A MIXED METHOD STUDY TO EXPLORE THE FEASIBILITY AND PATIENT SATISFACTION OF TWO DIFFERENT EXERCISE PROGRAMS IN SYSTEMIC SCLEROSISASSOCIATED MICROSTOMIA

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Background: Systemic sclerosis (SSc) is a severe autoimmune disease and fibrotic cutaneous involvement of hands and face is a typical characteristic. Oral involvement with reduced oral aperture is frequent and associated with impaired food intake, oral hygiene and secondary dental problems. Several studies have shown that stretching (placing the thumbs in opposite corners of the mouth hand, pulling outward) and oral augmentation (tongue depressors between the back molars) exercises can increase oral aperture but is often hampered by low adherence rates.

Objectives: The aim of this descriptive explorative mixed method study was to explore feasibility, patient satisfaction and effectiveness of two exercise programs, Therabite and orofacial exercises, in systemic sclerosis associated microstomia.

Methods: We included adult patients suffering from systemic sclerosis (fulfilling the ACR/EULAR 2013 criteria) and microstomia (maximal oral aperture <40mm). We discerned two groups: Group A exercised with a passive jaw motion device (Therabite®), and Group B performed mouth-stretching exercises. Patients were expected to exercise for 10 minutes, 3 times/day for 3 months. Patients were contacted 4 times by telephone to address encountered problems and completed an exercise diary to document the adherence rate. Patients were evaluated at baseline, 3 months (period without intervention), 6 months (3 months after intervention) and 9 months (post-intervention visit). At time point 6 months, semi-structured one to one interviews were conducted. Interviews were recorded, transcribed verbatim and systematically analyzed using Qualitative Analysis Guide of Leuven.

Results: We included 6 women and 3 men, with a median age of 60 years (range 40-75) and a median disease duration of 8 years (range 3-22). At time point 6 months, all patients in group A (n=4) and 4 patients in group B (n=5) improved with a median of 9mm (range 2-10) and 7mm (range 4-11), respectively. One patient had a decrease of 2mm. The compliance, measured as the ratio of executed exercises relative to the planned number of exercises ranged between 63.7% and 98.9% in group A and between 48.5% and 97.4% in group B. Details are shown in Table 1. In the follow-up period, we documented maintenance of the observed increase in oral aperture in those patients that continued exercising daily. In all others, maximal oral aperture declined again. All 9 patients attended the interview. Three main themes emerged from the data: drivers, challenges and perceived improvement. Patients highlighted several drivers to perform the exercises at home, such as the motivation to improve current disability cause by microstomia. Furthermore, they equally highlighted several challenges regarding feasibility, such as the struggle to exercise multiple times a day. Most of the patients were hoping that they could keep their improvement. They were willing to continue practicing if necessary, but with a lower frequency.

Conclusion: This study suggests that both types of intervention can improve maximal oral aperture. The adherence to therapy was higher than expected, but most of the patients considered it feasible to continue practicing 3 times/day in the long-term resulting in a decline of improvement post intervention. This is the first study to report the feasibility of the exercises for the patients and can be very useful for health professionals giving guidance. Future studies are needed in order to define exercise programs that are feasible and can be sustained in the long term.

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OSTEOARTHRITIS OF THE KNEE: A SYSTEMATIC REVIEW

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Background: Osteoarthritis (OA) is the most prevalent joint disease in the elderly. The signs and symptoms are degeneration of joint surface, pain, stiffness, swelling and decrease in physical function. Knee OA is the most common joint disease and more prevalent among older adults. Tai Chi Chuan is a safe exercise modality of Chinese origin, which may be a potentially in reducing symptoms.

Objectives: The aim of systematic review was to identify the effects of Tai Chi Chuan in the elderly with knee osteoarthritis.

Methods: This systematic review was registered in Prospero (CRD42018098699), MEDLINE, EMBASE, PEDro, Cochrane, Scopus, Scielo, Lilacs and Web of Science, were screened between May 2008 to May 2018 in English, Spanish, Portuguese and Mandarin language. Randomized controlled trials (RCTs) comparing Tai Chi to control conditions were included. Two authors independently assessed risk of bias using the risk of bias tool recommended by Jadad index. Outcome measures included were pain, stiffness, muscular strength, functionality and quality of life.

Results: In the search we found 161 studies, MEDLINE (29), Pedro (58), Web of Science (17), Embase (29), Cochrane (6), Scopus (18), Manual search (4). Eight articles were included and seven showed the effectiveness of Tai Chi Chuan, being higher to the interventions of the control groups, consisting of self-care educational activities, or strengthening and endurance exercises of knee flexors and extensors. Only one study, that patients received a lower limb resistance training program, presented better results in pain, stiffness and physical function scores. Tai Chi Chuan was not associated with adverse events.

Conclusion: Tai Chi Chuan was effective in improving pain, stiffness and physical function of sleep quality, in addition to increased speed and step length during gait, and strength gain of knee extensor muscles in elderly patients with knee OA. This systematic review found moderate...
evidence for short-term improvement of pain, physical function and stiffness in patients with knee OA. More high quality RCTs are urgently needed to confirm these results.

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A TAILOR-MADE EXERCISE PROGRAM DESIGNED FOR IMPROVING CARDIORESPIRATORY FITNESS IN PATIENTS WITH RHEUMATOID ARTHRITIS AND INCREASED CARDIOVASCULAR RISK

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Background: Rheumatoid arthritis (RA) is associated with low levels of cardiorespiratory fitness (CRF), especially in patients with RA and cardiovascular (CV) risk. The optimization of management of CV risk in patients with RA is an important aim in the treatment, including also exercise, particularly in patients with RA with a high CV risk, defined as a 10-year CV risk of 20% or higher. However, exercise to improve CRF in these patients is challenging since professionals should take multiple factors into account, such as comorbid conditions related to CV risk. It is unknown which intensity of exercise improves CRF and is safe for patients with RA and CV risk.

