library, Clinical Trials, SciELO and LILACS were searched for studies published until December 2014. Included articles were: prospective studies; including patients older than 18 years, diagnosed with periodontitis and rheumatoid arthritis submitted to non-surgical periodontal treatment; with a control group receiving no periodontal treatment; with outcomes including at least one marker of rheumatoid arthritis activity. Methodological quality of the studies was assessed using PEDro scale. Quantitative data were pooled in statistical meta-analysis using Review Manager **[ABSTRACT EDITED]**

Systematic review of anti-rheumatic medicinal plants: An overview of the effectiveness of articular tissues and joint pain associated with rheumatoid arthritis

Author(s): Zarei L.; Naji-Haddadi S.; Pourjabali M.; Naghdi N.; Tasbih-Forosh M.; Shahsavari S.

Source: Journal of Pharmaceutical Sciences and Research; 2017; vol. 9 (no. 5); p. 547-551

Publication Type(s): Article

Available in full text at Journal of Pharmaceutical Sciences and Research - from ProQuest

Abstract: Rheumatoid arthritis is a chronic inflammatory disease of the joints characterized by a specific plan of destruction for bones and joints. Rheumatoid arthritis risk factors include genetic, hormonal, environmental and nutritional, and socio-economic factors, age and sex, ethnicity, smoking, infections, and so on. Treatment of inflammatory diseases, such as rheumatoid arthritis is practiced based on traditional medicine in many countries. Many native medicinal plants of Iran have effective properties on hemorrhoid. Thus, in this review, the effective medicinal plants of Iranian ethnobotanical resources on hemorrhoid were reported. In the current review study, a search was done for articles by the keywords urinary retention, ethnobotanical, and medicinal plants. A search on the databases, such as Scopus, ISI C, S ID, Mega Iran, and a number of other databases was performed. 27 herbs from different parts of Iran are traditionally used for the treatment of urinary retention. Medicinal herbs, such as yarrow, oat, colchicum, dill, fennel, wild rue, bitter melon, willow, garlic, burdock, etc. are of the native medicinal plants of Iran, which are effective on the treatment of rheumatoid arthritis.

Dynamic Balance Training Improves Physical Function in Individuals With Knee Osteoarthritis: A Pilot Randomized Controlled Trial

Author(s): Takacs J.; Krowchuk N.M.; Hunt M.A.; Garland S.J.; Carpenter M.G.

Source: Archives of Physical Medicine and Rehabilitation; 2017

Publication Type(s): Article In Press

Abstract: Objective: To examine the effect of a targeted balance training program on dynamic balance and self-reported physical function in people with medial tibiofemoral osteoarthritis (OA). Design: Single-blind randomized controlled trial. Setting: Exercise gymnasium and community dwellings. Participants: Individuals with medial compartment knee OA (N=40). Interventions: Ten weeks of partially supervised exercises targeting dynamic balance and strength performed 4 times per week or no intervention (nonintervention group). Main Outcome Measures: Dynamic balance was measured using the Community Balance and Mobility Scale (CB&M), and self-reported physical function was measured using the Western Ontario and McMaster Universities Arthritis Index physical function subscale. Secondary outcomes included knee pain, fear of movement, knee joint proprioception, and muscle strength. **[ABSTRACT EDITED]**

The role of muscle strengthening in exercise therapy for knee osteoarthritis: A systematic review and meta-regression analysis of randomized trials

Author(s): Bartholdy C.; Christensen R.; Henriksen M.; Juhl C.; Lund H.; Zhang W.

Source: Seminars in Arthritis and Rheumatism; 2017

Publication Type(s): Article In Press

Abstract: Objectives: To analyze if exercise interventions for patients with knee osteoarthritis (OA) following the American College of Sports Medicine (ACSM) definition of muscle strength training differs from other types of exercise, and to analyze associations between changes in muscle strength, pain, and disability. Methods: A systematic search in 5 electronic databases was performed to identify randomized controlled trials comparing exercise interventions with no intervention in knee OA, and reporting changes in muscle strength and in pain or disability assessed as standardized mean differences (SMD) with 95% confidence intervals (95% CI). Interventions were categorized as ACSM interventions or not-ACSM interventions and compared using stratified random effects meta-analysis models. Associations between knee extensor strength gain and changes in pain/disability were assessed using meta-regression analyses. **[ABSTRACT EDITED]**

Exercise on balance and function for knee osteoarthritis: A randomized controlled trial

Author(s): Braghin R.D.M.B.; Libardi E.C.; Junqueira C.; de Abreu D.C.C.; Nogueira - Barbosa M.H.

Source: Journal of Bodywork and Movement Therapies; 2017

Publication Type(s): Article In Press

Abstract: Objectives: To assess balance and function of symptomatic and asymptomatic subjects with knee osteoarthritis (OA) and investigate the influence of physical exercise. Design: Subjects were divided into three groups: Group 1 (n = 15), symptomatic knee OA; Group 2 (n = 11), asymptomatic knee OA; and Group 3 (n = 16), knee OA and no intervention. History of falls, the WOMAC questionnaire, balance and functionality were assessed. Results: After intervention, there was a significant difference in the total WOMAC score and in the pain and function domains only in Group 1. After intervention, Group 2 showed significant differences in decreased time on the Step Up/Over test and postural sway increased. Conclusion: After the intervention, the symptomatic group reported improvement in pain and function on the WOMAC, while the asymptomatic group showed improvement in performance in the Step Up/Over test. There were no new episodes of falls in groups 1 and 2.

Risks of malignancies related to tofacitinib and biological drugs in rheumatoid arthritis: Systematic review, meta-analysis, and network meta-analysis

Author(s): Maneiro J.R.; Souto A.; Gomez-Reino J.J.

Source: Seminars in Arthritis and Rheumatism; 2017

Publication Type(s): Article In Press

Abstract: Objective: To summarize and compare the risks of malignancies accompanying biologic DMARDs (b-DMARDs) and tofacitinib in rheumatoid arthritis (RA) in randomized clinical trials (RCTs) and long-term extension studies (LTEs). **[ABSTRACT EDITED]**

Prevalence of neuropathic pain in knee or hip osteoarthritis: A systematic review and meta-analysis

Author(s): French H.P.; Smart K.M.; Doyle F.

Source: Seminars in Arthritis and Rheumatism; 2017

Publication Type(s): Article In Press

Abstract: Objective: Discordance between radiographic and pain severity in osteoarthritis (OA) has led researchers to investigate other pain mechanisms, including neuropathic pain. Accurate identification of any neuropathic pain in hip or knee OA is important for appropriate management, but neuropathic pain prevalence is unknown. We aimed to obtain an overall prevalence estimate by systematically reviewing and meta-analysing the prevalence of neuropathic pain in people with hip or knee OA. **[ABSTRACT EDITED]**

Implementation of Treat-to-Target in Rheumatoid Arthritis Through a Learning Collaborative: Results of a Randomized Controlled Trial.

Author(s): Solomon, Daniel H.; Losina, Elena; Lu, Bing; Zak, Agnes; Corrigan, Cassandra; Lee, Sara B.

Source: Arthritis & Rheumatology; Jul 2017; vol. 69 (no. 7); p. 1374-1380

Publication Type(s): Academic Journal

Abstract: Objective Treat-to-target (TTT) is an accepted paradigm for the management of rheumatoid arthritis (RA), but some evidence suggests poor adherence. The purpose of this study was to test the effects of a group-based multisite improvement learning collaborative on adherence to TTT. Methods We conducted a cluster-randomized quality-improvement trial with waitlist control across 11 rheumatology sites in the US. The intervention entailed a 9-month group-based learning collaborative that incorporated rapid-cycle improvement methods. A composite TTT implementation score was calculated as the percentage of 4 required items documented in the visit notes for each patient at 2 time points, as evaluated by trained staff. The mean change in the implementation score for TTT across all patients for the intervention sites was compared with that for the control sites after accounting for intracluster correlation using linear mixed models. Results Five sites with a total of 23 participating rheumatology providers were randomized to intervention and 6 sites with 23 participating rheumatology providers were randomized to the waitlist control. The intervention included 320 patients, and the control included 321 patients. At baseline, the mean TTT implementation score was 11% in both arms; after the 9-month intervention, the mean TTT implementation score was 57% in the intervention group and 25% in the control group (change in score of 46% for intervention and 14% for control; P = 0.004). We did not observe excessive use of resources or excessive occurrence of adverse events in the intervention arm. Conclusion A learning collaborative resulted in substantial improvements in adherence to TTT for the management of RA. This study supports the use of an educational collaborative to improve quality.

Mud-Bath Therapy in Addition to Usual Care in Bilateral Knee Osteoarthritis: An Economic Evaluation Alongside a Randomized Controlled Trial.

Author(s): Ciani, Oriana; Pascarelli, Nicola Antonio; Giannitti, Chiara; Galeazzi, Mauro;

Source: Arthritis Care & Research; Jul 2017; vol. 69 (no. 7); p. 966-972

Publication Type(s): Academic Journal

Abstract: Objective: To perform a cost-effectiveness analysis of mud-bath therapy (MBT) in addition to usual treatment compared to usual treatment alone in patients with bilateral knee osteoarthritis (OA).Methods: An economic evaluation alongside a randomized controlled trial was conducted. Patients were randomly assigned to receive either a 2-week cycle of MBT in addition to their usual treatment or to continue routine care alone. The EuroQol 5-domain questionnaire was administered at baseline, 2 weeks, and at 3, 6, 9, and 12 months. Direct health care resource consumption data up until 12 months were derived from a daily diary given to patients and returned at prescheduled followup visits.Results: A total of 103 patients were included (n = 53 for MBT patients; n = 50 for controls). Overall, patients in the MBT group accrued mean ± SD 0.835 ± 0.10 quality-adjusted life years (QALYs) compared to 0.753 ± 0.11 in the control group (P < 0.001). Average direct costs per patient (€303 versus €975; P < 0.001) were higher in the control group, primarily because of hospitalization for total knee replacement and use of intraarticular hyaluronic acid. Bootstrapping replications of costs and QALY sample distributions consistently indicated that the MBT therapy combined with standard therapy represents a dominant strategy as compared with standard therapy alone. The probability of MBT being cost-effective at standard cost-effectiveness thresholds (e.g., €20,000/QALY) is 100%.Conclusion: The results of this cost-effectiveness analysis support the use of MBT as midterm complementary therapy in the management of knee OA.

Internet Program for Physical Activity and Exercise Capacity in Children With Juvenile Idiopathic Arthritis: A Multicenter Randomized Controlled Trial.

Author(s): Armbrust, Wineke; Bos, G. J. F. Joyce; Wulffraat, Nico M.; van Brussel, Marco;

Source: Arthritis Care & Research; Jul 2017; vol. 69 (no. 7); p. 1040-1049

Publication Type(s): Academic Journal

The effectiveness of supplementary arm and upper body exercises following total hip arthroplasty for osteoarthritis in the elderly: a randomized controlled trial.

Author(s): Mitrovic, Dragica; Davidovic, Mladen; Erceg, Predrag; Marinkovic, Jelena

Source: Clinical Rehabilitation; Jul 2017; vol. 31 (no. 7); p. 881-890

Publication Type(s): Academic Journal

Abstract: Objective: To determine whether arm and upper body exercises in addition to the standard rehabilitation programme improve outcomes after hip arthroplasty. Design: Prospective, parallel, randomized, controlled trial. Setting: Orthopaedic and rehabilitation departments. Subjects: A total of 70 patients >60 years of age, who underwent hip replacement, out of 98 eligible candidates after exclusion criteria were implemented. Interventions: The study group took part in the supplementary arm and upper body exercise programme to be compared with the standard rehabilitation programme group. Main outcome: The primary outcome was a Harris Hip Score. Secondary outcomes were: Hand grip strength and Medical Outcomes Study 36-Item Short-Form Health Survey. Outcomes were assessed preoperatively, two weeks after surgery and at I2 weeks follow-up. Results: In the intervention group, significant improvements were found: in functional ability - Harris Hip Score after two (mean difference = 4.7 points) and I2 (mean difference = 5.85 points) weeks; in muscle strength - handgrip for both hands (mean difference for dominant hand = 4.I6 and for the

other hand = 2.8) after I2 weeks; and in role-physical dimension SF-36 Health Survey (mean difference = 6.42 points) after I2 weeks. Conclusion: Results of this study indicate that arm and upper body exercises in addition to the standard rehabilitation programme improve outcomes I2 weeks after hip arthroplasty.

Effects of a dance-based aquatic exercise program in obese postmenopausal women with knee osteoarthritis: a randomized controlled trial.

Author(s): Casilda-López, Jesús; Valenza, Marie Carmen; Cabrera-Martos, Irene; Díaz-Pelegrina, Ana;

Source: Menopause (10723714); Jul 2017; vol. 24 (no. 7); p. 768-773

Publication Type(s): Academic Journal

Abstract: Objective: To evaluate the effects of a dance-based aquatic exercise program on functionality, cardiorespiratory capacity, postexercise heart rate, and fatigue in obese postmenopausal women with knee osteoarthritis.Methods: A randomized controlled trial was performed. In all, 34 obese women diagnosed with knee osteoarthritis participated. **[ABSTRACT EDITED]**

Calprotectin levels in rheumatoid arthritis and their correlation with disease activity: a meta-analysis.

Author(s): Sang-Cheol Bae; Young Ho Lee; Bae, Sang-Cheol; Lee, Young Ho

Source: Postgraduate Medicine; Jul 2017; vol. 129 (no. 5); p. 531-537

Publication Type(s): Academic Journal

Abstract: Objective: We evaluated the relationship between calprotectin levels and rheumatoid arthritis (RA), and the correlation between plasma/serum calprotectin and RA activity. **[ABSTRACT EDITED]**

Effect of aquatic physical therapy on pain perception, functional capacity and quality of life in older people with knee osteoarthritis: study protocol for a randomized controlled trial.

Author(s): Alcalde, Guilherme Eleutério; Fonseca, Ana Carolina; Bôscoa, Thais Fernanda;

Source: Trials; Jul 2017; vol. 18 (no. 1); p. 317

Publication Type(s): Journal Article

Available in full text at Trials - from BioMed Central

Abstract:BACKGROUNDAquatic therapy promotes short-term benefits for patients with knee osteoarthritis (OA), and it may be the first therapeutic option for this pathological condition. The objective of this study was to investigate the effects of an aquatic therapy program on pain intensity, functional ability, and quality of life in older people with knee OA. **[ABSTRACT EDITED]**

Circulating osteoprotegerin levels are elevated in rheumatoid arthritis: a systematic review and meta-analysis.

Author(s): Wang, Peng; Li, Si; Liu, Li-Na; Lv, Tian-Tian; Li, Xiao-Mei; Li, Xiang-Pei; Pan, Hai-Feng

Source: Clinical rheumatology; Jul 2017

Publication Type(s): Journal Article

Abstract: This study aimed to systemically review the evidence regarding the relationship between the circulating blood osteoprotegerin (OPG) level and rheumatoid arthritis (RA), as well as the potential influential factors. Research related to plasma/serum OPG levels in RA patients and healthy

controls were gathered using PubMed, EMBASE, and The Cochrane Library database (up to Jan. 1, 2017). Pooled standard mean difference (SMD) with 95% confidence interval (CI) was calculated by fixed-effects or random-effect model analysis. Heterogeneity test was performed by the Q statistic and quantified using I 2, and publication bias was evaluated using a funnel plot and Egger's linear regression test. After searching databases, 443 articles were obtained, and 11 studies with 710 RA patients and 561 controls were finally included. Meta-analysis revealed that, compared with the control group, the OPG level was significantly higher in the RA group (P < 0.001), with the SMD of 1.02 and 95%CI (0.20, 1.84). Subgroup analyses showed that race, disease duration, body mass index (BMI), and disease activity score based on the assessment of 28 joints (DAS28) were positively associated with OPG level in RA patients. Our meta-analysis revealed a significantly higher circulating OPG level in RA patients, and it was influenced by race, disease duration, BMI, and DAS28.

