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EFFECT OF PLATELET-RICH PLASMA INJECTIONS VERSUS PLACEBO ON ANKLE SYMPTOMS AND FUNCTION IN ANKLE OSTEOARTHRITIS: A RANDOMIZED CLINICAL TRIAL

¹Liam Paget*, ¹Guus Reurink, ²Robert-Jan de Vos, ²Adam Weir, ³Maarten Moen, ²Sita Bierma-Zeinstra, ¹Sjoerd Stufkens, ¹Gino Kerkhoffs, ¹Johannes Tol. ¹Amsterdam UMC, University of Amsterdam, Department of Orthopedic Surgery, Amsterdam Movement Sciences, Academic Center for Evidence-based Sports medicine (ACES), Amsterdam Collaboration for Health and Safety in Sports (ACHSS), AMC/UMc IOC Research Center, Netherlands; ²Department of Orthopedic Surgery and sports medicine, Erasmus MC University Medical Center, Netherlands; ³Department of Sports Medicine, Bergman Clinics, Netherlands

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Introduction There is a lack of effective non-surgical interventions for ankle osteoarthritis. Platelet-rich plasma (PRP) injections are widely used and reported to be beneficial for knee osteoarthritis. We evaluated the efficacy of PRP injections in the management of ankle osteoarthritis.

Materials and Methods In this six-center stratified, block-randomised, double-blind, placebo-controlled trial design we randomly assigned 100 patients to two treatment groups: PRP versus Placebo (saline) injected intra-articular. Patients had talocrural joint space narrowing. The primary outcome measure was the American Orthopaedic Foot and Ankle Society (AOFAS) score at 26 weeks follow-up. Secondary outcome measures included multiple Patient Related Outcome Measures assessing pain, function and quality of life.

Results A total of 48 patients were randomized to the PRP-group and 52 patients to the placebo-group. No patients were lost to follow-up for the primary outcome. Compared to baseline, the mean AOFAS score improved by 10 points in the PRP group (from 63 to 73 points; 95% CI: 6 to 14; $p < 0.001$) and 11 points in the placebo group (from 64 to 75 points; 95% CI: 7 to 15; $p < 0.001$). The adjusted between-group difference over 26 weeks was -1 point (95% CI, -6 to 3; $p = 0.56$). No between group differences were seen for any of the secondary outcome measures. There was one serious adverse events in each group unrelated to the study intervention.

Conclusion In patients with ankle (talocrural) osteoarthritis intra-articular PRP injections compared with placebo injections, did not significantly improve ankle symptoms and function over 26 weeks.

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EMPIRICALLY DERIVED GUIDELINES FOR INTERPRETING THE EFFECTIVENESS OF EXERCISE THERAPY FOR TENDINOPATHIES: A META-ANALYSIS

¹Paul Swinton*, ¹Joanna Shim, ¹Anastasia Pavlova, ¹Rachel Moss, ²Colin MacLean, ³David Brandie, ⁴Laura Mitchell, ¹Leon Greig, ¹Eva Parkinson, ⁵Dylan Morrissey, ¹Lyndsay Alexander, ¹Kay Cooper. ¹School of Health Sciences, Robert Gordon University, UK; ²Library Services, Robert Gordon University, UK; ³Sport UK; ⁴NHS Grampian, UK; ⁵Centre for Sports and Exercise Medicine, Barts and the London School of Medicine and Dentistry, UK

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Introduction The purpose of this large meta-analysis was to synthesise intervention data to create empirically derived thresholds to interpret the effectiveness of exercise therapies in the management of tendinopathy.

Materials and Methods Data from exercise therapy interventions (rotator cuff, lateral elbow, patellar, Achilles and gluteal)

across eight outcome domains (disability, physical function capacity (PFC), function, pain, painLoading, painTime, range of motion (ROM), and quality of life (QoL)) were included. Mean standardized effect sizes were calculated and meta-analysed using a five-level Bayesian hierarchical model with the 0.25-, 0.5- and 0.75-quantiles used to benchmark 'small', 'medium', and 'large' effects.

Results A total of 1521 effect sizes from 121 studies comprising 176 treatment arms and 4370 participants were included. Substantial differences in effect size distributions were identified across outcome domains. The small, medium, and large thresholds for patient reported subjective outcomes (disability, function, pain, painLoading, painTime) were typified by values of 0.6, 1.0 and 1.6, respectively. In contrast, lower effect sizes were obtained for QoL and objective outcomes (ROM, PFC), with small, medium, and large thresholds typified by values of 0.2, 0.4 and 0.7, respectively.

