

SARCOPENIA RISK ASSESSEMENT AS AN INDEPENDENT TOOL FOR NUTRITIONAL STATUS ASSESSEMENT AMONGST REHABILITATION INSTITUTIONALIZED PATIENTS: AN UPDATE

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RATIONALE

Sarcopenia is a condition characterized by loss of muscle mass and function, thus maintaining a good nutritional status is vital to avoid its development. Patients at rehabilitation facilities are often impaired by sarcopenia. The study aims to characterize the nutritional status and risk of sarcopenia within patients institutionalized in a private social Portuguese rehabilitation institution.

METHODS

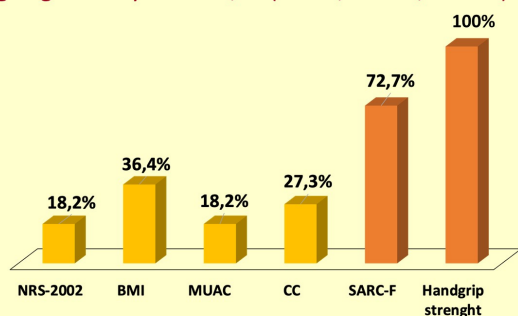
Of the 32 in rehabilitation patients institutionalized in ISCMST in December/21, patients in terminal illness, under parenteral nutrition or with severe dementia were excluded. A final sample of 11 patients was included. NRS-2002 and SARC-F were used to assess nutritional and sarcopenia risk, respectively. Patient's food intake was estimated by observing the percentage of 0-25%;25-50%;50-75%-75-100% of meals. To evaluate the nutritional status, a) Body Mass Index kg/m² (BMI); and b) mid-upper arm circumference (MUAC) was used. Regarding sarcopenia risk calf circumference (CC) was assessed. Functional capacity was evaluated using the hand grip Jamar dynamometer. A short number of patients in the sample determined a descriptive analysis.

Clinical study data collection fluxogram

- 1 Collected data from medical files:**
 - Gender and age
 - Date and purpose of rehabilitation facility admission
 - Diet consistency and oral nutritional supplements
 - Medication
- 2 Nutritional status assesement:**
 - BMI
 - CC
 - MUAC
 - Handgrip strenght
- 3 Nutritional risk assesement:**
 - NRS-2002
 - SARC-F
- 4 Estimation of food intake:**
 - Main meals

RESULTS

5/11 patients were male and 6 were female (55%), with an average age of 78 years \pm 13,96 (M=81; min40; max92).



Two-patients had an NRS-2002 score >3, being at risk for malnutrition. According to the MUAC, these same 2 patients had a BMI <20 kg/m². SARC-F identified 8-patients at risk for sarcopenia (72.7%) which was not in agreement with CC, as this assessment classified 3-patients at risk for sarcopenia. The hand grip test classified every patient (100%) with sarcopenia.

Results are summarized in table 1 (**Bold** = patients with sarcopenia risk; *Italic* = malnourished patients).

Table 1 – Nutritional assessment and sarcopenia risk

Sex	NRS-2002 score	Nutritional assessment			Sarcopenia risk	
		BMI (kg/m ²)	MUAC (cm)	CC (cm)	SARC-F score	Hand grip strength test (kg of strength)
F	0	25,5	31,8	37,4	2	0
F	4	20,3	25	32,6	5	4,2
M	1	23,9	25,3	32,8	5	23,7
M	1	22,9	30,9	33,1	7	18,7
F	1	29,1	38,9	36,2	3	9
F	1	22,6	23,2	33,3	8	9,1
M	2	19	24,1	29,1	8	7,2
M	1	20,8	27,6	30,9	3	9,2
F	1	25,1	29,3	33,1	6	7
M	1	23,9	25,1	31,4	5	7,7
F	4	16,3	19,3	23,8	7	5

Legend: F-Female; M-Male; BMI-Body Mass index; MUAC-Mid-upper arm circumference; CC-calf circumference

Interestingly, patients who ate all their meal (>75%) were not identified as sarcopenic by the SARC-F.

Table 2 – Sarcopenia risk and nutritional intake

Patient	SARC-F score	Food intake as a percentage of			Consistency of the diet	Oral nutritional supplements
		0-25%;25-50%;50-75%-75-100%	Soup (%)	Main course		
1	2	75-100	75-100	75-100	Regular	No
2	5	75-100	0-25	75-100	Regular	Yes
3	5	75-100	75-100	0-25	Puree	Yes
4	7	75-100	50-75	75-100	Regular	Yes
5	3	75-100	75-100	75-100	Regular	No
6	8	75-100	50-75	75-100	Soft	Yes
7	8	75-100	0-25	75-100	Liquid	Yes
8	3	75-100	75-100	75-100	Puree	Yes
9	6	75-100	50-75	75-100	Regular	No
10	5	0-25	75-100	75-100	Puree	Yes
11	7	75-100	25-50	25-50	Regular	Yes

CONCLUSIONS

The risk of sarcopenia was prevalent in our sample and occurred, regardless of a normal BMI or the absence of a malnutrition risk assessment. This might mean that sarcopenia should always be screened as an independent tool of the nutritional risk assessment throughout rehabilitation period.

References

Cruz-Jentoft et al. Sarcopenia: Revised European consensus on definition and diagnosis. Age Ageing 48,16–31(2019).

Acknowledgements

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