Update of sarilumb to treat rheumatoid arthritis based on randomized clinical trials: a systematic review.

Author(s): Aly, Aly M; Furst, Daniel E

Source: Expert review of clinical immunology; Jul 2017

Publication Type(s): Journal Article

Abstract:INTRODUCTIONSarilumab is a human monoclonal antibody against Interleukin 6 α (IL-6α) receptor. Compared to tocilizumab, another IL-6 α receptor antibody, sarilumab has a different structure and higher affinity. Areas Covered: In a systematic literature review, we examined all sarilumab randomized clinical trials (RCTs) in rheumatoid arthritis. The 6 reviewed RCTs included patients who were inadequate MTX, DMARD and/or TNFi responders. Sarilumab 150-200 mg every 2 weeks improved RA signs, symptoms, function and decreased radiological progression up to 52 weeks. The most common adverse events were infections and neutropenia, the latter of which will require careful observation in future trials. Examination of the effect of sero-positivity, disease duration, presence of erosions, use of previous biologic and comparisons to other biologics etc are still needed to complete understanding of this drug's profile. Long term studies, too, will be needed to assess long term tolerability Expert commentary: Results support the use of sarilumab to treat RA patients with inadequate response to MTX, other DMARDs and TNFis, although further studies are needed to fully assess its toxicity and understand the specific place of sarilumab in the RA armamentarium.

Effectiveness of Argan oil on knee osteoarthritis symptoms : a randomized controlled clinical trial.

Author(s): Essouiri, Jamila; Harzy, Taoufik; Benaicha, Nadia; Errasfa, Mourad; Ezzahra,

Source: Current rheumatology reviews; Jul 2017

Publication Type(s): Journal Article

Abstract:BACKGROUNDKnee osteoarthritis (KOA) is a common chronic degenerative disorder. It causes joints pain, walking difficulties and a decline of general physical function. Many pain drugs and treatment modalities can be prescribed for KOA. Among traditional medicine in Morocco, Argan oil has been used in the treatment of knee osteoarthritis to reduce pain and improve physical activity, though there have been no medical-based evidence for such treatment. Argan oil is known to have anti-oxidant and lipid modulatory properties due to its content of many substances, such as tocopherols, phytosterols, saturated and unsaturated fatty acids.OBJECTIVESThis study was undertaken in order to investigate the effect of daily consumption of culinary argan oil on KOA symptoms. **[ABSTRACT EDITED]**

Effectiveness of non-steroidal anti-inflammatory drugs for the treatment of pain in knee and hip osteoarthritis: a network meta-analysis.

Author(s): da Costa, Bruno R; Reichenbach, Stephan; Keller, Noah; Nartey, Linda; Wandel, Simon;

Source: Lancet (London, England); Jul 2017; vol. 390 (no. 10090); p. e21

Publication Type(s): Journal Article

Abstract:BACKGROUNDNon-steroidal anti-inflammatory drugs (NSAIDs) are the backbone of osteoarthritis pain management. We aimed to assess the effectiveness of different preparations and doses of NSAIDs on osteoarthritis pain in a network meta-analysis. **[ABSTRACT EDITED]**

Retraction and republication-Effectiveness of non-steroidal anti-inflammatory drugs for the treatment of osteoarthritis pain: a network meta-analysis.

Author(s): The Editors Of The Lancet

Source: Lancet (London, England); Jul 2017; vol. 390 (no. 10090); p. 109

Publication Type(s): Published Erratum

PubMedID: 28699579

Relationship between weight loss in obese knee osteoarthritis patients and serum biomarkers of cartilage breakdown: Secondary analyses of a randomised trial.

Author(s): Bartels, Else Marie; Henrotin, Yves; Bliddal, Henning; Centonze, Prescilia;

Source: Osteoarthritis and cartilage; Jul 2017

Publication Type(s): Journal Article

Abstract:OBJECTIVETo explore effects of weight loss and maintenance on serum cartilage biomarkers denaturation neoepitope for Collagen2 (Coll2-1) and Fibulin3 fragment (Fib3-2), as well as correlations between Coll2-1 and Fib3-2 and symptomatic improvement, in a knee osteoarthritis (KOA) population. **[ABSTRACT EDITED]**

22. The effects of shoe-worn insoles on gait biomechanics in people with knee osteoarthritis: a systematic review and meta-analysis.

Author(s): Shaw, Kathryn E; Charlton, Jesse M; Perry, Christina K L; de Vries, Courtney M;

Source: British journal of sports medicine; Jul 2017

Publication Type(s): Journal Article Review

Available in full text at British Journal of Sports Medicine - from Highwire Press

Abstract:OBJECTIVESThe effect of shoe-worn insoles on biomechanical variables in people with medial knee osteoarthritis has been studied extensively. The majority of research has focused specifically on the effect of lateral wedge insoles at the knee. The aim of this systematic review and meta-analysis was to summarise the known effects of different shoe-worn insoles on all biomechanical variables during level walking in this patient population to date. **[ABSTRACT EDITED]**

Effect of soft braces on pain and physical function in patients with knee osteoarthritis: systematic review with meta-analyses.

Author(s): Cudejko, Tomasz; van der Esch, Martin; van der Leeden, Marike; Roorda, Leo D;

Source: Archives of physical medicine and rehabilitation; Jul 2017

Publication Type(s): Journal Article Review

Abstract:OBJECTIVETo systematically review and synthesize the effect of soft braces on pain, and self-reported and performance-based physical function in patients with knee osteoarthritis. **[ABSTRACT EDITED]**

Corrigendum to "Systematic review of systemic sclerosis-specific instruments for the EULAR Outcome Measures Library: An evolutional database model of validated patient-reported outcomes [Semin Arthritis Rheum 46(5) (2017) 609-614].

Author(s): Ingegnoli, Francesca; Carmona, Loreto; Castrejon, Isabel

Source: Seminars in arthritis and rheumatism; Jul 2017

Publication Type(s): Published Erratum

Safety and efficacy of ocrelizumab in rheumatoid arthritis patients with an inadequate response to methotrexate or tumor necrosis factor inhibitors: a systematic review and meta-analysis.

Author(s): Abushouk, Abdelrahman Ibrahim; Ahmed, Hussien; Ismail, Ammar; Elmaraezy, Ahmed;

Source: Rheumatology international; Jul 2017; vol. 37 (no. 7); p. 1053-1064

Publication Type(s): Journal Article

Abstract: We conducted this systematic reviews and meta-analysis to investigate the safety and efficacy of ocrelizumab in patients with active rheumatoid arthritis (RA) who exhibited resistance or intolerance to methotrexate or biological therapy. We performed a web-based literature search of PubMed, Google Scholar, EBSCO, Scopus, Embase, and Web of science for studies that compared ocrelizumab plus methotrexate versus methotrexate plus placebo in RA patients. Data were extracted from eligible studies and pooled as risk ratios (RR), using RevMan software. Pooling data from four RCTs (2230 patients) showed that ocrelizumab plus methotrexate were superior to methotrexate plus placebo at 24 weeks in terms of improvement on the American college of rheumatology (ACR20, ACR50, and ACR70) criteria ($p < 0.00001$), disease activity score 28-ESR (RR = 3.77, 95% CI [2.47, 5.74], $p < 0.00001$), and Sharp/van der Heijde radiological score (RR = 1.63, 95% CI [1.43, 1.85], $p < 0.00001$). These effects were consistent among all ocrelizumab doses. The rates of serious adverse events were comparable between the ocrelizumab and placebo containing groups (RR = 1, 95% CI [0.78, 1.28], $p = 0.98$). However, infusion related reactions were significantly higher in ocrelizumab group (RR = 2.13, 95% CI [1.69, 2.68], $p < 0.00001$), compared to placebo group. The combination of ocrelizumab plus methotrexate was superior to methotrexate plus placebo on all clinical and radiographic improvement scales. The incidence of adverse events, including serious adverse events, was comparable between both groups. Future trials should investigate the efficacy of ocrelizumab alone and develop strategies to alleviate its related infusion reactions.

Patients' perceived health service needs for osteoarthritis (OA) care: a scoping systematic review.

Author(s): Papandony, M C; Chou, L; Seneviwickrama, M; Cicuttini, F M; Lasserre, K; Teichtahl, A J; Wang, Y; Briggs, A M; Wluka, A E

Source: Osteoarthritis and cartilage; Jul 2017; vol. 25 (no. 7); p. 1010-1025

Publication Type(s): Journal Article Review

Abstract:OBJECTIVETo identify and synthesise evidence regarding patients' perceived health service needs related to osteoarthritis (OA). **[ABSTRACT EDITED]**

Cryotherapy decreases synovial Doppler activity and pain in knee arthritis: A randomized-controlled trial.

Author(s): Guillot, Xavier; Tordi, Nicolas; Prati, Clément; Verhoeven, Frank; Pazart, Lionel;

Source: Joint, bone, spine : revue du rhumatisme; Jul 2017; vol. 84 (no. 4); p. 477-483

Publication Type(s): Journal Article

Abstract:OBJECTIVETo measure and compare the effects of 2 local cryotherapy techniques on synovial power Doppler activity (primary outcome) and pain in non-septic knee arthritis without any concurrent treatment. **[ABSTRACT EDITED]**

An evidence-based walking program among older people with knee osteoarthritis: the PEP (participant exercise preference) pilot randomized controlled trial.

Author(s): Loew, Laurianne; Brosseau, Lucie; Kenny, Glen P; Durand-Bush, Natalie;

Source: Clinical rheumatology; Jul 2017; vol. 36 (no. 7); p. 1607-1616

Publication Type(s): Journal Article

Abstract: Knee osteoarthritis is a common joint problem leading to an increase of pain and a loss of function in older individuals. The main objective of this study was to evaluate if a participant who was randomly assigned to his preferred group improved his adherence to an effective walking program compared to a participant who did not receive his preferred group. This was a 9-month pilot randomized clinical trial, based on a patient treatment preferences design. The 69 eligible participants had a diagnosis of knee osteoarthritis. Participants were randomized to one of two groups: a supervised community-based or unsupervised walking program, based on the Ottawa Panel guidelines. At 6 months, participants who expressed a preference, either for the supervised or unsupervised program, and who were assigned to their preferred choice of program showed significantly higher adherence to walking sessions (supervised 60.7 ± 12.3%, $P < 0.0001$; unsupervised 43.1 ± 12.1%, $P = 0.03$), compared to the participants who did not obtain their preferred choice of program. After 9 months, significant improvements were shown according to the level of stiffness evaluated with the WOMAC ($P = 0.01$) and the functional status assessed with the Timed Up and GO Test ($P = 0.04$), among the adherent participants who obtained their preference, as compared to those who did not receive their preference. We show this approach promotes long-term adherence to a community-based walking program, while ensuring the maintenance of clinical benefits of walking, among older adults susceptible to avoid or not properly engage in physical activity.

Indirect comparisons of the efficacy of biological agents in patients with active ankylosing spondylitis: a systematic review and meta-analysis.

Author(s): Ungprasert, Patompong; Erwin, Patricia J; Koster, Matthew J

Source: Clinical rheumatology; Jul 2017; vol. 36 (no. 7); p. 1569-1577

Publication Type(s): Journal Article

Abstract: Patients with ankylosing (AS) often do not have a satisfactory response to, or could not tolerate, non-steroidal anti-inflammatory drugs (NSAIDs). Several biologic agents are available for such patients. However, the comparative efficacy of these treatments remains unknown as head-to-head randomized controlled trials (RCTs) are not available. RCTs examining the efficacy of biologic agents in patients with AS who had inadequate response to, or could not tolerate, NSAIDs were identified. If at least two RCTs were available for a given biologic agent, the pooled odds ratio (OR) and 95% confidence interval (CI) of achieving 20% improvement according to the Ankylosing Spondylitis Assessment Study group response criteria 20 (ASAS20) across trials were calculated. The pooled OR for each biologic agent was then compared to each other using the indirect comparison technique. A total of 14 RCTs of older TNF inhibitors, two RCTs of secukinumab, one RCT of certolizumab, and one RCT of tofacitinib were identified. No significant difference in any indirect

comparisons was observed with the p values ranging from 0.12 to 0.74. The likelihood of achieving the ASAS20 response in patients AS who failed or could not tolerate NSAIDs was not significantly different between older TNF inhibitors, secukinumab, certolizumab, and tofacitinib. However, the analysis is limited by the small sample size with only one RCT for certolizumab and tofacitinib.

Disease-modifying anti-rheumatic drug effect of denosumab on radiographic progression in rheumatoid arthritis: a systematic review of the literature.

Author(s): Boleto, Gonçalo; Dramé, Moustapha; Lambrecht, Isabelle; Eschard, Jean-Paul; Salmon, Jean-Hugues

Source: Clinical rheumatology; Jul 2017

Publication Type(s): Journal Article

Abstract: The aim of this study was to evaluate the structural effect of denosumab on patients with rheumatoid arthritis (RA). We performed a systematic review of the literature in the following databases: PubMed, Cochrane, Web of Science, ClinicalTrials.gov , and the WHO International Clinical Trials Registry Platform. All studies evaluating the structural effect of denosumab on RA and meeting predefined criteria were included. Data regarding disease activity, progression of joint damage, joint space narrowing, and safety were recorded. Among 168 studies identified, only 4 were finally included in this review, involving a total of 687 patients. These 4 studies showed that denosumab is effective on joint damage at 6 and 12 months as compared to placebo, alendronate, and biological disease-modifying anti-rheumatic drugs (bDMARDs) alone. No effect was observed in terms of joint space narrowing, and DAS28 and HAQ scores remained unchanged. No case of osteonecrosis of the jaw or atypical fracture was recorded, and safety was similar in both denosumab and control groups. Denosumab appears to be effective on joint erosion at 6 and 12 months in patients with RA meeting the ACR criteria, treated or not by a biologic, with excellent safety.

Effect of Artemisia annua extract on treating active rheumatoid arthritis: A randomized controlled trial.

Author(s): Yang, Min; Guo, Ming-Yang; Luo, Yong; Yun, Ming-Dong; Yan, Jiao; Liu, Tao; Xiao, Chang-Hong

Source: Chinese journal of integrative medicine; Jul 2017; vol. 23 (no. 7); p. 496-503

Publication Type(s): Journal Article

Abstract:OBJECTIVETo investigate the effect and safety of the complementary use of the extract of Artemisia annua L. (EAA) on treating active rheumatoid arthritis (RA). **[ABSTRACT EDITED]**

Vaccinations and risk of systemic lupus erythematosus and rheumatoid arthritis: A systematic review and meta-analysis.