Conclusion Previous thresholds widely used to interpret small, medium, and large intervention effects (small = 0.2, medium = 0.5, large = 0.8) will tend to overestimate the effectiveness of patient reported subjective outcomes in the management of tendinopathy. The context specific benchmarks developed here should be used in future with the recommendation that evaluation of intervention effectiveness include both objective and subjective measurements.

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ARE PATIENTS SATISFIED? A SYSTEMATIC REVIEW AND META-ANALYSIS OF EXERCISE THERAPY IN THE MANAGEMENT OF TENDINOPATHY

¹Joanna Shim*, ¹Anastasia Pavlova, ¹Rachel Moss, ²Colin MacLean, ³David Brandie, ⁴Laura Mitchell, ¹Eva Parkinson, ¹Leon Greig, ⁵Dylan Morrissey, ¹Lyndsay Alexander, ¹Kay Cooper, ¹Paul Swinton. ¹School of Health Sciences, Robert Gordon University, UK; ²Library Services, Robert Gordon University, UK; ³Sport UK; ⁴NHS Grampian, UK; ⁵Centre for Sports and Exercise Medicine, Barts and the London School of Medicine and Dentistry, UK

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Introduction Patient satisfaction is consistently associated with improved health outcomes and higher quality of life. However, its relationship to tendinopathy outcomes is under-explored. The purpose of this systematic review and meta-analysis was to synthesise intervention data investigating patient satisfaction and self-perceived improvement or deterioration following engagement in exercise therapy for the management of tendinopathy.

Materials and Methods A search of controlled trials investigating exercise therapy interventions across all tendinopathies was made extracting data assessing patient rating of overall condition. Outcomes were split into those measuring satisfactions (binary) and those measuring global rating of change (GROC). Bayesian hierarchical models were used to meta-analyse proportions and mean effect size (percentage of maximum) for the two outcome categories.

Results From a total of 218 studies investigating exercise therapy for tendinopathy, 22 studies (Achilles: 40.9%, patellar: 22.7%, rotator cuff: 18.2%, elbow: 13.6% and gluteal: 4.5%) provided sufficient information to be meta-analysed. The data comprised of 35 treatment arms and 796 participants. The pooled estimate of the proportion of positive satisfaction (43 outcomes from 19 studies) was equal to 61.3% [95%CrI: 55.3–77.2], and the pooled estimate of percentage of maximum GROC (17 outcomes from 4 studies) was equal to 52.1% [95%CrI: 39.1–65.2].

Conclusion Patient satisfaction is not commonly reported in tendinopathy research, and in those studies where it is reported, satisfaction and GROC appear similar and are ranked moderately high demonstrating patients generally perceive exercise therapy for tendinopathy positively. Further research investigating satisfaction and GROC is required to identify moderating factors and improve patient-centred care.

27 'IT'S SECOND BEST': MIXED-METHODS EVALUATION OF THE EXPERIENCES OF PEOPLE WITH MUSCULOSKELETAL PAIN TOWARDS PHYSIOTHERAPIST DELIVERED TELEHEALTH DURING COVID-19 PANDEMIC

^{1,2}Allison M Ezzat*, ³Peter Malliaras, ^{4,5}Mark Merolli, ⁶Cylie Williams, ^{6,7}Terry Haines, ¹Namita Mehta, ¹Christian Barton. ¹La Trobe Sport and Exercise Medicine Research Centre, School of Allied Health, Human Services and Sport, La Trobe University, Australia; ²Department of Physical Therapy, University of British Columbia, Canada; ³Physiotherapy Department, School of Primary and Allied Health Care, Faculty of Medicine Nursing and Health Science, Monash University, Australia; ⁴Centre for Health, Exercise, and Sports Medicine, Department of Physiotherapy, School of Health Sciences, The University of Melbourne, Australia; ⁵Centre for Digital Transformation of Health, Melbourne Medical School, The University of Melbourne, Australia; ⁶School of Primary and Allied Health Care, Faculty of Medicine Nursing and Health Science, Monash University, Australia; ⁷National Centre for Healthy Ageing, Monash University, Australia

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Introduction Telehealth was rapidly adopted in musculoskeletal physiotherapy practice during the COVID-19 pandemic, providing a unique opportunity to evaluate the experiences and attitudes of people would not usually engage with these services.

