ESPEN 2015 Abstract Submission

Topic: Nutritional assessment

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BODY COMPOSITION OF ADULTS WITH MITOCHONDRIAL DISEASE

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Presentation Method: Oral or Poster presentation

Please indicate your professional occupation: Dietitian

The presenting author fulfills the above conditions and wants to apply for a travel award: No

Rationale: Patients with mitochondrial disease (MD) experience a variety of nutrition related complaints, i.e. dysphagia, intestinal problems, diabetes or exercise intolerance. Therefore, monitoring of nutritional status in these patients is highly relevant. Recently, it was shown that, based on their body mass index (BMI), malnutrition frequently occurs in these patients. However, as BMI is not a valid parameter for nutritional status this studied aimed at comparing BMI with fat and fat free mass index in adult patients with MD.

Methods: After an overnight fast height (m), weight (kg) and BMI (kg/m^2) of adult MD patients were measured and compared with their fat mass (FMI; fm (kg)/m^2) and fat free mass index (FFMI; ffm (kg)/m^2) as determined using bio-impedance (50Hz). BMI, FMI and FFMI were compared with their current standards for normal ranges.

Results: Patients (age: 44 yr ±13, mean ±SD; male: n=11) with chronic progressive external ophthalmoplegia (CPEO, n=17) and carriers of the m.3243A>G (MELAS) mutation (n=20) signed informed consent. Of all patients, 14% were underweight and 46% were overweight based on their BMI. In contrast, 51% of all patients had a decreased FFMI, while 51% had an increased FMI. Moreover, in patients with normal BMI (n=16) their FFMI ranged from 13- 17,7 kg/m^2 (<p5 to >p95). 29% of the patients had sarcopenic obesity (FFMI< p10 and high FM%).

Conclusion: This study shows that the majority of patients, even those with normal BMI, have an abnormal bodycomposition (BC) -i.e. decreased FFMI and/or increased FMI. They are at risk for both sarcopenia as metabolic syndrome which, using BMI alone, can remain undiscovered. These results are in line with data of patients with other neuromuscular diseases. It should be investigated whether and how nutrition and/or physical intervention may improve BC and quality of life in these patients.

Disclosure of Interest: None Declared

Keywords: Body Composition