respectively) and small correlations between TSP and KOOS sport/recreation and KOOS symptoms (r_w=0.13, p=0.36, r_v=0.22, p=0.11 respectively). There was a moderate, significant correlation between TSP total score and 30s CST (r_v=0.34, p=0.01). Discriminative ability for the TSP for unilateral knee pain was found to be significant worse in the painful side, with median 18 (2-36) vs. 14 (7-37) in the not painful side, p=0.001.

Conclusion: The OA-TSP could be used as a functional test to detect altered knee alignment interpreted as an early sign of knee OA and assist the physiotherapist in functional testing during the rehabilitation of individuals with symptomatic knee OA.

REFERENCES

Disclosure of Interests: None declared

DYNAMIC JOINT STABILITY MEASURED AS GAIT SYMMETRY IN WOMEN WITH SYMPTOMATIC KNEE OSTEOARTHRITIS

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Background: Modern strategies for knee osteoarthritis (OA) treatment and prevention includes early detection and analyses about pain, gait and lower extremity muscle function including both strength and stability. The very first sign of knee OA is pain or perceived knee instability, often experienced during weight bearing activities e.g. walking. Increased muscle strength will provide dynamic joint stability, reduce pain, and disability. Specific measures of gait symmetry (GS) can be assessed objectively by using accelerometers, which potentially is a feasible method when evaluating early symptoms of symptomatic knee OA.

Objectives: The aim was to study if symptoms of early knee pain affected gait symmetry, and the association between lower extremity muscles function and gait symmetry in patients with symptomatic knee OA.

Methods: Thirty-five participants (mean age 52 SD 9 years, 66% women) with uni- or bilateral symptomatic knee OA, and without signs of an inflammatory rheumatic disease or knee trauma were included. Pain was assessed by a numeric rating scale (NRS, range 0-10 best to worse), tests of lower extremity muscle function with the maximum number of one leg rises. Dynamic stability was measured as GS by using wearable inertial sensors (PXNordic senseneering platform), during the 6 min walking test to obtain spatio-temporal gait parameters. GS was computed based on stride time (temporal symmetry, TS) and stride length (spatial symmetry, SS). Stride length was normalized by height. Kruskal-Wallis and Spearman’s correlation coefficient were used for analyses.

Results: Reports of knee pain did not differ between gender (women 4.7, SD 2.4 vs. men 3.3, SD 2.6, p=0.362), neither did one leg rises or gait symmetry. Participants who reported unilateral knee pain (left/right side n=9/13), had a shorter stride length on the painful side. The mean difference in stride length was 0.7% of the subject’s height (SD 1.3). Participants with unilateral pain also presented less SS gait than those who reported bilateral pain (p=0.005). The higher number of one-leg rises performed in the better SS was observed. We found a significant relationship between TS and one-leg rise for the right r_w=-0.39, p=0.006, and left r_w=-0.40, p=0.004 left side). No significant relationship was observed between SS and one-leg rises.

Conclusion: Our results is in line with earlier findings stating that knee pain affects GS negatively and that lower extremity muscle function is an important feature for symmetry and dynamic joint stability in patients with symptomatic knee OA. We also found that pain in one leg was related to impaired GS. Bilateral knee pain was however more symmetrical and will need healthy controls for comparison to better understand the negative impact of symptomatic knee OA.

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THE EFFECTS OF EXERCISE ON PAIN AND DEPRESSION IN MOTHERS OF DISABLED CHILDREN WHO SUFFER FROM BACK PAIN

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Background: The rate of back pain prevalence and its subsequent negative psychological effects is quite high in mothers of disabled children. Family caregivers of children with a disability demonstrate higher degrees of chronic conditions and are more likely to engage in health risk behaviors (1, 2).

Objectives: The purpose of this study was to investigate the effects of home exercise programs on mothers’ back pain, relevant functional influence and the depression level (3).

Methods: Forty-two mothers aged 35,71±6,53 were included in this study whom children were diagnoses with cerebral palsy. Back pain level of the mothers was measured with Visual Analog Scale (VAS), relevant functional disability was measured with Oswestry Disability index and depression level was measured with Beck Depression Scale. Disability level of their children was measured with Gross Motor Function Classification System (GMFCS). Following the assessments, a home exercise program consisting of Dynamic Lumbar Stabilization Exercises was given to mothers. They were asked to perform the exercises for three months and exercises were checked once a month.

Results: GMFCS average of the children was 3.35±1.57. There was a significant difference in the pain level (VAS) changed from 4,90±2.67 to 3,21±2.50 after the exercise (p=0.000). The difference between the Oswestry Disability Index score before (13,92±8,32) and after the exercise (10,76±8,54) was statistically significant (p=0.001). Also there was a significant difference in the Beck Depression Scale score decreased from 25,169±46 to 12,76±7,50 (p=0.009).

Conclusion: Mothers with disabled children complain about back pain during activities such as caregiving their children (4). This study reveals that back pain, relevant functional influence and depression could be reduced in mothers by perform recommended exercises regularly.

REFERENCES

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BREAKING BAD: REPORTING OF VERTEBRAL FRAGILITY FRACTURES AND THE IMPACT TO MANAGEMENT OF BONE HEALTH

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Background: Vertebral fragility fracture (VFF) is the most common osteoporotic fracture and a strong predictor for future vertebral fracture(s) and/ or hip fracture. A clear reporting of VFF by radiologists offers ample opportunity for early diagnosis and appropriate management of osteoporosis among treating physicians.

Objectives: The objectives of this study were two-fold; to evaluate 1) the reporting of VFF by radiologists at one of the largest acute hospitals in southern Ireland 2) the management of osteoporosis (adherence to