Author(s): Wang, Bin; Shao, Xiaoqing; Wang, Dan; Xu, Donghua; Zhang, Jin-An

Source: Autoimmunity reviews; Jul 2017; vol. 16 (no. 7); p. 756-765

Publication Type(s): Journal Article Review

Abstract:BACKGROUNDIn the past several years, more and more studies proposed some concerns on the possibly increased risk of autoimmune diseases in individuals receiving vaccinations, but published studies on the associations of vaccinations with risks of systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) reported conflicting findings. A systematic review and meta-analysis was carried out to comprehensively evaluate the relationship between vaccinations and risk of SLE and RA.METHODSPubmed, Web of Science and Embase were searched for observational studies assessing the associations of vaccinations with risks of RA and SLE. Two authors

independently extracted data from those eligible studies. The quality of eligible studies was assessed by using the Newcastle-Ottawa Scale (NOS). The pooled relative risk (RR) with 95% confidence intervals (CIs) was used to measure the risk of RA and SLE associated with vaccinations, and was calculated through random-effect meta-analysis.RESULTSSixteen observational studies were finally considered eligible, including 12 studies on the association between vaccinations and SLE risk and 13 studies on the association between vaccinations and RA risk. The pooled findings suggested that vaccinations significantly increased risk of SLE (RR=1.50; 95%CI 1.05-2.12, P=0.02). In addition, there was an obvious association between vaccinations and increased risk of RA (RR=1.32; 95%CI 1.09-1.60, P=0.004). Meta-analysis of studies reporting outcomes of short vaccinated time also suggested that vaccinations could significantly increase risk of SLE (RR=1.93; 95%CI 1.07-3.48, P=0.028) and RA (RR=1.48; 95%CI 1.08-2.03, P=0.015). Sensitivity analyses in studies with low risk of bias also found obvious associations of vaccinations with increased risk of RA and SLE.CONCLUSIONThis study suggests that vaccinations are related to increased risks of SLE and RA. More and larger observational studies are needed to further verify the findings above and to assess the associations of vaccinations with other rheumatic diseases.

Retraction and republication-Effectiveness of non-steroidal anti-inflammatory drugs for the treatment of osteoarthritis pain: a network meta-analysis (The Lancet (2017) 390 (10090)(e21-e33) (S0140673617317440) (10.1016/S0140-6736(17)31744-0))

Author(s): The Editors of The Lancet

Source: The Lancet; Jul 2017; vol. 390 (no. 10090); p. 109

Publication Date: Jul 2017

Publication Type(s): Erratum

Abstract: On March 17, 2016, The Lancet published online a network meta-analysis of the effectiveness of non-steroidal anti-inflammatory drugs for pain in knee and hip osteoarthritis, and the Article was published in print on May 21, 2016.1 On July 6, 2016, the authors drew our attention to two missed trials2,3 and a duplicate publication.4,5 Lancet editors discussed the corrections that were needed in the paper, and decided, in accordance with the Committee on Publication Ethics guidelines, that because of the extent of the changes necessary, the previous version of the Article should be retracted and a corrected version republished after reanalysis and rereview. Today we retract the previous version and republish online the corrected version of the Article,6 in which the findings are slightly changed-ie, confidence intervals around the effects have changed slightly, mainly in the second digit after the decimal point, and the test for a linear dose effect is now significant for only one preparation (but was for three in the previous publication). The overall message remains the same. The previous version of the Article has been added to the appendix in the new version and is marked retracted. For the Committee on Publication Ethics guidelines see http://publicationethics.org/resources/guidelinesCopyright © 2017 Elsevier Ltd

Efficacy and safety of diclofenac in osteoarthritis: Results of a network meta-analysis of unpublished legacy studies

Author(s): Guyot P.; Pandhi S.; Nixon R.M.; Iqbal A.; Chaves R.L.; Andrew Moore R.

Source: Scandinavian Journal of Pain; Jul 2017; vol. 16 ; p. 74-88

Publication Type(s): Article

Abstract: Background and aim Diclofenac is widely prescribed for the treatment of pain. Several network meta-analyses (NMA), largely of published trials have evaluated the efficacy, tolerability, and safety of non-steroidal anti-inflammatory drugs (NSAIDs). The present NMA extends these analyses to unpublished older (legacy) diclofenac trials. **[ABSTRACT EDITED]**

Effects of High- and Low-Velocity Resistance Training on Gait Kinematics and Kinetics in Individuals with Hip Osteoarthritis: A Randomized Controlled Trial.

Author(s): Yoshihiro Fukumoto; Hiroshige Tateuchi; Rui Tsukagoshi; Yusuke Okita;

Source: American Journal of Physical Medicine & Rehabilitation; Jun 2017; vol. 96 (no. 6); p. 417-423

Publication Type(s): Academic Journal

Abstract: Objective: The aim of this study was to investigate the effects of high-velocity (HV) and low-velocity (LV) resistance training on gait kinematics and kinetics in patients with hip osteoarthritis. Design: This was a single-blind, randomized controlled trial. Forty-six women with hip osteoarthritis were randomly allocated to the HV (n = 23) or LV (n = 23) training group. The participants underwent an 8-week home-based the HV or LV resistance-training program, involving the hip and knee muscles. Outcome measures included gait kinematics and kinetics using 3-dimensional analyses, muscle strength and power, the Harris Hip Score, and hip pain using the visual analog scale. Results: There was no significant difference in changes for any of the outcome measures between groups. After the training session, muscle power, walking speed, and cadence significantly increased only in the HV group, whereas stride length and the peak hip extension angle during gait significantly increased, and pain on the visual analog scale and the peak ankle dorsiflexion moment during gait significantly decreased only in the LV group. Muscle strength and Harris Hip Score significantly increased in both groups. Conclusions: The results of this study may indicate that the potential effect of resistance training on abnormal gait pattern depends on movement velocities during training.

Home-Based Compared with Hospital-Based Rehabilitation Program for Patients Undergoing Total Knee Arthroplasty for Osteoarthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials.

Author(s): Donghai Li; Zhouyuan Yang; Pengde Kang; Xiaowei Xie

Source: American Journal of Physical Medicine & Rehabilitation; Jun 2017; vol. 96 (no. 6); p. 440-447

Publication Type(s): Academic Journal

Abstract: Objective: The aim of this study was to compare the effects of home-based with those of hospital-based rehabilitation on patients undergoing total knee arthroplasty (TKA). Design: PubMed Web of Science, EMBASE, and Cochrane Library were systematically searched for randomized controlled trials; the studies were assessed with the modified Jadad scale. Ten trials involving 1240 patients were eligible for meta-analysis. Results: The results revealed that home-based rehabilitation is not inferior to hospital-based rehabilitation according to the total Western Ontario and McMaster Universities Osteoarthritis index score, physical function, stiffness, walk test, and Oxford Knee Score at 12 or 52 weeks after TKA($P > 0.05$). Neither pain nor knee flexion range of motion differed between the groups in the first 12 weeks. Unexpectedly, the pain score in the hospital-based group was better than that in the home-based group (P 0.05). Conclusion: Home-based rehabilitation after primary TKA was comparable to hospital-based rehabilitation and thus is a significant alternative for patients.

Efficacy of Tailored Exercise Therapy on Physical Functioning in Patients With Knee Osteoarthritis and Comorbidity: A Randomized Controlled Trial.

Author(s): de Rooij, Mariëtte; van der Leeden, Marike; Cheung, John; van der Esch, Martin;

Source: Arthritis Care & Research; Jun 2017; vol. 69 (no. 6); p. 807-816

Publication Type(s): Academic Journal

Abstract: Objective: To evaluate the efficacy on physical functioning and safety of tailored exercise therapy in patients with knee osteoarthritis (OA) and comorbidities. **[ABSTRACT EDITED]**

Is Participation in Certain Sports Associated With Knee Osteoarthritis? A Systematic Review.

Author(s): Driban, Jeffrey B.; Hootman, Jennifer M.; Sitler, Michael R.; Harris, Kyle P.

Source: Journal of Athletic Training (Allen Press); Jun 2017; vol. 52 (no. 6); p. 497-506

Publication Type(s): Academic Journal

Available in full text at Journal of Athletic Training - from National Library of Medicine

Abstract: West Chester University of Pennsylvania Objective: Information regarding the relative risks of developing knee osteoarthritis (OA) as a result of sport participation is critical for shaping public health messages and for informing knee-OA prevention strategies. The purpose of this systematic review was to investigate the association between participation in specific sports and knee OA. **[ABSTRACT EDITED]**

Tibiofemoral Osteoarthritis After Surgical or Nonsurgical Treatment of Anterior Cruciate Ligament Rupture: A Systematic Review.

Author(s): Harris, Kyle P.; Driban, Jeffrey B.; Sitler, Michael R.; Cattano, Nicole M.

Source: Journal of Athletic Training (Allen Press); Jun 2017; vol. 52 (no. 6); p. 507-517

Publication Type(s): Academic Journal

Available in full text at Journal of Athletic Training - from National Library of Medicine

Abstract: Objective: To determine if surgical or nonsurgical treatment of anterior cruciate ligament rupture affects the prevalence of posttraumatic tibiofemoral osteoarthritis (OA). Data Sources: Studies published between 1983 and April 2012 were identified via EBSCOhost and OVID. Reference lists were then screened in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. Study Selection: Studies were included if (a) treatment outcomes focused on a direct comparison of surgical versus nonsurgical treatment of anterior cruciate ligament rupture, (b) the prevalence of tibiofemoral OA was reported, and (c) they were written in English. Studies were excluded if (a) the included patients were treated with cast immobilization after surgery, (b) the mean follow-up was less than 10 years, or (c) the patients underwent anterior cruciate ligament revision surgery. Data Extraction: Two independent investigators reviewed the included articles using the Newcastle-Ottawa Scale. Frequency of OA, surgical procedure, nonsurgical treatments, and participant characteristics were extracted and summarized. We calculated prevalence (%) and 95% confidence intervals for treatment groups for each individual study and overall. We developed 2 x 2 contingency tables to assess the association between treatment groups (exposed had surgery, referent was nonsurgical treatment) and the prevalence of OA. Data Synthesis: Four retrospective studies were identified (140 surgical patients, 240 nonsurgical patients). The mean Newcastle-Ottawa Scale score was 5 (range = 4-6 [of 10] points). Average length of follow-up was 11.8 years (range = 10-14 years). The prevalence of OA for surgically treated patients ranged from 32.6% to 51.2% (overall = 41.4%, 95% confidence interval = 35.0%, 48.1%) and for nonsurgical patients ranged from 24.5% to 42.3% (overall = 30.9%, 95% confidence interval = 24.4%, 38.3%). Conclusions: Although OA prevalence was higher in the surgical treatment group at a mean follow-up of 11.8 years, no definitive evidence supports surgical or nonsurgical treatment after anterior cruciate ligament injury to prevent posttraumatic OA. Current studies have been limited by small sample sizes, low methodologic quality, and a lack of data regarding confounding factors.

Randomized Controlled Trial Investigating the Role of Exercise in the Workplace to Improve Work Ability, Performance, and Patient-Reported Symptoms Among Older Workers With Osteoarthritis.

Author(s): Chopp-Hurley, Jaclyn N.; Brenneman, Elora C.; Wiebenga, Emily G.; Bulbrook, Brittany

Source: Journal of Occupational & Environmental Medicine; Jun 2017; vol. 59 (no. 6); p. 550-556

Publication Type(s): Academic Journal

Abstract: Objective: The aim of this study was to evaluate the effectiveness of a 12-week workplace exercise programon work ability, performance, and patient-reported symptoms in older university employees with knee and/or hip osteoarthritis. Methods: Twenty-four participants with clinical hip and/or knee osteoarthritis were randomized to exercise or no exercise. At baseline and follow-up, several work (work ability, resilience), patient-reported (pain, physical function, depressive symptoms, self-efficacy), and performance outcomes (hip and knee strength, mobility performance) were measured. Results: Significant improvements in work ability (P<0.049) and patient-reported outcomes (pain, function, depressive symptoms) existed in the exercise group. No improvements were demonstrated in the no exercise group. Conclusions: Exercise in the workplace improved work ability and patient-reported symptoms in older workers with osteoarthritis. The benefits of workplace exercise programs should be studied in a larger sample in which attention is given to improving exercise adherence.

The Association of Recreational and Competitive Running With Hip and Knee Osteoarthritis: A Systematic Review and Meta-analysis.

Author(s): ALENTORN-GELI, EDUARD; SAMUELSSON, KRISTIAN; MUSAHL, VOLKER;

Source: Journal of Orthopaedic & Sports Physical Therapy; Jun 2017; vol. 47 (no. 6); p. 373-390

Publication Type(s): Academic Journal

Abstract:* STUDY DESIGN: Systematic review and meta-analysis. * BACKGROUND: Running is a healthy and popular activity worldwide, but data regarding its association with osteoarthritis (0A) are conflicting. * OBJECTIVES: To evaluate the association of hip and knee 0A with running and to explore the influence of running intensity on this association. * **[ABSTRACT EDITED]**

Nurse-led Care for Patients with Rheumatoid Arthritis: A Systematic Review of the Effect on Quality of Care.

Author(s): Garner, Stephanie; Lopatina, Elena; Rankin, James A.; Marshall, Deborah A.

Source: Journal of Rheumatology; Jun 2017; vol. 44 (no. 6); p. 757-765

Publication Type(s): Academic Journal

Abstract: Objective: In the nurse-led care (NLC) model, nurses take on the primary responsibility for patient management. We systematically assessed the effect of NLC for patients with rheumatoid arthritis (RA) on multiple dimensions of quality of care from the Alberta Quality of Care Matrix for Health.Methods: We searched MEDLINE, EMBASE, and CINAHL from 1950 to January 2015. English-language studies were included if they reported on NLC for patients with RA and assessed 1 or more dimensions of quality (effectiveness, acceptability, efficiency, accessibility, appropriateness, and safety). Data were synthesized using narrative analysis.Results: We included 10 studies. The NLC models varied in terms of nurses' professional designation (clinical nurse specialists or nurse practitioners); however, their role in the clinic was fairly consistent. Disease activity was the most common measure of effectiveness, with NLC being equal (n = 2) or superior (n = 3) to the comparator. NLC was equal (n = 1) or superior (n = 5) versus the comparator in terms of patient satisfaction (i.e., acceptability of care). NLC was equally safe as other models (n = 2). Regarding efficiency, results varied across studies (n = 6) and did not allow for conclusions about models' cost-effectiveness. In qualitative studies, patients found NLC to be superior in terms of accessibility [i.e., continuity of care (n = 3) and appropriateness measured with education and support (n = 4)]; however, no quantitative measures were found.Conclusion: NLC for patients with RA is effective,

acceptable, and safe as compared with other models. However, current evidence is insufficient to draw conclusions about its efficiency, accessibility, and appropriateness.

Defining the optimal biological monotherapy in rheumatoid arthritis: A systematic review and meta-analysis of randomised trials.

Author(s): Tarp, Simon; Furst, Daniel E.; Dossing, Anna; Østergaard, Mikkel; Lorenzen, Tove;

Source: Seminars in Arthritis & Rheumatism; Jun 2017; vol. 46 (no. 6); p. 699-708

Publication Type(s): Periodical

Abstract: Objectives To summarize and compare the benefits and harms of biological agents used as monotherapy for rheumatoid arthritis (RA) in order to inform decisions for patients who are intolerant to conventional DMARD therapy. Methods We searched MEDLINE, EMBASE, CENTRAL, and other sources for randomised trials that compared biological monotherapy with methotrexate, placebo, or other biological monotherapies. Primary outcomes were ACR50 and the number of patients who discontinued due to adverse events. Our network meta-analysis was based on mixed-effects logistic regression, including both direct and indirect comparisons of the treatment effects, while preserving the randomised comparisons within each trial. PROSPERO identifier: CRD42012002800. Results The analysis comprises 28 trials (8602 patients), including all nine biological agents approved for RA. Eight trials included "DMARD-naïve", and 20 "DMARD-Inadequate responder" (DMARD-IR) patients. All agents except anakinra and infliximab were superior (p 0.52). However, because rituximab was evaluated in just 40 patients, our confidence in the estimates is limited. When including only DMARD-IR trials, the same statistical pattern emerged; in addition etanercept and tocilizumab were superior to abatacept. At recommended doses, both etanercept and tocilizumab were superior to adalimumab and certolizumab. No statistically significant differences among biological agents were found with respect to discontinuation due to adverse events (p > 0.068). Conclusions Evidence from randomised trials suggests that most biological agents are effective as monotherapy. Although our confidence in the estimates is limited, etanercept or tocilizumab may be the optimal choice for most patients who need treatment with biological monotherapy. However, given our limited confidence in the estimates including possibility of bias, it is appropriate to strongly weight patients' preferences and values in the final treatment choice.

