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The effect of dietary restriction and physical activity on physical function and body composition of obese elders with knee OA [173]

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Background: Knee OA is a common condition in older adults which affects approximately 3.64% of the global population¹. Despite the clinical recommendation of exercise and diet for people with knee osteoarthritis (OA) there are no published UK studies reporting efficacy of a combined intervention programme of physical activity and dietary restriction on the musculoskeletal function of overweight and obese elders with knee OA.

Aim: To assess the feasibility and acceptability and collect preliminary data on the effectiveness of a combined dietary restriction/ exercise intervention programme.

Methods: The trial will begin in February 2017 and conclude in August 2017. It will take place at the Royal Orthopaedic Hospital (ROH) and University of Birmingham. Participants will receive a physiotherapy usual care programme for knee OA for one month, after which they will continue to exercise in their local gyms for 3 months. Participants will also follow dietary restriction throughout the 4 months of the intervention.

Results/ Findings: Feasibility will be assessed via focus group (participants) and questionnaire (ROH physio staff) at the end of the trial. Secondary outcome measures will include WOMAC, body weight, BMI, body composition, waist circumference, musculoskeletal function (including knee ROM, lower limb muscle power, stair climb and timed up-and-go), pain, QoL, and markers of joint remodeling.

Discussion and Conclusion: The result of this trial will inform the design of a combined intervention programme within the UK population. Also, it will help to identify optimal method(s) for weight reduction plus the most effective way of delivering exercise to optimize patient outcome in a secondary health care setting. Trial registration: ISRCTN12906938

References:

- 1 Vos T, Flaxman AD, Naghavi M, et al. Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet* 2013 Jan 4;380(9859):2163-96.

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Rehabilitation of patients suffering gonarthrosis: how effective are strategies of aftercare? [216]

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Background: According to current understanding, medical rehabilitation must be judged by the quality of sustainability effects.

Aim: In a prospective comparative study, the aim was to investigate whether and to what extent the sustainability-oriented model of outpatient workplace medical rehabilitation (AAMR) in osteoarthritis of the knee is able to achieve beneficial treatment effects over the long term.

Methods: A total of 41 male employees (52.5 years) from the building and metal trades with advanced gonarthrosis completed both the 3-week intensive initial phase and the subsequent extended outpatient physiotherapy (EAP) once a week for 12 weeks (stabilisation phase). While the experimental group (EG, n = 22) continued the training program for another 18 months, the control group (CG, n = 19) terminated all other sporting activities.

Results: After completion of the initial work-up phase, strength of the thigh muscles, endurance capacity and quality of life increased and knee pain and functional limitations decreased in both groups (p < 0.05). The positive effects could be stabilised by carrying out the EAP. While the data of the CG after 18 months fell even below the status quo ante, the effects of the EG remitted but in comparison to the beginning of the AAMR still showed a trend towards improvement.

Conclusion: The results of the EG were positive but did not meet the expectations. The content of the follow-up strategies used must be optimised. Furthermore, the advanced stage of osteoarthritis of the knee seems to negatively affect the long-term results. A more preventive approach has to be discussed.



This is to certify that

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