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Miscellaneous

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Bioimpedance In Patients With Rheumatic Diseases

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Has this paper been previously presented at another conference?: No

Background/Objectives: Introduction: rheumatic diseases are chronic entities, which cause pain, weakness and impact on lifestyle; BMI is useful in weight monitoring, however assessing body composition identifies conditions such as sarcopenia, Kim and. Et al. describe the latter as a risk factor for cardiovascular diseases and decrease in quality of life, thus the question arises: what is the body composition of patients with rheumatic diseases we are treating?

Objective: to perform a bioimpedance measurement of patients attending a referral center for the treatment of rheumatic diseases of the Guatemalan Institute of Social Security of Guatemala, focusing on measurement of muscle mass (MM), physical rating (RF), muscle quality, metabolic age and BMI.

Methods: Materials and Methods: Prospective, randomized study, conducted in November 2023, included 25 patients with: Rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), Sjögren's syndrome (SS), systemic sclerosis (SSc), ankylosing spondylitis (AS), antiphospholipid syndrome (APS), vasculitis; attending a referral center for the treatment of rheumatic diseases, using the monitor: InnerscanPro/model rd-901PRO.

Results: Results: 100% were female, with average data: BMI 27; 48% were found overweight and 26% obese, among groups patients with RA presented 80% overweight or obese, SLE with 40%, and the rest with 100% of patients with abnormal BMI data, the highest percentage of BMI 20-25 was found in SLE with 40% and only 9% presented BMI<20 including one patient with SLE and one with SSc, metabolic age was 55. 6 years on average, 8.8 years higher than chronological age, also with RF: 52% obese (high fat percentage/low MM), of them one occult obese (apparent normal with high fat percentage/low MM), 13% were thin (low fat percentage and MM), muscle mass quality was low with 57% and only 4% high (table 1).

Image 1:

TABLE No. 1 RESULTS FROM BIOIMPEDANCE IN PATIENTS WITH RHEUMATIC DISESS

VARIABLE	MEAN	RA	SLE	SS	VASCULITIS	APS	SSc	AS
GENDER	25	12	5	2	2	2	1	1
AGE (x)	46.8 Years	53.5 Years	36.8 Years	36 Years	65 Years	34 Years	47 Years	42 Years
BMI (x)	27	27.9	25.6	32.1	32.6	29	16.8	29.4
<18.5 (Low)	9 %	***	20%	***	***	***	100	***
18.5-24.9 (Normal)	17%	20 %	40%	***	***	***	***	***
25-30 (Overweight)	48%	60 %	20%	50%	50%	50%	***	100%
>30 (Obesity)	26%	20 %	20 %	50%	50%	50%	***	***
Physical Rating								
Low	13%	***	40%	***	***	***	100%	***
Standard	22%	20 %	40%	***	50	***	***	***
Solid	13%	10 %	20%	***	50	***	***	***
Obese	48%	60 %	***	100%	***	100%	***	100%
Hidden obese	4%	10 %	***	***	***	***	***	***
METABOLIC AGE (x)	55.6 Years	60.9 Years	37.4 Years	63 Years	68.5 Years	66 Years	19 Years	70 Years
Difference between chronological age vs Metabolic Age								
<5 Years	30%	20 %	60%	***	50%	***	100%	***
<0.5 Years	9%	20 %	***	***	***	***	***	***
No difference	***	***	***	***	***	***	***	***
>0.5 Years	9%	10 %	20%	***	***	***	***	***
>5 Years	52%	50 %	20%	100%	50%	100%	***	100%
Muscle Quality								
Low	57%	60 %	40%	50%	0	100%	100%	100%
Average	39%	40 %	40%	50%	100%	0	0	0
High	4%	0	20%	0	0	0	0	0

Rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), Sjögren's syndrome (SS), systemic sclerosis (SSc), ankylosing spondylitis (AS), antiphospholipid syndrome (APS)

Conclusion: Conclusions: Patients with rheumatic diseases present a metabolic age higher than the chronological age, in 65% of the cases physical qualification was found with a tendency to decrease muscle mass and muscle fibers were of low quality in 57%, being these factors can affect mobility and development of daily life; this shows us that multidisciplinary management is a point to consider in our patients in which we can improve the quality of body composition and muscle mass and thus have an impact on improving the quality of life.

Disclosure of Interest: None Declared

Keywords: bioimpedance, physical rating, rheumatic diseases