RELATIONSHIP OF PHASE ANGLE AND PEAK TORQUE OF KNEE EXTENSORS WITH THE PERFORMANCE IN SIX-MINUTE STEP TEST IN HAEMODIALYSIS PATIENTS.

Camila Porto Brito¹, Igor Gutierrez Moraes¹, Cláudio Luders¹,

Christina May Moran de Brito¹, Wellington Pereira Yamaguti¹

¹Hospital Sírio-Libanês

Corresponding author: Wellington Pereira Yamaguti Hospital Sírio-Libanês, Rehabilitation Centre, Dona Adma Jafet Street, 91 – Bela Vista, São Paulo/SP, Brazil, 01308-050 Telephone Number +55 11 97286 0465 Email wellington.psyamaguti@hsl.org.br

DATA COLLECTION FORM

1. PERSONAL AND HEALTH HISTORY

Patient Code: Date//
Personal Data
Age group: () I 18-30 () II 30-40 () III 40- 50 () IV 50- 60 () V 60-70 () VI 70-80 () VII >80
Name:
Sex()F()M Birth Date:// Age:Ethnicity:Marital Status:
Ocuppation:(years) Previous Ocuppation:
Scholarity: () college complete () incomplete college () complete high school () incomplete high school
() literate () not literate
Adress:
Postal code: District: City: () São Paulo () Other:
Phone number: ()()Email:
1.a) Life habits
() Smoker () Ex-smoker Smoking load:
() Drink alcohol Weekly frequency:
() Sedentary () Physical activity Weekly frequency:
Physician responsible:
1.b) Personal Background
Diseases:
() systemic arterial hypertension () systemic arterial hypotension () Diabetes mellitus () Hypothyroidism () Dyslipidemia () Stroke () Coronary insufficiency () acute myocardial infarction () Bronchopneumonia () Tuberculosis () COPD ()Asthma () Rinithis () Sinusitis () Obstructive sleep apnea syndrom

Etiology of kidney disease: _____

Hemodialysis frequency:
Hemodialysis session duration:
Other diseases:
() Allergies
() Osteomioarticular diseases:
Previous surgeries :
() Previous hospitalization
Date of last hospital stay?
Reason of last hospital stay:
Time of last hospital stay:Outcome:
Mediantions in use/ Decare

Medications in use/ Dosage

1.c) Anthropometric Date

Date ((/_		Evaluator:
--------	-----	--	------------

Weight:	Height:	m	BMI:

Classification: () low weight () normal () overweight () obesity

2. MEDICAL RESEARCH COUNCIL

Medical Research Council (MRC)	Right side	Left side	Total
Shoulder abduction			
Elbow flexion			
Wrist extension			
Hip flexion			
Knee extension			
Ankle dorsiflexion			

Total Score

		_

<u>3.HANDGRIP STRENGTH</u>

HANDGRIP STRENGTH	1st measure	2nd measure	3rd measure
Score			

Dominant Side ()R()L

<u>4. SIX-MINUTE STEP TEST</u>

Six Minute Step Test	

				Peripheral	BORG		STEPS
Time	Heart Hate	Respiratory frequency	Blood pessure	Oxygen Saturation	(lower limb)	BORG (dyspnea)	

Rest				
1 st min				
2 nd min.				
3 rd min.				
4 th min.				
5 th min.				
6 th min. (FINAL)				
2 nd min after the end of the test (Recovery)				

Stopped during the test?	Yes ()	No () Reason:	
--------------------------	---------	------	-----------	--

() ventilatory () cardiac () peripheral muscle () Others ______

Total time stopped	during the test	:
--------------------	-----------------	---

Adverse event: ______

5. QUESTIONNAIRE 1: MALNUTRITION AND INFLAMMATION SCORE (MIS)

(A).Medical History

1.Dry weight change (after hemodialysis session) in the last three to six months?

- Without weight reduction or reduction less than 0.5kg (0 point)
- ot Weight reduction greater than 0.5kg and less than 1kg (1 point)
 - Weight reduction greater than 1 kg and less than 5% of body weight (2 points)
- Weight reduction greater than 5% of body weight (3 points)

2. Food Intake

- Good food intake and without worsening food pattern (0 point)
- Ingestion of solid but sub-optimal diet (1 point)
- Just liquid diet (2 points)
- Hypocaloric liquid diet or fasting (3 points)

3. Gastrointestinal symptons

- _ No symptons with good food intake (0 point)
- Mild symptoms, poor food intake, occasional nausea (1 point)
- \square Moderated symptoms with frequent nausea (2 points)
 - Frequent diarrhea, vomiting or severe anorexia (3 points)

4. Functional capacity

- Normal or improved functional capacity (0 point)
- Occasional difficulty walking or feeling tired frequently (1 point)
- Difficulty performing tasks that used to do without help (2 points)
- ☐ Restricted to bed or chair, with little or no physical activity (3 points)

5. Comorbities including the number of years undergoing hemodialysis

On hemodialysis for less than one year and feeling well (0 point)

On hemodialysis between one and four years, or presence of mild comorbidities, without MC* (1 point)

On hemodialysis for more than four years or with moderate comorbidities with MC* (2 points)

Any severe or multiple comorbidity with two or more MC* (3 points)

*MC: Main Comorbidities: include chronic heart failure (functional class III and IV), AIDS, severe coronary insufficiency, moderate to severe COPD, severe neurological sequelae, metastatic cancer and recent chemotherapy.

