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MORPHOFUNCTIONAL ASSESSMENT WITH NUTRITIONAL ULTRASOUND PARAMETERS OF POST-ICU PATIENTS WITH COVID. PRELIMINARY RESULTS OF NUTRIECOMUSCLE STUDY.

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Rationale: To evaluate nutritional and morphofunctional status of COVID-19 patients at hospital discharge.

Methods: Observational study in COVID-19 patients discharged from ICU. Body composition was assessed by BIA and nutritional ultrasound and functional status by hand-grip strength and timed “up and go” test (TUG).

Results: 96 patients. Mean age: 58.8 (8.5) years, 71.9% males. According to GLIM criteria, 52.1% patients presented moderate and 46.9% severe malnutrition. During hospitalization, percentage of weight loss was 11.6% (SD 6.7). Hand grip strength was < 27kg in 56.5% of the male and < 16 kg in 77.8% women. Body composition parameters are displayed in Table. Fat free mass index <17 kg/m² in 34.3% of the male and < 15 in 26.1% women. Phase angle (N=96) < 3.95° in 29.5%, SPA (N=31) < -1.85 in 54.8%. US myosteotosis was reported in 78.1% males and 100% females. TUG test was pathologic (> 20 sec.) in 27.7% (20.9% men and 44.4% women). A positive correlation was observed between muscle area and phase angle (rho=0.51), and between muscle area and hand grip strength (rho=0.55).

	Males	Females
	(n=69)	(n=27)
Overweight ₂ ≥ 25 - 29.99 Kg/m ²	28 (41.2%)	5 (18.5%)
Obesity* ≥ 30 Kg/m ²	19 (27.9%)	16 (59.3%)
FFMI** (kg/m ²)	18 ± 4.5	16.3 ± 3.3
Phase angle (°)	4.6 ± 1.1	4.4 ± 0.9
Preperitoneal adipose tissue	0.8 ± 0.4	1.0 ± 0.5
RF-CSA** (cm ²)	3.7 ± 1.4	2.6 ± 0.6

Thickness RF* (cm) 1.2 ± 0.5 0.9 ± 0.2

*SMI: Skeletal Muscle Index; FFMI: Fat Free Mass Index; RF-CSA: Rectus femoris cross sectional area; *p<0.05 (Fisher's test). **p<0.005 (Mann-Whitney test)*

Conclusion: Almost all post-ICU COVID patients had some degree of malnutrition at hospital discharge and also a high prevalence of overweight or obesity and myosteatorsis. Ultrasound nutritional parameters show a good correlation with BIA-body composition analysis and functional test in these patients.

References: Cornejo-Pareja I, et al. Clin Nutr. 2021:S0261-5614(21)00091-1.

Disclosure of Interest: None Declared

Keywords: bioimpedance, COVID 19, Nutritional ultrasound