Materials and Methods A sequential mixed-methods study recruited people with musculoskeletal pain conditions accessing private practice physiotherapist services in Australia. Participants completed an online survey of telehealth services accessed, treatments, self-reported global change in condition, and attitudes toward telehealth. A subset of survey participants completed semi-structured interviews to explore experiences and attitudes towards telehealth. Data was summarized descriptively (quantitative), analyzed using inductive thematic analysis (qualitative), and integrated facilitating deeper understanding.

Results 172 participants responded to the survey and 19 were interviewed. 95% accessed video-based telehealth, typically via zoom; and 85% reported improvement in their condition. 84% agreed it was an efficient use of time, 75% agreed it was financially viable, and 73% agreed their condition was accurately diagnosed. 62% percent believed telehealth should be less expensive than face-to-face services. Qualitative analysis revealed four themes (17 subthemes), including (i) value of telehealth; (ii) challenges; (iii) advantages; and (iv) use of technology to support patient experience.

Conclusion Australians with musculoskeletal pain conditions accessing physiotherapy via telehealth during the COVID-19 pandemic felt this care was valuable, although less so than traditional face-to-face care. Key challenges included the perception that lack of physical contact prevented accurate assessment, diagnosis and 'hands on' treatment, and requirements for technology to facilitate a quality

service. Advantages included access to expert care and convenience.

29 MANAGING SERIOUS PATHOLOGY IN LOW BACK PAIN: DEVELOPMENT AND VALIDATION OF A BAYESIAN NETWORK DECISION SUPPORT TOOL

¹Adele Hill*, ¹Christopher Joyner, ²Barbaros Yet, ¹Chloe Keith-Jopp, ³Ceren Tuncer Sakar, ¹William Marsh, ¹Dylan Morrissey. ¹Queen Mary University of London, Bancroft Road, UK; ²Middle East Technical University, Turkey; ³Hacettepe University, Turkey

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Introduction A key decision for assessment of Low back pain (LBP) is identifying serious underlying conditions such as Cauda Equina Syndrome, infection, fracture or space-occupying lesions. Previous decision support tools for LBP deployed rule-based recommendations, yet Artificial Intelligence has enabled 'intelligent' decision support tools, with Bayesian Networks particularly suitable for complex conditions such as LBP. This study aimed to test whether clinical knowledge could be elicited to construct a Bayesian Network to support clinicians' detection of serious pathology masquerading as LBP.

Methods A modified-RAND appropriateness procedure elicited knowledge from 16 domain experts from General Practice, Rheumatology and Musculoskeletal specialties. This comprised a four-stage process using bespoke online tools interleaved with face-to-face meetings; 1) Variable elicitation, 2) Structure elicitation, 3) Probability elicitation 4) Validation. Independent experts in spinal pathology reviewed the initial tool and its outputs.

Results The tool includes background risk factors (e.g. trauma, age), signs and symptoms (e.g. bladder disturbance, inflammatory symptoms) and derived judgement factors (e.g. cord compression, fracture). The tool has an interactive online interface, requiring real-time patient inputs from the subjective assessment, then gives a judgement comparing baseline to the current patient. Content validation suggested no missing elements to the model, but may require more detail for clinical understanding of terms. Face validation exposed some inconsistency in clinical reasoning, particularly for spinal infections and fractures.

Conclusion The structured elicitation method yielded a reasoning model using expert clinician knowledge, establishing consensus amongst participants about its content. Further iterations to expand this to common LBP presentations should follow.

30 ONE HUNDRED CHILDREN AND ADOLESCENTS CONSULTING GENERAL PRACTICE WITH MUSCULOSKELETAL PAIN

¹Negar Pourbordbari*, ¹Martin Bach Jensen, ¹Jens Lykkegaard Olesen, ^{1,2}Sinead Holden, ^{1,2}Michael Skovdal Rathleff. ¹Center For General Practice at Aalborg University, Aalborg, Fyrkildevvej 7, 1st. floor, Denmark; ²Department of Health Science and Technology, Aalborg University, Frederik Bajers vej 7, Denmark

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Introduction Each year, 8% of children and adolescents consult their general practitioner (GP) due to musculoskeletal conditions, with pain the most frequent symptom. There is