

There was no association of mtDNA elevation with any particular type of intra-, extra-cranial or ocular vessel involvement).

Conclusion: The quantification of cell free mtDNA - but not nDNA - copy numbers allows a sensitive and specific distinction between healthy individuals and patients with GCA and raises the possibility that circulating nucleic acids contribute to the pathogenesis of GCA. Plasma mtDNA quantification may aid in the diagnosis of GCA and in monitoring GCA activity.

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Basic and translational science in paediatric rheumatology

AB0153 EFFECT OF STANDING FRAMES USED IN REAL LIFE ON BONE REMODELING IN NON-WALKING CHILDREN WITH CEREBRAL PALSY

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Background: Children with severe cerebral palsy are prone to low bone mineral density. Standing frames are recommended as postural management for these children. The beneficial effects in promoting bone health remain unclear.

Objectives: To determine whether static standing frames enhance bone remodeling in real life in severe cerebral palsy.

Methods: 24 children with severe cerebral palsy GMFCS IV & V were included in the study and were divided into two groups: 13 were using a passive standing frame and 11 were not. We performed a single center retrospective cross-sectional study comparing the two groups using dual X-ray absorptiometry data and tests on biological samples, including bone remodeling factors.

Results: Total body (less head) bone mineral content was significantly higher in children who used a standing frame for an average of 30 min/day. This was confirmed in the lumbar spine. Although the total body bone mineral density (less head and proximal femur) densitometric data were not significantly higher, a positive trend favored the use of a standing frame in the children. Bone resorptive factors (CTX) were higher in the non standing-frame group, whereas there was no difference among osteoformation factors. No difference in fracture history was found.

Conclusion: Used in real life, we showed that static standing practice improved mineralization by reducing osteoresorption in non-ambulant children with cerebral palsy. Further studies are needed to determine how standing practice could impact bone mineralization over time in real life and to explore more bone remodeling factors.

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AB0154 PHYSICAL FUNCTION ASSESSMENT TOOLS IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS: JAFAS VERSUS CHAQ

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Background: Children with juvenile idiopathic arthritis (JIA) frequently experience impairments in one or more body systems. These may include pain, fatigue, muscle weakness, and poor exercise capacity. Functional disability can be evaluated by means of questionnaires and observed performance tests. Only the Juvenile Arthritis Functional Assessment Scale (JAFAS) and the Childhood Health Assessment questionnaire (CHAQ) were developed specifically for children with juvenile arthritis.

Objectives: The aim of this study was to investigate the relationship between JAFAS and CHAQ in the evaluation of physical function.

Methods: This is a cross sectional study including patients with JIA. Assessment of disease activity (DAS28), number of tender joints (NTJ) and swollen joints (NSJ) were determined. The JAFAS (range 0-20) includes 10 items of activities of daily living (dressing, cutting food, getting in and out of bed, picking up an object from the floor while standing, moving from standing to the floor and returning to standing, walking 50 feet unaided, and walking up a flight of 5 steps). The score range for each item is 0–2, based on the time in seconds the child takes to complete each task. Higher scores indicate greater activity limitation (1). The original CHAQ including 30 activities in eight different domains, with a total score ranging from 0 (no limitation) to 3 (maximal limitation) was completed by interviewing the patient (2). Spearman correlation test and Cohen's kappa coefficient (k) were used. Significance level was set at p<0.05.

Results: Twenty-nine patients with a median age of 25 years [8-40] and median disease duration of 16 years, were included. Age of onset of the disease was 8 years [2-16] years. The median JAFAS score was 3 [0-12] and the median CHAQ score was 0.05 [0-3]. There was a slight agreement between JAFAS and CHAQ k=0.1 (p = 0.05). A positive correlation was found between NTJ and CHAQ (r=0.54, p=0.03) and JAFAS (r=0.5, p=0.05). A correlation was noticed also between NSJ and CHAQ (r=0.51, p=0.05). Both the JAFAS and CHAQ scores correlated with DAS28 (r=0.55, p=0.01 and r=0.44, p=0.02, respectively). At the level of the individual joints, coxitis was the most frequent complication (13 patients out of 28), six of them had surgery of total hip prosthesis. There was a linear relationship between JIA complicated with coxitis and the level of functional disability measured with JAFAS (p=0.027).

Conclusion: Our study shows that, even though JAFAS had a slight agreement with CHAQ, both were correlated with the level of disease activity and the number of swollen and tender joints.

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