(B) Physical Exam

- 6. Decreased body fat reserve
 - Normal (0 point)
 - Slight (1 point)
 - Mild (2 points)
 - Severe (3 points)
- 7. Signs of reduced muscle mass
 - Normal (0 point)
 - Slight (1 point)
 - Mild (2 points)
 - Severe (3 points)
- 8. Body Mass Index (BMI)
 - Greater or equal to 25kg/m² (0 point)
 - Between 18 e 19,99kg/m²(1 point)
 - Between 16 e 17,99kg/m² (2 points)
 - Less than 16kg/m² (3 points)

9.	Serum	Albu	min
----	-------	------	-----

	Greater c	r equal to	o 4,0g/dL	(0 point)
--	-----------	------------	-----------	-------------

- Between 3,5 e 3,9g/dL (1 point)
- Between 3,0 e 3, 4g/dL (2 points)
- Less than 3,0g/dL (3 points)

10. Ferritin

- Greater or equal to 250 mg/dL (0 point)
- Between 200 e 249mg/dL (1 point)
- Between 150 e 199mg/dL (2 points)
- Less than 150 mg/dL (3 points)

TOTAL SCORE:

<u>6. QUESTIONNAIRE 2: QUALITY OF LIFE QUESTIONNAIRE –</u> (KDQOL-SF)

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
1	2	3	4	5

2.Compared to one year ago, how would you rate your health in general now?

Much better	Somewhat	About the	Somewhat worse	Much worse
now than	better now	same as	now than one	now than
one year	than one	one year	year ago	one year
ago	year ago	ago		ago

	2	3	4	5
3. The follo	owing items are	e about activi	ties you might	
	ur health now li			
If so, how muc	;h?			

		Yes, limited a lot	Yes, limited a little	No, not limited at all
a.	Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
b.	Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	1	2	3
C.	Lifting or carrying groceries	1	2	3
d.	Climbing several flights of stairs	1	2	3
e.	Climbing one flight of stairs	1	2	3
f.	Bending, kneeling, or stooping	• 1	2	3
g.	Walking more than a mile	• 1	2	3
h.	Walking 500 meters	• 1	2	3
i.	Walking 100 meters	• 1	2	3
j.	Bathing or dressing yourself	1	2	3

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

		Yes	No	
а	Cut down on the amount of time you spent on work or other activities?	1	2	
b	Accomplished less than you would have liked?	1	2	
с	Were limited in the kind of work or other activities?	1	2	
d	Had difficulty performing the work or other activities (for example, it took extra effort)?	1	2	

5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

		Yes	No
а	Cut down on the amount of time you spent on work or other activities?	1	2
b	Accomplished less than you would like?	1	. 2
с	Didn't do work or other activities as carefully as usual?	1	. 2

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or clubs?

	Not at all	Slightly	Mode	erately	Quite a bit	Extremely	
	1	2	[3	4	5	
How	How much bodily pain have you had during the past 4 weeks?						
	None	Very mild	Mild	Moderate	e Severe	Very severe	
	1	2	3	4	5	6	

7.

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
1	2	3	4	5

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

		All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
a.	Did you feel full of life?	1	2	3	4	5	6
b	Have you been a very nervous person?	1	2	3	4	5	6
С	Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
d	Have you felt calm and peaceful?	1	2	3	4	5	6
е	Did you have a lot of energy?	1	2	3	4	5	6
f	Have you felt downhearted and unhappy?	1	2	3	4	5	6
g	Did you feel worn out?	1	2	3	4	5	6
h	Have you been a happy person?	1	2	3	4	5	6
i	Did you feel tired?	1	2	3	4	5	6

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?



