SARCOPENIA; PHYSICAL FUNCTIONING, BODY COMPOSITION AND PROTEIN INTAKE IN ADULT PATIENTS WITH MITOCHONDRIAL DISEASE COMPARED WITH MATCHED HEALTHY CONTROLS – DYNAMO STUDY

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Rationale

Mitochondrial Disease

Altered body composition • Inadequate nutritional intake • Decreased physical functioning

Methods

• Adult MD-patients were matched to healthy controls by gender, age and BMI
• Body Composition: DXA; ASM and SMI
• Physical functioning: Handgrip strength
• Sarcopenia ↓SMI (Cruz) and ↓ HGS (Dodds)
• Protein intake: 3-day food records
• Unpaired t-test and Pearson correlation

Results

• 37 MD-patients and 37 matched controls
• 42 ± 12 years of age
• BMI: 22.8 ± 4 kg/m²
• 41% male

Average height and weight (mean ± SD) of patients and controls

HGS is related with MD, Mitochondrial disease; DXA, Dual energy X-ray absorptiometry; ASM, appendicular skeletal muscle mass; SMI, skeletal muscle mass index HGS, Handgrip strength

Conclusion

• MD-patients have decreased physical functioning
• MD-patients have altered body composition; shorter stature, lower weight and lower ASM
• HGS is related with lower muscle mass and lower protein intake in MD-patients
• The higher prevalence of sarcopenia warrants supporting protein intake through nutritional guidance in MD-patients