Effectiveness of behavioural change techniques in physiotherapy interventions to promote physical activity adherence in patients with hip and knee osteoarthritis: a systematic review protocol.

Author(s): Willett, Matthew; Duda, Joan; Gautrey, Charlotte; Fenton, Sally; Greig, Carolyn;

Source: BMJ open; Jun 2017; vol. 7 (no. 6); p. e015833

Publication Date: Jun 2017

PubMedID: 28667221

Available in full text at BMJ Open - from ProQuest

Abstract:INTRODUCTIONOsteoarthritis (OA) is a common degenerative articular disease, the highest cause of individual level disability and a significant socioeconomic burden to healthcare services. Patient education and physical activity (PA) prescription are recommended components of interventions in several healthcare guidelines and are commonly provided by physiotherapists. However, these interventions lack long-term clinical effectiveness. Patient adherence to PA prescription requires patients to modify their PA behaviour and appears critical in maintaining symptomatic improvements. This systematic review aims to evaluate the effectiveness of behavioural change techniques (BCTs) used in physiotherapy interventions to improve PA adherence.METHODS AND ANALYSISMedline, Cochrane and PEDro registers of Controlled Trials,

EMBASE, CINAHL and PsycInfo databases, and key grey literature sources will be rigorously searched for randomised controlled trials that compared a physiotherapy intervention incorporating BCTs with other therapies, placebo interventions, usual care or no-treatment. Two independent researchers will conduct literature searches, assess trial eligibility, extract data, conduct risk of bias assessment (using Cochrane risk of bias tool), classify BCTs and evaluate the quality of the body of literature following Grading of Recommendations, Assessment, Development and Evaluation (GRADE) guidelines. Narrative synthesis of key outcomes will be presented and meta-analysis will be performed if included trials are clinically homogenous, based on their intervention and comparator groups and outcome measures. This review will be reported in line with the Preferred Reporting Items for Systematic review and Meta-Analysis guidelines.ETHICS AND DISSEMINATIONResearch ethics approval is not required. This review will help inform clinicians and researchers on the most effective behavioural change techniques used in physiotherapy interventions to enhance adherence to PA prescription for patients with lower limb OA. The findings will be disseminated through publication in a peer-reviewed journal and conference presentations.TRIAL REGISTRATION NUMBERPROSPERO CRD42016039932.

Electro-Acupuncture is Beneficial for Knee Osteoarthritis: The Evidence from Meta-Analysis of Randomized Controlled Trials.

Author(s): Chen, Na; Wang, Jing; Mucelli, Attilio; Zhang, Xu; Wang, Changqing

Source: The American journal of Chinese medicine; Jun 2017 ; p. 1-21

Publication Type(s): Journal Article

Abstract: Knee osteoarthritis (KOA) is a common chronic degenerative disease of the elderly. Electro-acupuncture (EA) is considered as a beneficial treatment for KOA, but the conclusion is controversial. This systematic review compiled the evidence from 11 randomized controlled trials to objectively assess the effectiveness and safety of EA for KOA. Eight databases including PubMed, Cochrane Library, Clinic trials, Foreign Medical Literature Retrial Service (FMRS), Science Direct, China National Knowledge Infrastructure (CNKI), Chinese Scientific Journal Database (VIP), and Wanfang Data were extensively searched up to 5 July 2016. The outcomes included the evaluation of effectiveness, pain and physical function. Risk of bias was evaluated according to the Cochrane risk of bias tool. Eleven RCTs with 695 participants were included. Meta-analysis indicated that EA was more effective than pharmacological treatment (RR [Formula: see text] 1.14; 95% CI [Formula: see text] 1.01,1.28; [Formula: see text]) and manual acupuncture (RR [Formula: see text] 1.12; 95% CI [Formula: see text] 1.02,1.22; [Formula: see text]). Also, EA had a more significant effect in reducing the pain intensity (SMD [Formula: see text]; 95% CI [Formula: see text]; [Formula: see text]) and improving the physical function in the perspective of WOMAC (MD [Formula: see text]; 95% CI [Formula: see text], 5.56; [Formula: see text]) and LKSS (pharmacological treatment: MD [Formula: see text]; 95% CI [Formula: see text], 6.64; [Formula: see text]). Furthermore, these studies implied that EA should be performed for at least 4 weeks. Conclusively, the results indicate that EA is a great opportunity to remarkably alleviate the pain and improve the physical function of KOA patients with a low risk of adverse reaction. Therefore, more high quality RCTs with rigorous methods of design, measurement and evaluation are needed to confirm the long-term effects of EA for KOA.

The importance of dose in land-based supervised exercise for people with hip osteoarthritis. A systematic review and meta-analysis.

Author(s): Moseng, T; Dagfinrud, H; Smedslund, G; Østerås, N

Source: Osteoarthritis and cartilage; Jun 2017

Publication Type(s): Journal Article Review

Abstract:PURPOSETo compare effects of land-based exercise programmes with high vs low or uncertain compliance with dose recommendations among people with hip osteoarthritis (OA).DESIGNA systematic review with meta-analyses of supervised exercise programmes in people with symptomatic hip OA was conducted. Dose of the exercise interventions was evaluated according to the American College of Sports Medicine's (ACSM) recommendations for developing and maintaining cardiorespiratory fitness, muscular strength and flexibility in healthy adults. Compliance ratios with the recommendations were calculated. Standardized Mean Differences (SMDs) were calculated in meta-analyses for the outcomes pain and self-reported physical function. Outcome effects were compared between the sub-groups of studies with interventions with "high" vs "uncertain" compliance with the ACSM recommendations.RESULTSTwelve studies including 1202 participants were included. Seven were categorized with "high" and five with "uncertain" compliance with the ACSM recommendations. Ten studies had an overall low risk of bias. Comparing exercise with no exercise, the pooled SMD for pain was -0.42 (95% CI -0.58, -0.26) in the high compliance group, favouring exercise. In the uncertain compliance group the pooled SMD was 0.04 (95% CI -0.24, 0.31). For physical function the SMD was -0.41 (95% CI -0.58, -0.24) in the high compliance group and -0.23 (95% CI -0.52, 0.06) in the uncertain compliance group.CONCLUSIONSThe results show that land-based, supervised exercise interventions with high compliance to the ACSM recommendations result in significantly larger improvements in pain and non-significantly larger improvement in self-reported physical function compared with land-based, supervised exercise interventions with uncertain compliance.

Rheumatoid arthritis is associated with negatively variable impacts on domains of female sexual function: evidence from a systematic review and meta-analysis.

Author(s): Zhang, Qiuxiang; Zhou, Congcong; Chen, Haoyang; Zhao, Qian; Li, Lin; Cui, Yafei; Shen, Biyu

Source: Psychology, health & medicine; Jun 2017 ; p. 1-12

Publication Type(s): Journal Article

Abstract: To systematically review the literature to identify the impact of rheumatoid arthritis (RA) on specific female sexual function domains. A meta-analysis was performed and the related literature were searched in MEDLINE, EMBASE, Cochrane Library, CNKI, CBM and Web of Science databases, and in reference lists of articles and systematic reviews. Score of the Female Sexual Function Index (FSFI) was used as the outcome measurement, and mean differences (MD) with 95% confidence intervals (CI) were calculated. Five studies were included, including 346 women with RA and 237 healthy female controls. Each domain of the FSFI score: lubrication (MD, -2.48; 95% CI, -3.69, -1.28), orgasm-1.71 (-2.09, -1.33), sexual desire-1.27 (-1.59, -0.95), satisfaction-1.67 (-2.18, -1.16), arousal-1.83 (-2.85, -0.82), pain-1.57 (-2.43, -0.70) and the total score -8.84 (-11.88, -5.79) were lower in RA women than healthy controls. Furthermore, lubrication dimension was most severely affected especially. This meta-analysis showed that female RA patients scored lower in each dimension of FSFI, mostly in the lubrication domain. It demonstrated that targeted interventions should be done to improve their sexual function. Future well-designed researches with larger sample sizes are necessary to evaluate the potential risk factors which determine female sexual dysfunction.

A randomised, double-blind trial to demonstrate bioequivalence of GP2013 and reference rituximab combined with methotrexate in patients with active rheumatoid arthritis.

Author(s): Smolen, Josef S; Cohen, Stanley B; Tony, Hans-Peter; Scheinberg, Morton; Kivitz, Alan

Source: Annals of the rheumatic diseases; Jun 2017

Publication Type(s): Journal Article

Available in full text at EULAR Meeting Abstracts - from Highwire Press

Available in full text at Annals of the Rheumatic Diseases - from Highwire Press

Abstract:OBJECTIVESThe aim of this report is to demonstrate pharmacokinetic (PK) and pharmacodynamic (PD) equivalence as well as similar efficacy, safety and immunogenicity between GP2013, a biosimilar rituximab, and innovator rituximab (RTX) in patients with rheumatoid arthritis (RA) with inadequate response or intolerance to tumour necrosis factor inhibitor (TNFi) treatment.METHODSIn this multinational, randomised, double-blind, parallel-group study, 312 patients with active disease despite prior TNFi therapy were randomised to receive GP2013 or either the EU (RTX-EU) or the US (RTX-US) reference product, along with methotrexate (MTX) and folic acid. The primary endpoint was the area under the serum concentration-time curve from study drug infusion to infinity (AUC0-inf). Additional PK and PD parameters, along with efficacy, immunogenicity and safety outcomes were also assessed up to week 24.RESULTSThe 90% CI of the geometric mean ratio of the AUCs were within the bioequivalence limits of 80% to 125% for all three comparisons; GP2013 versus RTX-EU: 1.106 (90% CI 1.010 to 1.210); GP2013 versus RTX-US: 1.012 (90% CI 0.925 to 1.108); and RTX-EU versus RTX-US: 1.093 (90% CI 0.989 to 1.208). Three-way PD equivalence of B cell depletion was also demonstrated. Efficacy, safety and immunogenicity profiles were similar between GP2013 and RTX.CONCLUSIONSThree-way PK/PD equivalence of GP2013, RTX-EU and RTX-US was demonstrated. Efficacy, safety and immunogenicity profiles were similar between GP2013 and RTX.TRIAL REGISTRATION NUMBERNCT01274182; Results.

Yoga for the management of pain and sleep in rheumatoid arthritis: a pilot randomized controlled trial.

Author(s): Ward, Lesley; Stebbings, Simon; Athens, Josie; Cherkin, Daniel; David Baxter, G

Source: Musculoskeletal care; Jun 2017

Publication Type(s): Journal Article

Abstract:OBJECTIVEThe aim of the present study was to determine the feasibility of a relaxation-based yoga intervention for rheumatoid arthritis, designed and reported in accordance with Delphi recommendations for yoga interventions for musculoskeletal conditions.METHODSParticipants were recruited from a hospital database, and randomized to either eight weekly 75-min yoga classes or a usual care control. Feasibility was determined by recruitment rates, retention, protocol adherence, participant satisfaction and adverse events. Secondary physical and psychosocial outcomes were assessed using self-reported questionnaires at baseline (week 0), week 9 (primary time point) and week 12 (follow-up).RESULTSOver a 3-month period, 26 participants with mild pain, mild to moderate functional disability and moderate disease activity were recruited into the study (25% recruitment rate). Retention rates were 100% for yoga participants and 92% for usual care participants at both weeks 9 and 12. Protocol adherence and participant satisfaction were high. Yoga participants attended a median of seven classes; additionally, seven of the yoga participants (54%) reported continuing yoga at home during the follow-up period. No serious adverse events were related to the study. Secondary outcomes showed no group effects of yoga compared with usual care.CONCLUSIONSA relaxation-based yoga programme was found to be feasible and safe for participants with rheumatoid arthritis-related pain and functional disability. Adverse events were minor, and not unexpected from an intervention including physical components. This pilot provides a framework for larger intervention studies, and supports further exploration of yoga as a complex intervention to assist with the management of rheumatoid arthritis.

Efficacy, safety, pharmacokinetics, and pharmacodynamics of filgotinib, a selective Janus kinase 1 inhibitor, after short-term treatment of rheumatoid arthritis: Results of two randomized Phase IIA trials.

Author(s): Vanhoutte, Frédéric; Mazur, Minodora; Voloshyn, Oleksandr; Stanislavchuk, Mykola;

Source: Arthritis & rheumatology (Hoboken, N.J.); Jun 2017

Abstract:OBJECTIVEJanus kinase (JAK) inhibitors have shown efficacy in rheumatoid arthritis (RA). We hypothesized that selective inhibition of JAK1 would combine good efficacy with a differentiated safety profile versus less selective JAK inhibitors.METHODSIn two 4-week exploratory, double-blind, placebo-controlled Phase IIA trials, 127 RA patients with insufficient response to methotrexate received filgotinib (GLPG0634, GS-6034) oral capsules (twice-daily 100 mg, or once-daily 30, 75, 150, 200, or 300 mg) or placebo, added on to a stable regimen of methotrexate, to evaluate safety, efficacy, pharmacokinetics and pharmacodynamics of filgotinib. The primary endpoint was the American College of Rheumatology 20% improvement (ACR20) response rate at Week 4.RESULTSFilgotinib (75-300 mg) treatment met the primary endpoint and showed early onset of efficacy. ACR20 response rates progressively increased to Week 4, and DAS28 [CRP] decreased. Marked and sustained improvements in serum CRP and other pharmacodynamic markers were observed. The pharmacokinetic exposure increased dose proportionally within the 30-300 mg dose range. Early side effects observed with other less selective JAK inhibitors were not observed, such as no worsening of anemia (JAK2 related), no effects on liver transaminases and no increase in LDL/cholesterol. A limited decrease in neutrophils, but no neutropenia, was consistent with immunomodulatory effects through JAK1 inhibition. There were no infections. Overall, filgotinib was well tolerated with study drug-related events mild to moderate and transient on therapy, the most common being nausea.CONCLUSIONSelective inhibition of JAK1 by filgotinib shows initial efficacy in RA with an encouraging safety profile in these exploratory studies. This article is protected by copyright. All rights reserved.

Systematic review of non-surgical therapies for osteoarthritis of the hand: an update.

Author(s): Lue, S; Koppikar, S; Shaikh, K; Mahendira, D; Towheed, T E

Source: Osteoarthritis and cartilage; Jun 2017

Publication Type(s): Journal Article Review

Abstract:OBJECTIVETo update our earlier systematic reviews which evaluated all published randomized controlled trials (RCTs) evaluating pharmacological and non-pharmacological therapies in patients with hand osteoarthritis (OA). Surgical therapies were not evaluated.DESIGNRCTs published between March 2008 and December 2015 were added to the previous systematic reviews.RESULTSA total of 95 RCTs evaluating various pharmacological and non-pharmacological therapies in hand OA were analyzed in this update. Generally, the methodological quality of these RCTs has improved since the last update, with more studies describing their methods for randomization, blinding, and allocation concealment. However, RCTs continue to be weakened by a lack of consistent case definition and a lack of standardized outcome assessments specific to hand OA. The number and location of evaluated hand joints continues to be underreported, and only 25% of RCTs adequately described the method used to ensure allocation concealment. These remain major weaknesses of published RCTs. A meta-analysis could not be performed because of marked study heterogeneity, insufficient statistical data available in the published RCTs, and a small number of identical comparators.CONCLUSIONHand OA is a complex area in which to study the efficacy of therapies. There has been an improvement in the overall design and conduct of RCTs, however, additional large RCTs with a more robust methodological approach specific to hand OA are needed in order to make clinically relevant conclusions about the efficacy of the diverse treatment options available.