11. Please choose the answer that best describes how true or false each of the following statements is for you.

		Definitely true	Mostly true	Don't know	Mostly false	Definitely false
а	I seem to catch things a little more easily than other people	1	2	3	4	5
b	I am as healthy as anybody I know	1	2	3	4	5
С	I expect my health to get worse	1	2	3	4	5
d	My health is excellent	1	2	3	4	5

12. How true or false is each of the following statements for you?

		Definitely true	Mostly true	Don't know	Mostly false	Definitely false
а	My kidney disease interferes too much with my life	1	2	. 3	• 4	. 5
b	Too much of my time is spent dealing with my kidney disease	1	2	. 3	. 4	. 5
с	I feel frustrated dealing with my kidney disease	1	2	3	• 4	. 5
d	l feel like a burden on my family	1	2	• 3	• 4	. 5

13. These questions are about how you feel and how things have been going during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

		None of the time	A little of the time	Some of the time	A good bit of the time	Most of the time	All of the time
а	Did you isolate yourself from people around you?	1	2	3	4	5	6
b	Did you react slowly to things that were said or done?	1	2	3	4	5	6
С	Did you act irritable toward those around you?	1	2	3	4	5	6
d	Did you have difficulty concentrating or thinking?	1	2	3	4	5	6
е	Did you get along well with other people?	1	2	3	4	5	6
f	Did you become confused?	1	2	3	4	5	6

14. During the past 4 weeks, to what extent were you bothered by each of the following?

		Not at all bothered	Somewhat bothered	Moderately bothered	Very much bothered	Extremely bothered
а	Soreness in your muscles?	1	2	3	4	5
b	Chest pain?	1	2	3	4	5
С	Cramps?	1	2	3	4	5
d	Itchy skin?	1	2	3	4	5
е	Dry skin?	1	2	3	4	5
f	Shortness of breath?	1	2	3	4	5
g	Faintness or dizziness?	1	2	. 3	4	5
h	Lack of appetite?	1	2	3	4	5
i	Washed out or drained?	1	2	3	4	5
j	Numbness in hands or feet?	1	2	3	4	5
k	Nausea or upset stomach?	1	2	3	4	5
	Problems with your access site?	1	. 2	. 3	. 4	5

15. Some people are bothered by the effects of kidney disease on their daily life, while others are not. How much does kidney disease bother you in each of the following areas?

		Not at all bothered	Somewhat bothered	Moderately bothered	Very much bothered	Extremely bothered
а	Fluid restriction?	1	2	• 3	4	• 5
b	Dietary restriction?	1	2	. 3	4	. 5
С	Your ability to work around the house?	1	2	. 3	4	. 5
d	Your ability to travel?	1	2	• 3	4	. 5
е	Being dependent on doctors and other medical staff?	1	2	. 3	4	. 5
f	Stress or worries caused by kidney disease?	1	2	. 3	4	. 5
g	Your sex life?	1	2	• 3	4	• 5
h	Your personal appearance?	1	2	. 3	4	. 5

16. The next two questions are personal and relate to your sexual activity, but your answers are important in understanding how kidney disease impacts on people's lives. How much of a problem was each of the following in the past 4 weeks?

		Not a problem	A little problem	Somewhat of a problem	Very much a problem	Severe problem
а	Enjoying sex?	1	2	3	4	5
b	Becoming sexually aroused?	1	2	3	4	5

17. For the following question, please rate your sleep using a scale ranging from 0 representing "very bad" to 10 representing "very good". On a scale from 0 to 10, how would you rate your sleep overall?

Very ba	d								Ve	ery goo	d
0	1	2	3	4	5	6	7	8	9	10	

18. How often during the past 4 weeks did you...

		None of the time	A Little of the time	Some of the time	A good bit of the time	Most of the time	All of the time
а	Awaken during the night and have trouble falling asleep again?	1	2	3	4	5	6
b	Get the amount of sleep you need?	1	2	3	4	5	6
С	Have trouble staying awake during the day?	1	2	• 3	4	5	6

19. Concerning your family and friends, how satisfied are you with...

		Very dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Very satisfied
а	The amount of time you are able to spend with your family and friends?	1	2	3	4
b	The support you receive from your family and friends?	1	2	• 3	• 4

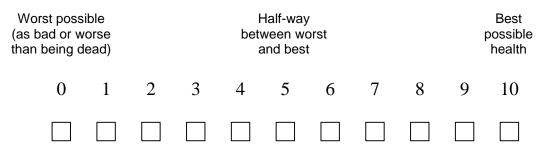
20. During the past 4 weeks, did you work at a paying job?

Yes	No
1	2

21. Does your health keep you from working at a paying job?

Yes	No
1	2

22. Overall, how would you rate your health?



23. Think about the care you receive for kidney dialysis. In terms of your satisfaction, how would you rate the friendliness and interest shown in you as a person?

Very poor	Poor	Fair	Good	Very good	Excellent	The Best
1	2	3	4	5	6	7

24. How true or false is each of the following statements?

		Definitely true	Mostly true	Don't know	Mostly false	Definitely false
а	Dialysis staff encourage me to be as independent as		2	3	4	5
b	possible Dialysis staff support me in coping with my		□.			□.
	kidney disease		2	3	4	5