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Società Italiana di Nutrizione Artificiale e Metabolismo

MALNUTRITION AND MUSCLE LOSS IN PATIENTS WITH NEW DIAGNOSIS OF AMYOTROPHIC LATERAL SCLEROSIS (ALS)

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Background and aims

Malnutrition is a major prognostic factor in Amyotrophic Lateral Sclerosis (ALS). Malnutrition and reduced muscle-mass prevalence were assessed at diagnosis.

Methods

Patients with ALS new diagnosis (2020-2022) were evaluated. Nutritional history and anthropometric parameters were collected. Nutritional intakes were assessed through the 24-hours recall tecnique by an expert dietician, swallowing impairments by a speech therapist (expressed as Strand score). Fatty-Free Mass (FFM), Fatty Mass (FM), Phase Angle (PA) were detected through bioelectrical impedance analysis (BIA). Malnutrition diagnosis and severity were assessed according to Global Leadership Initiative for Malnutrition (GLIM) criteria. All patients met by definition one etiological criterion (ALS diagnosis). Nutritional requirements (according to ESPEN guidelines): 30 kcal/kg/day (energy), ≥1 g/kg/day (proteins). Weight at BMI 25.0 kg/m2 was considered for obese patients.

Results

58 patients; men/women 37/21(64/36%); median age 67(27-85) years; spinal/bulbar onset 39/19(67/33%). Nutritional parameters: Table 1.

Conclusions

1. Malnutrition is common in ALS since diagnosis. 2. Muscle-mass assessment allows to identify malnourished patients without reduced weight and/or BMI. 3. An early nutritional assessment is essential to perform an effective intervention.

Weight loss prevalence (n)(%)	Weight loss (*vs* health body-weight) (%)	Weight loss time (months)	BMI (kg/m^2)
44(75.9%)	7.4(0.6-29.4)*	9.0(1-36)*	24.7(16.8-35.4)*
Fatty-Free Mass (% total body-weight)	**Fatty Mass (% total body-weight)**	**PA (°)**	**Reduced PA (n)(%)**
73.1(53.8-89.9)*	27.0(10.1-46.2)*	4.4(1.2-7.9)*	<5.2° 45(77.6%) <4.4° 28(48.3%)
Malnutrition (n)(%)	**Mild malnutrition (n)(%)**	**Severe malnutrition (n)(%)**	**Reduced FFM-Index (n)(%)**
26(44.8%)	14(24.1%)	8(13.8%)	4(6.9%)
Kcal-intake impairment (<75% requirements) (n)(%)	**Protein-intake impairment (<75% requirements) (n)(%)**	**Strand score**	**Thickened fluids (n)(%)**
19(32,8%)	14(24,1%)	8.5(3-10)*	9(15.5%)

Table 1. (*)=median.