Efficacy and safety of tofacitinib monotherapy, tofacitinib with methotrexate, and adalimumab with methotrexate in patients with rheumatoid arthritis (ORAL Strategy): a phase 3b/4, double-blind, head-to-head, randomised controlled trial.

Author(s): Fleischmann, Roy; Mysler, Eduardo; Hall, Stephen; Kivitz, Alan J; Moots, Robert J;

Source: Lancet (London, England); Jun 2017

Publication Type(s): Journal Article

Abstract:BACKGROUNDTofacitinib is an oral Janus kinase inhibitor for the treatment of rheumatoid arthritis. The Oral Rheumatoid Arthritis triaL (ORAL) Strategy aimed to assess the comparative efficacy of tofacitinib monotherapy, tofacitinib plus methotrexate, and adalimumab plus methotrexate for the treatment of rheumatoid arthritis in patients with a previous inadequate response to methotrexate.METHODSORAL Strategy was a 1 year, double-blind, phase 3b/4, head-to-head, non-inferiority, randomised controlled trial in patients aged 18 years or older with active rheumatoid arthritis despite methotrexate therapy. Patients were randomly assigned (1:1:1) to receive oral tofacitinib (5 mg twice daily) monotherapy, oral tofacitinib (5 mg twice daily) plus methotrexate, or subcutaneous adalimumab (40 mg every other week) plus methotrexate at 194 centres in 25 countries. Eligible patients received live zoster vaccine at investigators' discretion. The primary endpoint was the proportion of patients who attained an American College of Rheumatology response of at least 50% (ACR50) at month 6 in the full analysis set (patients who were randomly assigned to a group and received at least one dose of the study treatment). Non-inferiority between groups was shown if the lower bound of the 98·34% CI of the difference between comparators was larger than -13·0%. This trial is registered with ClinicalTrials.gov, number NCT02187055.FINDINGS1146 patients received treatment (384 had tofacitinib monotherapy; 376 had tofacitinib and methotrexate; and 386 had adalimumab and methotrexate). At 6 months, ACR50 response was attained in 147 (38%) of 384 patients with tofacitinib monotherapy, 173 (46%) of 376 patients with tofacitinib and methotrexate, and 169 (44%) of 386 patients with adalimumab and methotrexate. Non-inferiority was declared for tofacitinib and methotrexate versus adalimumab and methotrexate (difference 2% [98·34% CI -6 to 11]) but not for tofacitinib monotherapy versus either adalimumab and methotrexate (-6 [-14 to 3]) or tofacitinib and methotrexate (-8 [-16 to 1]). In total, 23 (6%) of 384 patients receiving tofacitinib monotherapy, 26 (7%) of 376 patients receiving tofacitinib plus methotrexate, and 36 (9%) of 386 patients receiving adalimumab plus methotrexate discontinued due to adverse events. Two (1%) of the 384 patients receiving tofacitinib monotherapy died. No new or unexpected safety issues were reported for either treatment in this study for up to 1 year.INTERPRETATIONTofacitinib and methotrexate combination therapy was non-inferior to adalimumab and methotrexate combination therapy in the treatment of rheumatoid arthritis in patients with an inadequate response to methotrexate in this trial. Tofacitinib monotherapy was not shown to be non-inferior to either combination.FUNDINGPfizer Inc.

Number of parity and the risk of rheumatoid arthritis in women: A dose-response meta-analysis of observational studies.

Author(s): Ren, Lei; Guo, Peng; Sun, Qiao-Mei; Liu, Hong; Chen, Yu; Huang, Ying; Cai, Xiao-Jun

Source: The journal of obstetrics and gynaecology research; Jun 2017

Publication Type(s): Journal Article

Abstract:AIMThe association between parity and rheumatoid arthritis (RA) risk has been investigated, but results are controversial. Thus, our aim was to systematically analyze the effect of number of parity on the risk of RA in women.METHODSRelevant published studies were identified using PubMed and embase databases through 1 April 2016. We pooled the relative risks (RR) and 95% confidence intervals (CI) using random-effects models.RESULTSIn all, 12 studies with a total of 2 497 580 participants and 11 521 RA cases were included. A borderline significant inverse association was observed when we compared parity with nulliparity for RA, with summarized RR = 0.90 (95%CI: 0.79-1.02; I2 = 58.5%, Pheterogeneity = 0.010). In dose-response analysis, we observed a significant nonlinear (Pnonlinearity = 0.000) relation between parity number and the risk of RA. Compared with null parity, the pooled RR of RA were 0.89 (95%CI: 0.86-0.93), 0.84 (95%CI:

0.79-0.89), 0.85 (95%CI: 0.79-0.90), 0.88 (95%CI: 0.81-0.95), 0.90 (95%CI: 0.83-0.97), 0.92 (95%CI: 0.84-1.02), and 0.94 (95%CI: 0.83-1.07) for 1, 2, 3, 4, 5, 6, and 7 live births, respectively. Subgroup and sensitivity analyses showed similar associations. No publication bias was found.CONCLUSIONThe findings from the current meta-analysis indicate that parity was related to decreased risk of RA. The greatest risk reduction appeared when the parity number reached two. Further studies are warranted to confirm our findings.

Systematic review and meta-analysis: pharmacogenetics of anti-TNF treatment response in rheumatoid arthritis.

Author(s): Bek, S; Bojesen, A B; Nielsen, J V; Sode, J; Bank, S; Vogel, U; Andersen, V

Source: The pharmacogenomics journal; Jun 2017

Publication Type(s): Journal Article Review

Abstract: Rheumatoid arthritis (RA) is a chronic inflammatory disease that affects ~1% of the Caucasian population. Over the last decades, the availability of biological drugs targeting the proinflammatory cytokine tumour necrosis factor α, anti-TNF drugs, has improved the treatment of patients with RA. However, one-third of the patients do not respond to the treatment. We wanted to evaluate the status of pharmacogenomics of anti-TNF treatment. We performed a PubMed literature search and all studies reporting original data on associations between genetic variants and anti-TNF treatment response in RA patients were included and results evaluated by meta-analysis. In total, 25 single nucleotide polymorphisms were found to be associated with anti-TNF treatment response in RA (19 from genome-wide association studies and 6 from the meta-analyses), and these map to genes involved in T cell function, NFκB and TNF signalling pathways (including CTCN5, TEC, PTPRC, FCGR2A, NFKBIB, FCGR2A, IRAK3). Explorative prediction analyses found that biomarkers for clinical treatment selection are not yet available.The Pharmacogenomics Journal advance online publication, 13 June 2017; doi:10.1038/tpj.2017.26.

Efficacy and Safety of GuiZhi-ShaoYao-ZhiMu Decoction for Treating Rheumatoid Arthritis: A Systematic Review and Meta-Analysis of Randomized Clinical Trials.

Author(s): Daily, James W; Zhang, Ting; Cao, Shihua; Park, Sunmin

Source: Journal of alternative and complementary medicine (New York, N.Y.); Jun 2017

Abstract:OBJECTIVESGuiZhi-ShaoYao-ZhiMu decoction (GSZD), a traditional Chinese herbal medication for the management of rheumatoid arthritis (RA), has a long history of use and modern scientific research support for efficacy, but the studies have not been systematically evaluated. Therefore, this study systematically reviewed the efficacy of GSZD using the available human clinical trials and conducted a meta-analysis.METHODSThe available databases were searched using proper languages of English, Korean, and Chinese. The key erms used for searching were "GSZD," "Cassia Twig," "Guizhi," "Paeonia lactiflora," "Shaoyao," "Anemarrhena Rhizome," "Zhimu," "rheumatoid arthritis," "randomized," "controlled trial," and "clinical trial." Randomized clinical trials (RCTs) using GSZD were included in the review and meta-analysis. According to heterogeneity, odds ratio and confidence intervals in the pooled RCTs were assessed by a fixed or random model in meta-analysis. Risk of bias was evaluated for all included studies.RESULTSThirteen RCTs met the inclusion criteria and were included in the meta-analysis. All studies evaluated the efficacy of GSZD for treating RA, but the herbal formulations varied since some studies added herbs to the basic GSZD formulation. However, all formulations contained the essential herbs: Guizhi, Shaoyao, and Zhimu. Each RCT included an experimental group (GSZD with or without Western-style medicine) and a control group (either standard Western-style medicines or placebo). When compared to placebo, the GSZD treatment was found to be three to six times more effective than standard Western drugs for some symptoms. Furthermore, only two studies reported any adverse events associated with the GSZD

group, whereas several reported serious adverse events in the control groups.CONCLUSIONSThe Traditional Chinese Medicine, GSZD, may have equal or superior effectiveness and safety for treating RA compared to Western RA drugs. It should be considered a viable alternative to Western medicine. However, more long-term research is needed in larger patient groups to better establish its safety and efficacy.

Efficacy, Safety and Pharmacokinetics of Up to Two Courses of the Rituximab Biosimilar CT-P10 Versus Innovator Rituximab in Patients with Rheumatoid Arthritis: Results up to Week 72 of a Phase I Randomized Controlled Trial.

Author(s): Yoo, Dae Hyun; Suh, Chang-Hee; Shim, Seung Cheol; Jeka, Slawomir;

Source: BioDrugs : clinical immunotherapeutics, biopharmaceuticals and gene therapy; Jun 2017

Publication Type(s): Journal Article

Abstract:BACKGROUNDCT-P10 is a biosimilar of innovator rituximab (RTX), a biological therapy used to treat patients with rheumatoid arthritis (RA) who have responded inadequately to anti-tumor necrosis factor agents.OBJECTIVEOur objective was to compare the clinical profile of CT-P10 versus RTX in patients with RA who received up to two courses of treatment and were followed for up to 72 weeks.METHODSIn this multicenter double-blind phase I study, patients were randomized 2:1 to receive CT-P10 1000 mg or RTX 1000 mg at weeks 0 and 2. Based on disease activity, patients could receive a second course of treatment between weeks 24 and 48. Efficacy endpoints, including mean change from baseline in Disease Activity Score using 28 joints (DAS28), safety, immunogenicity, pharmacokinetics, and pharmacodynamics were evaluated.RESULTSIn total, 154 patients were randomized to CT-P10 or RTX (n = 103 and 51, respectively); 137 (n = 92 and 45) completed the first course of treatment, of whom 83 (n = 60 and 23) were re-treated. Improvements from baseline in all efficacy endpoints were highly similar between the CT-P10 and RTX groups over both treatment courses. At week 24 after the second course, mean change from week 0 of the first course in DAS28 erythrocyte sedimentation rate was -2.47 and -2.04 for CT-P10 and RTX, respectively, (p = 0.1866) and in DAS28 C-reactive protein was -2.32 and -2.00, respectively (p = 0.3268). The proportion of patients positive for antidrug antibodies at week 24 after the second treatment course was 20.0% and 21.7% in the CT-P10 and RTX groups, respectively. The safety profile of CT-P10 was comparable to that of RTX, and pharmacokinetic and pharmacodynamic properties were similar.CONCLUSIONSIn patients with RA, efficacy, safety, and other clinical data were comparable between CT-P10 and RTX after up to two courses of treatment over 72 weeks. (ClinicalTrials.gov identifier NCT01534884).

Immunogenicity of Biologics in Chronic Inflammatory Diseases: A Systematic Review.

Author(s): Strand, Vibeke; Balsa, Alejandro; Al-Saleh, Jamal; Barile-Fabris, Leonor

Source: BioDrugs : clinical immunotherapeutics, biopharmaceuticals and gene therapy; Jun 2017

Publication Type(s): Journal Article Review

Abstract:OBJECTIVESA systematic review was conducted to explore the immunogenicity of biologic agents across inflammatory diseases and its potential impact on efficacy/safety.METHODSLiterature searches were conducted through November 2016 to identify controlled and observational studies of biologics/biosimilars administered for treatment of rheumatoid arthritis (RA), psoriatic arthritis (PsA), juvenile idiopathic arthritis (JIA), ankylosing spondylitis (AS), non-radiographic axial spondyloarthritis (nr-axSpA), psoriasis (Ps), Crohn's disease, and ulcerative colitis.RESULTSOf >21,000 screened publications, 443 were included. Anti-drug antibody (ADAb) rates varied widely among biologics across diseases (and are not directly comparable because of immunoassay heterogeneity); the highest overall rates were reported with infliximab (0-83%), adalimumab (0-54%), and infliximab biosimilar CT-P13 (21-52%), and the lowest with secukinumab (0-1%), ustekinumab (1-11%), etanercept (0-13%), and golimumab (0-19%). Most ADAbs were neutralizing, except those to

abatacept and etanercept. ADAb+ versus ADAb- patients had lower rates of clinical response to adalimumab (RA, PsA, JIA, AS, Ps), golimumab (RA), infliximab (RA, PsA, AS, Ps), rituximab (RA), ustekinumab (Ps), and CT-P13 (RA, AS). Higher rates of infusion-related reactions were reported in infliximab- and CT-P13-treated ADAb+ patients. Background immunosuppressives/anti-proliferatives reduced biologic immunogenicity across diseases.CONCLUSIONSBased on reviewed reports, biologic/biosimilar immunogenicity differs among agents, with the highest rates observed with infliximab and adalimumab. As ADAb formation in biologic-/biosimilar-treated patients may increase the risk of lost response, the immunogenicity of these agents is an important (albeit not the only) consideration in the treatment decision-making process.

Magnetic resonance imaging assessed inflammation in the wrist is associated with patient-reported physical impairment, global assessment of disease activity and pain in early rheumatoid arthritis: longitudinal results from two randomised controlled trials.

Author(s): Glinatsi, Daniel; Baker, Joshua F; Hetland, Merete L; Hørslev-Petersen, Kim; Ejbjerg, Bo J

Source: Annals of the rheumatic diseases; Jun 2017

Publication Type(s): Journal Article

Available in full text at EULAR Meeting Abstracts - from Highwire Press

Available in full text at Annals of the Rheumatic Diseases - from Highwire Press

Abstract:OBJECTIVESTo examine whether MRI assessed inflammation and damage in the wrist of patients with early rheumatoid arthritis (RA) are associated with patient-reported outcomes (PROs).METHODSWrist and hand MRIs of 210 patients with early RA from two investigator-initiated, randomised controlled studies (CIMESTRA/OPERA) were assessed according to the Outcome Measures in Rheumatology RA MRI score (RAMRIS) for synovitis, tenosynovitis, osteitis, bone erosions and joint space narrowing (JSN) at baseline, 1 and 5 years follow-up. These features, and changes therein, were assessed for associations with health assessment questionnaires (HAQ), patient global visual analogue scales (VAS-PtGlobal) and VAS-pain using Spearman's correlations, generalised estimating equations and univariate/multivariable linear regression analyses. MRI features were further tested for trends against specific hand-related HAQ items using Jonckheere trend tests.RESULTSMRI inflammation, but not damage, showed statistically significant associations with HAQ, VAS-PtGlobal and VAS-pain for status and change scores, independently of C reactive protein and swollen joint count. MRI-assessed synovitis was most consistently associated with PROs, particularly VAS-PtGlobal and VAS-pain. MRI-assessed synovitis and tenosynovitis mean scores were positively associated with patient-reported difficulty to cut meat and open a milk carton ($p<0.01$), and similar patterns were seen for other hand-related HAQ items. Incorporating metacarpophalangeal joints in the analyses did not strengthen the associations between MRI pathology and PROs.CONCLUSIONSMRI-assessed inflammation, but not damage, in early RA wrists is associated with patient-reported physical impairment, global assessment of disease activity and pain and influences the physical function in the hand.TRIAL REGISTRATION NUMBERNCT00660647.