Objectives: To design a tailor-made exercise therapy program to improve CRF for RA patients with CV risk >20%.

Methods: To design a tailor-made exercise therapy program, patients and experts’ opinions were collected, and a systematic literature search on exercise programs in RA and CV risk factors was performed. The ACSM guidelines were also used to gain insight into frequency, intensity, type and progression of the exercises. In addition, a cardiologist rehabilitation team and an arthritis rehabilitation team were consulted during the development of the program. The designed program was partly based on cardiac rehabilitation protocols and especially the way the training load was increased, taking into account the joint load. Finally, the developed exercise program was discussed and approved by an expert panel of patients, rheumatologists, a cardiologist, physical therapists and researchers in rheumatology. The designed program was tested on 10 patients in which the feasibility and safety was tested.

Results: Intensity of exercises was based on the results from the baseline exercise tests showing that on average the VO2 max was under the standard. The maximum Heart Rate (HR max), which was on average (mean, SD) 140.6 (10.9) beats per minute, was used to determine the individually performed intensity of exercises. The duration of the program was 12 weeks. Patients had two training sessions per week with a duration of one hour each. To guarantee safety, the training load was progressively increased and the tolerability was assessed at every training. Exercises consisted of aerobic and muscle strength exercises. The first four weeks patients trained 30 minutes (which were spread over three exercises) on 65% of the HR max which was gradually increased until 75% of the HR max in the sixth week. From the fifth week three exercises to improve muscle strength were added to the program. From the seventh week interval training started, with a peak of 85% of the HR max and a rest of 65% of the HR max. The program also included motivational interviewing because one of the main reasons for a high CV risk is the inactivity during daily life. All patients were motivated to perform 30 minutes of moderate exercises every day at home.

Conclusion: A tailor-made exercise program to improve cardiorespiratory fitness in patients with RA and CV risk is developed, based on the opinion and experience of patients and health professionals and supported by a literature review and guidelines. A progressively increase in intensity of the exercise program, based on the individual maximum HR, is tolerable and safe and might increase cardiorespiratory fitness in patients with RA and CV risk.

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Disclosure of Interests: Joëlle van den Hoek : None declared, Martin van der Esch: None declared, Marike van der Leeden: None declared, Willems Lems Speakers bureau: Amgen Inc. , Merck, Eli Lilly and Pfizer, George Metsios: None declared, George D Kitas Speakers bureau: GDK has received honoraria for lectures, participation in advisory boards and/or hospitality by Roche, Abbvie, Pfizer, Novartis, UCSB, GSK and received grant support from Lilly., Joost Dekker: None declared, Wilma Scholte op Reimer: None declared, Harald Jorstad: None declared, Merel J. L. Ami: None declared, Maaike Heslinga: None declared, Michael Nurmohamed Grant/research support from: AbbVie, Bristol-Myers Squibb, Celnige, Eli Lilly, Janssen, Menarini, MSD, Mundipharma, Pfizer, Roche, Sanofi and UCB, Consultant for: AbbVie, Bristol-Myers Squibb, Celnige, Eli Lilly, Janssen, Menarini, MSD, Mundipharma, Pfizer, Roche, Sanofi and UCB, Speakers bureau: AbbVie, Bristol-Myers Squibb, Celnige, Eli Lilly, Janssen, Menarini, MSD, Mundipharma, Pfizer, Roche, Sanofi and UCB


DOES ART THERAPY MAKE A DIFFERENCE IN THE MANAGEMENT OF CHILDREN AND YOUNG PEOPLE WITH RHEUMATIC DISEASES: A MULTI-SITE SERVICE REVIEW TO EXPLORE THE IMPACT OF ART THERAPY IN TWO TERTIARY PAEDIATRIC RHEUMATOLOGY SERVICES IN SCOTLAND

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Background: Art therapy interventions in various medical settings are known to contribute to the mental health and wellbeing of patients. In paediatric rheumatology there is a well documented unmet need for psychological support for children and families coping with chronic disease and its treatment. The role that art therapy could have in this provision is unknown and there is no evidence-based research to help understand its potential contribution. The Teapot Trust is a Scottish charity working with paediatric rheumatology services offering art therapy to children and young people with rheumatic diseases.

Objectives: This project aimed to evaluate the service provided by art therapists in two tertiary paediatric rheumatology units in Scotland. The objective was to better understand which patients were referred for art therapy; why they were referred; levels of engagement and acceptability of therapy and benefit resulting in improved outcome.

Methods: A retrospective review was conducted of referrals received in the period 2012-2018 to art therapy from paediatric rheumatology services. A mixed method approach was used for gathering quantitative, secondary and qualitative data. Quantitative data was collected by collating numerical and demographic information from referral forms; art therapist service databases; and patient medical records. Secondary and qualitative data has been gathered from pre-existing service information; the use of outcome measurement tools; end of therapy evaluations; end of therapy reports and patient feedback forms.

Results: The demographics of children seen were as expected in a paediatric rheumatology service with the majority being females with juvenile idiopathic arthritis and on treatment with methotrexate. Peak age of referral was between 7 and 12 years. The majority of referrals were for help with coping either with their diagnosis or the emotional impact. Patient reported outcomes show significant improvements for patients in their social and emotional wellbeing. This review highlighted the limitations...