Study protocol: COmparison of the effect of treatment with Nonsteroidal anti-inflammatory drugs added to anti-tumour necrosis factor a therapy versus anti-tumour necrosis factor a therapy alone on progression of StrUctural damage in the spine over two years in patients with ankyLosing spondylitis (CONSUL) - an open-label randomized controlled multicenter trial.

Author(s): Proft, Fabian; Muche, Burkhard; Listing, Joachim; Rios-Rodriguez, Valeria; Sieper, Joachim; Poddubnyy, Denis

Source: BMJ open; Jun 2017; vol. 7 (no. 6); p. e014591

Publication Type(s): Journal Article

Available in full text at BMJ Open - from ProQuest

Abstract:INTRODUCTIONThere is some evidence that non-steroidal anti-inflammatory drugs (NSAIDs), in particular celecoxib, might possess not only a symptomatic efficacy but also disease-modifying properties in ankylosing spondylitis (AS), retarding the progression of structural damage in the spine if taken continuously. In contrast, this remains controversial for tumour necrosis factor alpha (TNF-α) inhibitors, despite their good clinical efficacy. The impact of a combined therapy (a TNF inhibitor plus an NSAID) on radiographic spinal progression in AS is unclear.METHODS AND ANALYSISThe aim of this study is to evaluate the impact of treatment with an NSAID (celecoxib) when added to a TNF inhibitor (golimumab) compared with TNF inhibitor (golimumab) alone on progression of structural damage in the spine over 2 years in patients with AS. The study consists of a 6-week screening period, a 12-week period (phase I: run-in phase) of treatment with golimumab for all subjects followed by a 96-week controlled treatment period (phase II: core phase) with golimumab plus celecoxib versus golimumab alone, and a safety follow-up period of 4 weeks. At week 108, the primary study endpoint radiographic spinal progression (as assessed by the change in the modified Stoke Ankylosing Spondylitis Spine Score after 2 years) will be evaluated.ETHICS AND DISSEMINATIONThe study will be performed according to the principles of good clinical practice and the German drug law. The written approval of the independent ethics committee and of the German federal authority have been obtained. On study completion, results are expected to be published in a peer-reviewed journal.TRIAL REGISTRATION NUMBERClinicalTrials.gov register (NCT02758782) and European Union Clinical Trials Register (EudraCT No 2016-000615-33).

Serum procalcitonin levels as a diagnostic marker for septic arthritis: A meta-analysis.

Author(s): Zhao, Jingyi; Zhang, Shufeng; Zhang, Lei; Dong, Xianhui; Li, Jianhui; Wang, Ying;

Source: The American journal of emergency medicine; Jun 2017

Publication Date: Jun 2017

Publication Type(s): Journal Article

Abstract:BACKGROUNDThe aim of this study was to assess the value of serum procalcitonin (PCT) levels as a diagnostic marker for septic arthritis (SA) via meta-analysis.METHODSWe searched PubMed, Embase and the Cochrane Library, as well as the reference lists of relevant articles, for studies published up to May 21, 2015 and did not impose language restrictions. We selected original studies reporting the usefulness of PCT or C-reactive protein (CRP) as a diagnostic marker for SA. We summarized test performance characteristics with the use of forest plots, hierarchical summary receiver operating characteristic curves, and bivariate random effects models. Prespecified subgroup analyses and meta-regression analyses were also performed.RESULTSThis meta-analysis comprised 10 studies including 838 patients. The overall sensitivity of serum PCT levels for the diagnosis of SA in these studies was 0.54 (95% CI, 0.41-0.66), and the specificity of PCT was 0.95 (95% CI, 0.87-0.98). The positive likelihood ratio (LR) was 10.97 (95% CI, 4.65-25.89); the negative LR was 0.49 (95% CI, 0.38-0.62); and the area under ROC curve (AUROC) was 0.82 (95% CI, 0.78-0.85). Six studies also examined the usefulness of CRP levels as a marker for the diagnosis of SA. The sensitivity and specificity of CRP were 0.45 (95% CI, 0.35-0.55) and 0.079 (95% CI, 0.0.021-0.25), respectively, and the positive LR, negative LR and AUROC curve were 0.48 (95% CI, 0.39-0.61), 6.79 (95% CI, 2.04-23.81), and 0.30 (95% CI, 0.26-0.34), respectively.CONCLUSIONPCT is more valuable than CRP for distinguishing SA from non-SA.

Is rheumatoid arthritis associated with reduced immunogenicity of the influenza vaccination? A systematic review and meta-analysis.

Author(s): Huang, Yafang; Wang, Huili; Tam, Wilson W S

Source: Current medical research and opinion; Jun 2017 ; p. 1-8

Publication Type(s): Journal Article

Abstract:OBJECTIVETo determine whether immunogenicity and safety of the influenza vaccination in rheumatoid arthritis (RA) patients are significantly different from those in a healthy population.METHODSPubMed, MEDLINE, Embase, Cochrane Library and Web of Science were searched on 31 August 2016. Studies were included when they met the inclusion criteria. Two reviewers independently extracted data on study characteristics, methodological quality and outcomes. The primary outcome was seroprotection (SP) rate after immunization.RESULTSThirteen studies were included. The SP rates did not significantly differ between the RA patients and healthy controls for the H3N2 (RR = 0.96, 95% CI, 0.82 to 1.13, p = .64) and B strain (RR = 0.95, 95% CI 0.84 to 1. 08, p = .44). Nevertheless, RA was associated with a significant decrease in SP rate for the H1N1 strain (RR = 0.72, 95% CI 0.60 to 0.86, p < .001). RA patients receiving immunosuppressive chemotherapy, TNF blockers, rituximab and other biologics responded to the H1N1 strain significantly less than healthy controls in SP rate, whereas those receiving steroids did not. Non-adjuvanted vaccination had a significantly lower SP rate than in healthy controls, whereas adjuvanted vaccination did not. RA was associated with an increase in adverse events (RR = 1.77, 95% CI 1.02 to 3.08, p = .04).CONCLUSIONSImmunogenicity was significantly different between RA patients and healthy controls for the H1N1 strain, but not for the H3N2 or B strains. Adverse event rates were higher in RA patients. Adjuvant and special kinds of immunosuppressive biologics may play an important role in immunogenicity of inactivated influenza vaccines for RA patients.

Influences of De Qi induced by acupuncture on immediate and accumulated analgesic effects in patients with knee osteoarthritis: study protocol for a randomized controlled trial.

Author(s): Li, Min; Yuan, Hongwen; Wang, Pei; Xin, Siyuan; Hao, Jie; Liu, Miaomiao; Li, Jinfeng; Yu, Man; Zhang, Xinrui

Source: Trials; Jun 2017; vol. 18 (no. 1); p. 251

Publication Type(s): Journal Article

Available in full text at Trials - from BioMed Central

Abstract:BACKGROUNDDe Qi is a special sensational response upon acupuncture needling. According to traditional acupuncture theory, the treatment is "effective only after Qi arrival"; that is, De Qi is an important indicator of therapeutic efficacy and good prognosis. However, it is still disputable whether De Qi improves the efficacy of acupuncture therapy. This prospective, randomized controlled trial aims to explore the influence of De Qi induced by acupuncture on immediate and accumulated analgesic effects in patients with knee osteoarthritis (KOA).METHODS/DESIGNEighty-eight patients with KOA will be recruited and randomly assigned to the De Qi group (enhanced stimulation to evoke De Qi) and the control group (weak stimulation to avoid De Qi) in the Department of Acupuncture and Physical Therapy, Beijing Luhe Hospital Affiliated to Capital Medical University. Each patient will receive three 30-minute sessions per week for 4 consecutive weeks and undergo a 1 month follow-up. The severity of knee pain, as measured on a 100-mm visual analog scale (where 0 indicates no pain and 100 indicates intolerable pain) will be used as the primary outcome, and the Knee injury and Osteoarthritis Outcome Score will be used as the secondary outcome. Both indexes will be measured before and after the 1st (for evaluating the immediate analgesic effects), 3rd, 6th, 9th, and 12th (for evaluating the accumulated analgesic effects) treatments and at the end of the follow-up. The intensity of the De Qi sensation will be assessed by the Chinese-Modified Massachusetts General Hospital Acupuncture Sensation Scale at the end of each treatment. Side effects during the treatments will be recorded and analyzed as well. The comparisons between the De Qi group and the control group will be done by using both an intention-to-treat analysis and a per-protocol analysis.DISCUSSIONThis prospective randomized controlled study will be helpful in enhancing our understanding of the analgesic effect of De Qi on patients with KOA and may provide a clinical basis for further investigation of the relationship

between De Qi and the therapeutic efficacy of acupuncture, thereby offering some evidence for the role of De Qi in an efficacious acupuncture therapy.TRIAL REGISTRATIONChinese Clinical Trial Registry, ChiCTR-IIR-16008972 . Registered on 4 August 2016 Additional file 2.

Prevalence and risk factors for liver fibrosis detected by transient elastography or shear wave elastography in inflammatory arthritis: a systematic review.

Author(s): Rouhi, Azin; Hazlewood, Glen; Shaheen, Abdel-Aziz; Swain, Mark G; Barber, Claire E H

Source: Clinical and experimental rheumatology; Jun 2017

Publication Type(s): Journal Article

Abstract:OBJECTIVESEmerging technologies for monitoring subclinical liver fibrosis include transient elastography (TE) and shear wave elastography (SWE). A systematic review was conducted to assess the prevalence and report on predictors of liver fibrosis as detected by these technologies in inflammatory arthritis (IA) patients, including rheumatoid arthritis, spondyloarthritis and juvenile idiopathic arthritis.METHODSMEDLINE, EMBASE and Web of Science were searched from inception to 06/27/2016 using search terms for IA or DMARDs and TE/SWE. Studies reporting on prevalence and/or risk factors for liver fibrosis as detected by TE/SWE were included. A meta-analysis was not conducted due to study heterogeneity.RESULTSSeven cross-sectional and three case-control studies were included. The cut-off values to define liver fibrosis ranged from 5.3-8.6 kPa. The prevalence of liver fibrosis in RA detected by TE/SWE ranged from 3-23%, with higher prevalence found in studies using a 5.3kPa cut-off. In two studies fibrosis was reported in 16-17% of PsA patients with no JIA studies identified. Obesity was the most consistently reported independent predictor of fibrosis in three studies. Liver function tests (LFTs) were found to independently predict increased liver stiffness in one study, while cumulative dose of either methotrexate or leflunomide were predictors in two studies.CONCLUSIONSMethotrexate or leflunomide cumulative dose was not consistently reported as an independent predictor of liver fibrosis; whereas, obesity was more consistently identified. Of note, LFTs did not consistently predict elevated TE/SWE measures. Further studies are needed to evaluate the prevalence and predictors of liver fibrosis and to explore the utility of using TE/SWE in IA patients.

The efficacy of motivational counselling and SMS reminders on daily sitting time in patients with rheumatoid arthritis: a randomised controlled trial.

Author(s): Thomsen, Tanja; Aadahl, Mette; Beyer, Nina; Hetland, Merete Lund; Løppenthin, Katrine; Midtgaard, Julie; Christensen, Robin; Østergaard, Mikkel; Jennum, Poul Jørgen; Esbensen, Bente Appel

Source: Annals of the rheumatic diseases; Jun 2017

Publication Type(s): Journal Article

Available in full text at EULAR Meeting Abstracts - from Highwire Press

Available in full text at Annals of the Rheumatic Diseases - from Highwire Press

Abstract:OBJECTIVESThe aim of this report is to investigate the efficacy of an individually tailored, theory-based behavioural intervention for reducing daily sitting time, pain and fatigue, as well as improving health-related quality of life, general self-efficacy, physical function and cardiometabolic biomarkers in patients with rheumatoid arthritis (RA).METHODSIn this randomised controlled trial 150 patients with RA were randomised to an intervention or a no-intervention control group. The intervention group received three individual motivational counselling sessions and short message service or text messages aimed at reduction of sedentary behaviour during the 16-week intervention period. Primary outcome was change in daily sitting time measured objectively by ActivPAL. Secondary outcomes included change in pain, fatigue, physical function, general self-efficacy, quality of life, blood pressure, blood lipids, haemoglobin A1c, body weight, body mass index, waist circumference and waist-hip ratio.RESULTS75 patients were allocated to each group. Mean

reduction in daily sitting time was -1.61 hours/day in the intervention versus 0.59 hours/day increase in the control group between-group difference -2.20 (95% CI -2.72 to -1.69; p<0.0001) hours/day in favour of the intervention group. Most of the secondary outcomes were also in favour of the intervention.CONCLUSIONAn individually tailored, behavioural intervention reduced daily sitting time in patients with RA and improved patient-reported outcomes and cholesterol levels.TRIAL REGISTRATION NUMBERNCT01969604; Results.

Effect of a model consultation informed by guidelines on recorded quality of care of osteoarthritis (MOSAICS): a cluster randomised controlled trial in primary care.

Author(s): Jordan, K P; Edwards, J J; Porcheret, M; Healey, E L; Jinks, C; Bedson, J; Clarkson, K;

Source: Osteoarthritis and cartilage; Jun 2017

Publication Type(s): Journal Article

Abstract:OBJECTIVETo determine the effect of a model osteoarthritis (OA) consultation (MOAC) informed by National Institute for Health and Care Excellence (NICE) recommendations compared with usual care on recorded quality of care of clinical OA in general practice.DESIGNTwo-arm cluster randomised controlled trial.SETTINGEight general practices in Cheshire, Shropshire, or Staffordshire UK.PARTICIPANTSGeneral practitioners and nurses with patients consulting with clinical OA.INTERVENTIONFollowing six-month baseline period practices were randomised to intervention (n = 4) or usual care (n = 4). Intervention practices delivered MOAC (enhanced initial GP consultation, nurse-led clinic, OA guidebook) to patients aged ≥45 years consulting with clinical OA. An electronic (e-)template for consultations was used in all practices to record OA quality care indicators.OUTCOMESQuality of OA care over six months recorded in the medical record.RESULTS1851 patients consulted in baseline period (1015 intervention; 836 control); 1960 consulted following randomisation (1118 intervention; 842 control). At baseline wide variations in quality of care were noted. Post-randomisation increases were found for written advice on OA (4-28%), exercise (4-22%) and weight loss (1-15%) in intervention practices but not controls (1-3%). Intervention practices were more likely to refer to physiotherapy (10% vs 2%, odds ratio 5.30; 95% CI 2.11, 13.34), and prescribe paracetamol (22% vs 14%, 1.74; 95% CI 1.27, 2.38).CONCLUSIONSThe intervention did not improve all aspects of care but increased core NICE recommendations of written advice on OA, exercise and weight management. There remains a need to reduce variation and uniformly enhance improvement in recorded OA care.TRIAL REGISTRATION NUMBERISRCTN06984617.

Clinical outcomes of kinesio taping applied in patients with knee osteoarthritis: A randomized controlled trial.

Author(s): Aydoğdu, Onur; Sari, Zübeyir; Yurdalan, S Ufuk; Polat, M Gülden

Source: Journal of back and musculoskeletal rehabilitation; Jun 2017

Publication Type(s): Journal Article

Abstract:INTRODUCTIONThe aim of this study was to compare kinesio taping along with conventional treatment to conventional treatment alone and to report the results of both a single and repetitive kinesio taping application applied on quadriceps femoris and hamstring muscles on pain, range of motion, muscle strength, and functional status in patients with knee osteoarthritis.METHODSFifty-four patients with knee osteoarthritis were randomly allocated to two groups. A total of 28 patients were included in kinesio taping group, others were included in the control group. Before and after intervention, pain was measured with visual analog scale, range of motion was measured with universal goniometer, muscle strength was measured with dynamometer, and functional status was measured with Knee Injury Osteoarthritis Outcome Score.RESULTSThere were statistically significant improvements in measures of pain, range of

motion, quadriceps muscle strength and functional status between pre- and post-treatment in both groups (p 0.05). It was also found that significant difference was observed in terms of range of motion, pain, functional status between pre-treatment and post-taping in intervention group (p< 0.017).CONCLUSIONIn conclusion, we could report that kinesio taping has significant immediate effects after a single kinesio taping application on range of motion, pain and functional status in patients with knee osteoarthritis. We could also report that KT in addition to conventional treatment is not superior to conventional treatment alone in terms of clinical outcomes over 3 weeks later.

Occupational Exposure to Knee Loading and the Risk of Osteoarthritis of the Knee: A Systematic Review and a Dose-Response Meta-Analysis.

Author(s): Verbeek, Jos; Mischke, Christina; Robinson, Rachel; Ijaz, Sharea; Kuijer, Paul;

Source: Safety and health at work; Jun 2017; vol. 8 (no. 2); p. 130-142

Publication Type(s): Journal Article Review

Abstract:BACKGROUNDOsteoarthritis of the knee is considered to be related to knee straining activities at work. The objective of this review is to assess the exposure dose-response relation between kneeling or squatting, lifting, and climbing stairs at work, and knee osteoarthritis.METHODSWe included cohort and case-control studies. For each study that reported enough data, we calculated the odds ratio (OR) per 5,000 hours of cumulative kneeling and per 100,000 kg of cumulative lifting. We pooled these incremental ORs in a random effects meta-analysis.RESULTSWe included 15 studies (2 cohort and 13 case-control studies) of which nine assessed risks in more than two exposure categories. We considered all but one study at high risk of bias. The incremental OR per 5,000 hours of kneeling was 1.26 (95% confidence interval 1.17-1.35, 5 studies, moderate quality evidence) for a log-linear exposure dose-response model. For lifting, there was no exposure dose-response per 100,000 kg of lifetime lifting (OR 1.00, 95% confidence interval 1.00-1.01). For climbing, an exposure dose-response could not be calculated.CONCLUSIONThere is moderate quality evidence that longer cumulative exposure to kneeling or squatting at work leads to a higher risk of osteoarthritis of the knee. For other exposure, there was no exposure dose-response or there were insufficient data to establish this. More reliable exposure measurements would increase the quality of the evidence.

Does exercise impact on sleep for people who have rheumatoid arthritis? A systematic review.

Author(s): McKenna, Sean; Donnelly, Alan; Fraser, Alexander; Comber, Laura; Kennedy, Norelee

Source: Rheumatology international; Jun 2017; vol. 37 (no. 6); p. 963-974

Publication Type(s): Journal Article Review

Abstract: To systematically search for the availability of evidence for exercise impacting on sleep for people who have rheumatoid arthritis. Two reviewers independently searched seven electronic databases, identified and extracted relevant studies by applying eligibility criteria. Sources of bias were assessed independently by two reviewers using the Cochrane bias assessment tool for randomized controlled trials (RCTs) and Newcastle-Ottawa Quality Assessment Scale for non-RCTs. Data were synthesized using a level of evidence approach. Meta-analyses were deemed to be inappropriate due to the heterogeneity of study designs, measurement tools and interventions. Five studies were included: one RCT; two pilot RCTs and two samples of convenience. A total of 262 people with RA were included. Interventions used were difficult to assess due to the heterogeneity of study designs and the inclusion of two using different types of yoga as an intervention. Different sleep outcome measures were used thus, it was not feasible to pool results. Studies had a high risk of bias. This review could find no consistent or conclusive evidence on whether exercise impacts on sleep in people who have rheumatoid arthritis, therefore no firm conclusions can be made. However, there is some indication that exercise may have positive benefits on sleep in people who

have rheumatoid arthritis. Further studies with improved study designs, using subjective and objective measures, are needed.

Improvements in Fatigue in 1536 Patients with Rheumatoid Arthritis and Correlation with Other Treatment Outcomes: A Post Hoc Analysis of Three Randomized Controlled Trials of Abatacept.

Author(s): Gossec, Laure; Ahdjoudj, Souhila; Alemao, Evo; Strand, Vibeke

Source: Rheumatology and therapy; Jun 2017; vol. 4 (no. 1); p. 99-109

Publication Type(s): Journal Article

Available in full text at Rheumatology and Therapy - from ProQuest

Abstract:INTRODUCTIONA post hoc analysis of three randomized controlled trials of abatacept in rheumatoid arthritis (RA) was conducted to explore the effect of abatacept on fatigue in RA and its correlation with other outcomes.METHODSIn this analysis of AGREE (early RA) and AIM and ATTAIN (established RA), changes in baseline fatigue (0-100 mm scale), pain, sleep (AIM and ATTAIN only) and Disease Activity Score (DAS) 28 (C-reactive protein; CRP) were calculated at days 29, 85, and 169. Agreement between improvements ≥minimum clinically important differences (MCID) in fatigue and other outcomes were evaluated using agreement statistics (kappa) in each study and at each time point.RESULTSOf 1536 patients (mean disease duration: 6.2 months [AGREE], 8.5 years [AIM], 12.2 years [ATTAIN]), mean (SE) decreases in fatigue from baseline to day 169 with abatacept were 28.9 (1.7), 25.3 (1.2), and 21.9 (1.6) in AGREE, AIM, and ATTAIN, respectively, with corresponding decreases of 16.0, 13.7, and 13.4 at day 29. Most patients (67.8%; 624/920) reported improvements ≥MCID in fatigue with abatacept at day 169; 79.2% (671/847) and 57.8% (388/671) reported improvements ≥MCID in pain and sleep, respectively; 18.9% (158/836) were in DAS28 (CRP) remission. Agreement between improvement in fatigue and other outcomes was low (kappa range 0.30-0.51 [pain], 0.14-0.26 [sleep], and 0.02-0.12 [DAS28 (CRP) remission]).CONCLUSIONSAbatacept resulted in rapid improvements in fatigue and pain in patients with RA. However, low agreement between improvements in these outcomes indicates that fatigue and other outcomes including pain and sleep may represent different domains of response.FUNDINGBristol-Myers Squibb.

Association between smoking and risk of knee osteoarthritis: a systematic review and meta-analysis.

Author(s): Kong, L; Wang, L; Meng, F; Cao, J; Shen, Y

Source: Osteoarthritis and cartilage; Jun 2017; vol. 25 (no. 6); p. 809-816

Publication Type(s): Journal Article Review

Abstract:OBJECTIVETo investigate the association between smoking and the risk for knee osteoarthritis (OA).DESIGNCohort, case-control, and cross-sectional studies were obtained from the Medline, Embase, and Web of Science databases. Estimates were calculated using a random-effects model. Subgroup analyses and meta-regression models were performed to investigate potential sources of heterogeneity. We further analyzed the dose-response relationship between cigarette consumption and risk of knee OA. **[ABSTRACT EDITED]**

Safety and efficacy of topical ketoprofen in transfersome gel in knee osteoarthritis: A systematic review.

Author(s): Sardana, Vandit; Burzynski, Joanna; Zalzal, Paul

Source: Musculoskeletal care; Jun 2017; vol. 15 (no. 2); p. 114-121

Publication Type(s): Journal Article Review

Abstract:PURPOSETopical ketoprofen in Transfersome gel has been used for the alleviation of symptoms in osteoarthritis. Non-steroidal anti-inflammatory drugs (NSAIDs) are associated with various side effects. Topical NSAIDs are known to have a lower side-effect profile when compared with systemic administration. The present systematic review aimed to determine the safety and efficacy of topical ketoprofen in Transfersome gel in knee osteoarthritis (OA). **[ABSTRACT EDITED]**

Safety of tumor necrosis factor-alpha inhibitors for treatment of ankylosing spondylitis: A meta-analysis.

Author(s): Ma, Zeren; Liu, Xiaoping; Xu, Xiaosheng; Jiang, Jie; Zhou, Jian; Wang, Jia; Chen, Dewang; Luo, Song

Source: Medicine; Jun 2017; vol. 96 (no. 25); p. e7145

Publication Type(s): Journal Article

Abstract:BACKGROUNDAnkylosing spondylitis (AS) is a chronic immune-mediated disease affecting the sacroiliac joints and the spine, manifesting with new bone formation and osteopenia. Five tumor necrosis factor-alpha (TNF-α) inhibitors (infliximab, etanercept, adalimumab, certolizumab, and golimumab) are available for the treatment of AS, however, the results for the safety of TNF-α inhibitors in the treatment of AS are not consistent.METHODSIn this study, we conducted a meta-analysis to determine the safety of TNF-α inhibitors compared with placebo in reducing pain, swelling, and inflammation of AS patients. Eight relevant articles including 2049 patients were included for this meta-analysis study. We observed that the incidence of adverse events (RR = 1.22, 95% CI: 1.12-1.33; P = .501, I = 0%) and injection-site reaction (RR = 2.93, 95% CI: 2.02-4.23; P = .691, I = 0%) in AS patients' treatment with TNF-α inhibitors was significantly higher than that with placebo.RESULTSHowever, there was no significant difference in the incidence of serious adverse event, infection, serious infection, and discontinuations due to adverse event. TNF-α inhibitors may be a promising treatment for AS, but carries an increased incidence rate of adverse events and injection-site reaction.CONCLUSIONDue to the existence of the unstable factors, further studies need to be done to verify the result of this study.

Moxibustion for the treatment of osteoarthritis: An updated systematic review and meta-analysis.

Author(s): Choi, Tae-Young; Lee, Myeong Soo; Kim, Jong In; Zaslawski, Christopher

Source: Maturitas; Jun 2017; vol. 100 ; p. 33-48

Publication Type(s): Journal Article Review

Abstract: The aim of this study was to update previous reviews and examine recent evidence from randomised clinical trials (RCTs) of the use of moxibustion for osteoarthritis (OA). Twelve databases were searched from inception through to September 2016 with no language limits applied. Data extraction and risk-of-bias assessments were performed by two independent reviewers. A total of 19 RCTs met all inclusion criteria and were evaluated. Three RCTs compared the effects of moxibustion with those of sham moxibustion in patients with knee OA (KOA) and found favourable effects of moxibustion on pain reduction (n=305; SMD, -0.46; 95% CI: -0.86 to -0.06, P=0.02, I2=65%), including at follow-up (n=305; SMD, -0.36; 95% CI: -0.70 to -0.01, P=0.04, I2=54%). Eleven RCTs compared the effects of moxibustion with those of conventional oral drug therapies. Eight RCTs reported a total symptom score and the meta-analysis showed superior effects of moxibustion compared with drug therapies for this measure (n=691; SMD, -0.24; 95% CI: -0.78 to 0.29; P=0.37, I2=91%) and response rate (n=758 knees; RR, 1.10; 95% CI: 1.05-1.16, P <0.0001, I2=0%). Three RCTs found superior or equivalent effects of moxibustion on symptom score compared with intra-articular injection or topical drug therapy. The existing trial evidence is sufficiently convincing to suggest that moxibustion, compared with sham moxibustion and oral drugs, is effective for pain reduction and

symptom management in KOA. The level of evidence is moderate, given the high risk of bias and small sample size.

"Total evidence" network meta-analysis as a tool for improving the assessment of biosimilars: application to etanercept in rheumatoid arthritis .

Author(s): Messori, Andrea; Trippoli, Sabrina; Marinai, Claudio

Source: International journal of clinical pharmacology and therapeutics; Jun 2017; vol. 55 (no. 6); p. 517-520

Publication Type(s): Journal Article

Abstract: Since biosimilars generally have undergone less clinical research than originators, their place in therapy can be strengthened by increasing the amount of clinical evidence supporting their approval. This report describes an approach in which a "total evidence" network meta-analysis is performed that compares the biosimilar not only with the originator but also with the previous standard of care. This analysis was retrospectively applied to etanercept biosimilar in rheumatoid arthritis (end-point = ACR50). Using an increased number of evaluated patients (1,003 for network meta-analysis vs. 596 for equivalence trial), our results confirmed the equivalence index previously estimated from the approval trial of biosimilar. .

Efficacy of extracorporeal shockwave therapy and low-intensity pulsed ultrasound in a rat knee osteoarthritis model: A randomized controlled trial.

Author(s): Yılmaz, Volkan; Karadaş, Ömer; Dandinoğlu, Taner; Umay, Ebru; Çakçı, Aytül; Tan, Arif Kenan

Source: European journal of rheumatology; Jun 2017; vol. 4 (no. 2); p. 104-108

Publication Type(s): Journal Article

Abstract:OBJECTIVEThis study aims to assess the efficacy of extracorporeal shockwave therapy (ESWT) and low-intensity pulsed ultrasound (LIPUS) on osteoarthritic rat knees.MATERIAL AND METHODSTwenty-four rats were divided into 3 groups: group 1-control (n=8), group 2-LIPUS (n=8) and group 3-ESWT (n=8). Cartilage degeneration was provided using mono-iodo-asetate (MIA). One milligram of MIA was delivered to the right knees in group 1 and both knees in group 2 and 3. A 0.09% saline solution was delivered to the left knees in group 1 for control. Twenty-four hours after the delivery, ESWT was applied once on the right knees in the group 2 rats to the medial tibia plateu with a 1 Hz frequency and 800 impulses. LIPUS was applied to the right knees in the group 2 rats to the medial tibia plateu with a 3 mHz frequency and 40 mW/cm2 intensity for 20 minutes over a period of 15 days. Pain scores were measured with a knee bend test. Bone mineral density measurements and scintigraphic bone scans were performed. Histopathological examination was done using a modified Mankin scale.RESULTSThere was no difference among the right knee subchondral bone osteoblastic activities (p>0.05). The left knee osteoblastic activities in the LIPUS and extracorporeal shockwave therapy (ESWT) groups were higher than those in the control group (p0.05). The modified Mankin scores of both the right and left knees of the ESWT and LIPUS groups were lower than those of the control group (p<0.05), but there was no difference between the ESWT and LIPUS groups. The pain scores of both knees of the ESWT and LIPUS groups at day 7 were higher than those of the control group (p<0.05), but there was no difference between the ESWT and LIPUS groups. There was no difference among the pain scores of the right knees at day 14 (p<0.05).CONCLUSIONESWT and LIPUS have systemic proliferative and regenerative effects on cartilage and tissue.

Non-elastic taping, but not elastic taping, provides benefits for patients with knee osteoarthritis: systemic review and meta-analysis.

Author(s): Ouyang, Jin-Han; Chang, Kwang-Hwa; Hsu, Wen-Yen; Cho, Yen-Ting; Liou, Tsan-Hon;

Source: Clinical rehabilitation; Jun 2017 ; p. 269215517717307

Publication Type(s): Journal Article

Abstract:OBJECTIVETo determine whether therapeutic taping, which includes elastic (Kinesio tape) and non-elastic (Leukotape) taping, is superior to control taping in improving pain and functions for patients with knee arthritis. To understand whether both elastic and non-elastic taping are beneficial.METHODSWe searched the PubMed and Scopus databases from their earliest record to 31 May 2017 for randomized controlled and cross-over studies that used taping to treat knee osteoarthritis. We extracted the mean differences and SD between baseline and posttreatment for selected outcomes measured in the experimental and control groups for subsequent meta-analyses.RESULTSIn total, 11 studies were included in the review. Of which, five Leukotaping and five Kinesio taping studies involving 379 participants were used in the meta-analysis. PEDro scores of the Leukotaping and Kinesio taping studies were 4.2 and 7.8, respectively. Overall, therapeutic taping exhibited significantly greater pain reduction than control taping with a significant weighted mean difference of 12.8 mm on a 0- to 100-mm visual analogue scale. Compared to control taping, Leukotaping produced a significant weighted mean difference of 11.6 mm regarding pain with a large effect size of 0.89 and I2 = 0%, while Kinesio taping produced a non-significant weighted mean difference of 12.1 mm and I2 = 93%. Leukotaping also exhibited a large and significant standard mean difference of 0.82, while Kinesio taping exhibited a non-significant standard mean difference of 1.34 regarding climbing stairs and stepping.CONCLUSIONTherapeutic taping seemed to be superior to control taping in pain control for knee osteoarthritis. Non-elastic taping, but not elastic taping, provides benefits in pain reduction and functional performance.

The effectiveness of prolotherapy in treating knee osteoarthritis in adults: a systematic review.

Author(s): Hassan, Fadi; Trebinjac, Suad; Murrell, William D; Maffulli, Nicola

Source: British medical bulletin; Jun 2017; vol. 122 (no. 1); p. 91-108

Publication Type(s): Journal Article

Abstract: IntroductionOsteoarthritis (OA) often leads to symptoms such as pain, stiffness and decreased function. OA is treated with a wide range of modalities, both conservatively and surgically. Prolotherapy has been used to treat various musculoskeletal problems and has shown some promise.Sources of dataSearches of the electronic databases, PubMed, ISI web of science, PEDro and SPORTDiscus, were conducted for all Level 1-4 studies published from inception through to December 2016.Areas of agreementTen studies were evaluated and results show significant improvement in scores for pain, function and range of motion, both in the short term and long term. Patient satisfaction was also high in these patients (82%).Areas of controversyMeta-analysis was not possible due to heterogeneity of outcome measures and populations.Growing pointsModerate evidence suggests that prolotherapy is safe and can help achieve significant symptomatic control in individuals with OA.Areas for developing researchFuture research should focus on larger sample size, standardization of treatment protocol and basic science evidence.

Mitochondrial DNA haplogroups influence the risk of incident knee osteoarthritis in OAI and CHECK cohorts. A meta-analysis and functional study.

Author(s): Fernández-Moreno, Mercedes; Soto-Hermida, Angel; Vázquez-Mosquera, María E

Source: Annals of the rheumatic diseases; Jun 2017; vol. 76 (no. 6); p. 1114-1122

Publication Type(s): Journal Article

Available in full text at EULAR Meeting Abstracts - from Highwire Press

Available in full text at Annals of the Rheumatic Diseases - from Highwire Press

Abstract:OBJECTIVETo evaluate the influence of the mitochondrial DNA (mtDNA) haplogroups in the risk of incident knee osteoarthritis (OA) and to explain the functional consequences of this association to identify potential diagnostic biomarkers and therapeutic targets. **[ABSTRACT EDITED]**

Short-term changes on MRI predict long-term changes on radiography in rheumatoid arthritis: an analysis by an OMERACT Task Force of pooled data from four randomised controlled trials.

Author(s): Peterfy, Charles; Strand, Vibeke; Tian, Lu; Østergaard, Mikkel; Lu, Ying; DiCarlo, Julie;

Source: Annals of the rheumatic diseases; Jun 2017; vol. 76 (no. 6); p. 992-997

Publication Type(s): Journal Article

Available in full text at EULAR Meeting Abstracts - from Highwire Press

Available in full text at Annals of the Rheumatic Diseases - from Highwire Press

Abstract:OBJECTIVEIn rheumatoid arthritis (RA), MRI provides earlier detection of structural damage than radiography (X-ray) and more sensitive detection of intra-articular inflammation than clinical examination. This analysis was designed to evaluate the ability of early MRI findings to predict subsequent structural damage by X-ray.METHODSPooled data from four randomised controlled trials (RCTs) involving 1022 RA hands and wrists in early and established RA were analysed. X-rays were scored using van der Heijde-modified or Genant-modified Sharp methods. MRIs were scored using Outcome Measures in Rheumatology (OMERACT) RA MRI Score (RAMRIS). Data were analysed at the patient level using multivariable logistic regression and receiver operating characteristic curve analyses.RESULTSProgression of MRI erosion scores at Weeks 12 and 24 predicted progression of X-ray erosions at Weeks 24 and 52, with areas under the curve (AUCs) of 0.64 and 0.74, respectively. 12-week and 24-week changes in MRI osteitis scores were similarly predictive of 24-week and 52-week X-ray erosion progressions; pooled AUCs were 0.78 and 0.77, respectively. MRI changes in synovitis at Weeks 12 and 24 also predicted progression of X-ray joint damage (erosion and joint-space narrowing) at Weeks 24 and 52 (AUCs=0.72 and 0.65, respectively).CONCLUSIONSEarly changes in joint damage and inflammation detected with MRI predict changes in joint damage evident on subsequent X-rays. These findings support the use of MRI as a valid method for monitoring structural damage in short-duration RCTs.

Addition of transcranial direct current stimulation to quadriceps strengthening exercise in knee osteoarthritis: A pilot randomised controlled trial

Author(s): Chang W.-J.; Young C.L.; Buscemi V.; Liston M.B.; Schabrun S.M.; Bennell K.L.;

Source: PLoS ONE; Jun 2017; vol. 12 (no. 6)

Publication Type(s): Article

Available in full text at PLoS ONE - from National Library of Medicine

Abstract:A randomised, assessor- and participant-blind, sham-controlled trial was conducted to assess the safety and feasibility of adding transcranial direct current stimulation (tDCS) to quadriceps strengthening exercise in knee osteoarthritis (OA), and provide data to inform a fully powered trial. Participants were randomised to receive active tDCS+exercise (AT+EX) or sham tDCS+exercise (ST+EX) twice weekly for 8 weeks whilst completing home exercises twice per week. Feasibility, safety, patient-perceived response, pain, function, pressure pain thresholds (PPTs) and conditioned pain modulation (CPM) were assessed before and after treatment. Fifty-seven people were screened for eligibility. Thirty (52%) entered randomisation and 25 (84%) completed the trial. One episode of headache in the AT+EX group was reported. Pain reduced in both groups following treatment

(AT+EX: p2 = 0.55; ST+EX: p = 0.026, partial ?2 = 0.18) but no between-group differences were observed (p = 0.18, partial ?2 = 0.08). Function improved in the AT+EX (p = 0.01, partial ?2 = 0.22), but not the ST+EX (p = 0.16, partial ?2 = 0.08) group, between-group differences did not reach significance (p = 0.28, partial ?2 = 0.052). AT+EX produced greater improvements in PPTs than ST+EX (p2 = 0.17; superior knee: partial ?2 = 0.3; superomedial knee: partial ?2 = 0.26). CPM only improved in the AT+EX group but no between-group difference was observed (p = 0.054, partial ?2 = 0.158). This study provides the first feasibility and safety data for the addition of tDCS to quadriceps strengthening exercise in knee OA. Our data suggest AT+EX may improve pain, function and pain mechanisms beyond that of ST+EX, and provides support for progression to a fully powered randomised controlled trial.

Role of platelet rich plasma injection grafts in osteoarthritis: A randomized controlled trial

Author(s): Jain P.; Jain R.; Chaudhury N.; Mahadik V.

Source: Vox Sanguinis; Jun 2017; vol. 112 ; p. 32

Publication Type(s): Conference Abstract

Abstract: Background: Platelet rich plasma and mesenchymal stem cells are known to have a potential for articular cartilage regeneration. Specific growth factors have been proposed as therapeutic proteins for cartilage repair. Hypothesis: Platelet-rich plasma (PRP) provides symptomatic relief in early osteoarthritis (OA) of the knee. Study Design: Prospective, Randomized controlled trial; Level of evidence, 1. Aims: 1. The purpose of this study was to assess the safety and efficacy of intra-articular injection of autologous Platelet rich plasma for knee osteoarthritis. 2. Clinical assessment of effect of PRP in osteoarthritis patients after one, two and three intra-articular injections. **[ABSTRACT EDITED]**

Protocol for systematic review and meta-analysis: Moxibustion for treating ankylosing spondylitis

Author(s): Xu X.; Liu L.; Cao L.; Mwandalima C.J.; Wang Z.; Sun Z.-Q.

Source: European Journal of Integrative Medicine; Jun 2017; vol. 12 ; p. 142-146

Publication Type(s): Article

Abstract: Introduction Moxibustion is widely used in China and other East Asian countries to manage the symptom of ankylosing spondylitis (AS). The purpose of this systematic review is to evaluate the available evidence from randomized controlled trials (RCTs) of moxibustion for treating patients with AS. Methods The following Seventeen databases will be searched from their inception to August 2016: MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials, AMED, CINAHL, China National Knowledge Infrastructure (CNKI), Wan-Fang Data, Chinese BioMedical Database (CBM), Chinese WeiPu Database(a special translation in English), and the six Korean medical datebases (Korean Studies Information, DBPIA, the Korean Institute of Science and Technology Information, KERIS, KoreaMed and the Korean National Assembly Library). Only the RCTs related to the effects of moxibustion on AS will be included in this systematic review. A quantitative synthesis of RCTs will be conducted using RevMan 5.3 software. Study selection, data extraction, and validation will be performed independently by two reviewers. Cochrane criteria for risk of bias will be used to assess the methodological quality of the trials. Ethics and dissemination This systematic review will not use data from individual patients and no privacy will be involved. The results will be disseminated through peer-reviewed publications. Trial registration number PROSPERO registration number: CRD42016046246.

Cupping therapy for Treating Knee Osteoarthritis: A protocol for systematic review and meta-analysis of randomized controlled trials

Author(s): Guo M.-Y.; Tang Y.-J.; He Z.-P.; Zhang Q.-X.

Source: European Journal of Integrative Medicine; Jun 2017; vol. 12 ; p. 131-134

Publication Type(s): Article

Abstract: Introduction Cupping therapy is widely used in East Asia, the Middle East, or Central and North Europe to manage the symptom of knee osteoarthritis (KOA). The purpose of this systematic review is to evaluate the available evidence from randomized controlled trials (RCTs) of cupping therapy for treating patients with KOA. Methods The following databases will be searched from their inception until January 2017: PubMed, Embase, the Cochrane Central Register of Controlled Trials, AMED, CINAHL, four Chinese databases [WanFang Med Database, Chinese BioMedical Database, Chinese WeiPu Database, and China National Knowledge Infrastructure (CNKI)], and six Korean medical datebases (Korean Studies Information, DBPIA, the Korean Institute of Science and Technology Information, KERIS, KoreaMed and the Korean National Assembly Library). Only the RCTs related to the effects of cupping therapy on KOA will be included in this systematic review. A quantitative synthesis of RCTs will be conducted using RevMan 5.3 software. Study selection, data extraction, and validation will be performed independently by two reviewers. Cochrane criteria for risk-of-bias will be used to assess the methodological quality of the trials. Ethics and dissemination This systematic review will not use data from individual patients and no privacy will be involved. The results will be disseminated through peer-reviewed publications.

Efficacy of bromelain along with trypsin, rutoside trihydrate enzymes and diclofenac sodium combination therapy for the treatment of TMJ osteoarthritis - A randomised clinical trial

Author(s): Jayachandran S.; Khobre P.

Source: Journal of Clinical and Diagnostic Research; Jun 2017; vol. 11 (no. 6)

Publication Type(s): Article

Abstract: Introduction: Osteoarthritis (OA) is a degenerative disorder characterized by chronic inflammatory response of cartilage and articular surface involving Temporomandibular Joint (TMJ). Pain as one of the major symptom of osteoarthritis affects the quality of life and is usually managed by Non Steroidal Anti Inflammatory Drugs (NSAIDs) such as diclofenac sodium. Bromelain, trypsin and rutoside trihydrate formulation can be used to treat this disease because of anti-inflammatory and anti-oxidant effects. Aim: To assess the effectiveness of oral bromelain, trypsin, rutoside trihydrate enzymes and diclofenac sodium combination therapy over diclofenac sodium for the treatment of TMJ osteoarthritis. Materials and Methods: Thirty Patients with symptomatic TMJ osteoarthritis were randomly divided into three groups. 10 patients were treated with diclofenac sodium (Group 1), 10 were given oral enzymes (bromelain, trypsin, rutoside trihydrate) and diclofenac sodium combination (Group 2), and 10 were treated with oral enzyme preparation (bromelain, trypsin, rutoside trihydrate) (Group 3). Patients were evaluated on day 1, day 4, day 7 and day 10. Comparison of pain rating within three groups was assessed using numeric rating scale. The efficacy criteria were analysed applying ANOVA followed by post-hoc test. Results: Inter group comparison of the effectiveness of management of pain, resulted in a value p 0.05 between Group 1 and Group 3 showed both groups responded equally to the treatment. Conclusion: The trial showed significant improvement in reducing pain in patients treated with oral enzymes and diclofenac sodium combination therapy.

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Journal of Rheumatology

July 1 2017, Volume 44, Issue 7

Osteoporosis International

July 2017, Volume 28, Issue 7

Exercise: Sensitivity and Specificity

Sensitivity:
If a person has a disease, how often will the test be positive (true positive rate)?

If the test is highly sensitive and the test result is negative you can be nearly certain that they don't have disease.

Specificity:
If a person does not have the disease how often will the test be negative (true negative rate)?

If the test result for a highly specific test is positive you can be nearly certain that they actually have the disease.

Quick Quiz:

1. **A very sensitive test, when negative, helps you:**
   a: Rule-in disease
   b: Rule-out disease
   c: Confuse medical students
   d: Save money

2. **A test which is highly specific, when positive, helps you:**
   a: Rule-in disease
   b: Rule-out disease
   c: Confuse medical students
   d: Save money

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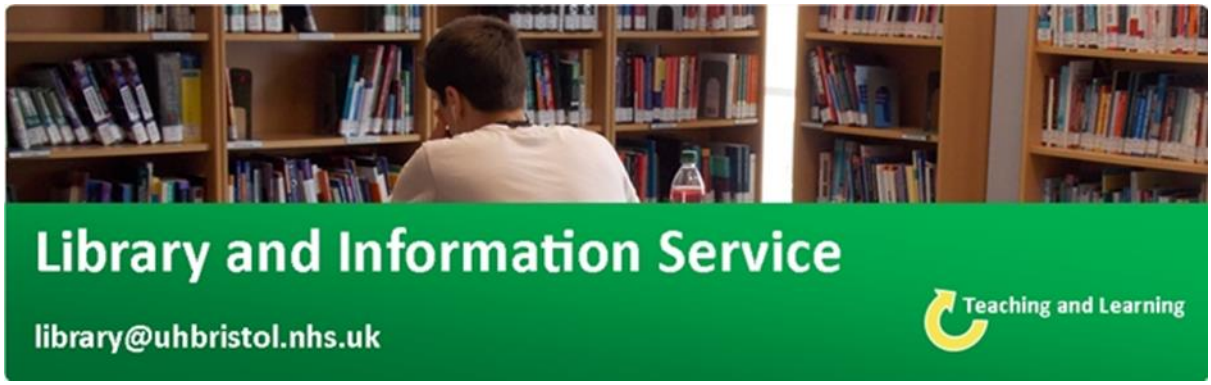
Answers: 1b; 2a



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