

PHYSICAL AND MENTAL EFFECT OF TAI CHI CHUAN IN CHRONIC DISEASES : RESEARCH EVIDENCE, CLINICAL EXPERIENCE AND PATIENT PERCEPTION.

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INTRODUCTION/BACKGROUND

In chronic inflammatory diseases, none of the therapeutic interventions used to this day has curative result, so efforts should be aimed at alleviating symptoms and preventing evolutionary injuries.

Normally are used a sequential pharmacological battery, rehabilitation treatments and surgeries. The role of treatment is regulate immunity, which is amplified in these persons and modify development of disease, but have no curative effect.

Multimodal treatments with medication, rehabilitation, surgery, and more are used.

Often there is a huge frequency of mental depression and high anxiety developed by these patients to psychosocial and labor difficulties, often more worrisome than physical illness.

In recent years have insisted that the most important is the "quality of life", how living patients their illness. Exercise; meditation and socialization greatly enhance the patient's sense about their disease.

The objective of the exercises is to relieve pain, prevent deformities, maintain correct posture and preserve and increase joints motility, increase breathing capacity, achieve psychological compensation and gain independence in activities of daily living and gait. Increase physical strength and endurance, calm the mind and so, improve the sense of wellbeing.

Tai Chi Chuan with slow standardized movements and sequential postures would be the ideal exercise for these patients, even more knowing that involves physical and mental aspects (now called mind-body exercises).

This paper performed at the National Institute of Rheumatology of Uruguay, belonging to the Health's Ministry and the Medical School of the University of Uruguay.

Contributed clinicians in rheumatology, medical physiatrists and of course, Tai Chi Chuan's instructors.

Purpose

The goal was to observe the effects of Tai Chi Chuan on the quality of life. More specifically on some physical aspects: balance, strength, flexibility, coordination, physical agility and principally, how the patient perceives the physical improvements, analyzing mood, emotional and mental sensations, and impact on their daily and social life

In short, how the patient reacts when added to conventional treatment TCC practices and how this influences their quality of life

Methods

The method was a pilot prospective plan with repeated measurements of indicators during one year. Inclusion criteria were considered inflammatory and non-inflammatory rheumatologic diseases with more than two years of evolution (spondyloarthropathies, rheumatoid arthritis, osteoarthritis and fibromyalgia) in patients at the National Institute of Rheumatology.

Conventional drug treatments were maintained and had no changes during protocol. Only patients with spondyloarthropathy in first and second cervical vertebra were excluded.

After being approved protocol by the Institutional Ethics Committee, a group of twelve volunteers, four males and eight females, between thirty three to fifty eight years old, who signed consent to participate in the research program for one year and perform weekly ninety minutes of Traditional Yang Tai Chi Chuan was formed.

Interventions were given by two qualified instructors trained in the Yang Cheng Fu Center Sao Paulo, being one of them medical doctor. The first part of the Yang traditional 103 frame was used.

Evaluations were performed at the clinic. Were used as physical indicators: Stork Balance Stand Test, Leg Extension Strength Test, Chair Stand Test, Eight Feet up to go Test, Chair Sit and Reach Test and Balance four Stage Test.

As an indicator of quality of life the Spanish Modified HAQ 20-Item the Disability Scale was used and a questionnaire with thirty six questions involving aspects of physical, mental and emotional perception of Tai Chi Chuan effects were analyzed.

Chi square statistic was used, in baseline measures and a year measures.

Results/Interpretations

There was a strong adhesion to the TCC interventions, higher than in other type of exercises introduced in conventional treatments. This means that the patient remained involved protocol all year. Two patients left the program for personal reasons. In short, there was eighty three point three per cent of adhesion, and that is a great result because in our country others rehabilitation exercises just have one year adhesion of twenty seven per cent. More interesting was that when completed the protocol patients have continued practicing joining to new groups.

As result of the Health Assessment Questionnaire the Comparative analysis of pre and post one year Tai Chi Chuan interventions showed significant improvements:

Pre test media 1,08 points \pm 0.04

Post one year test 2,5 points \pm 0.05 = p 0.017

In **Table Nr. 1**, you can see results from the tests were used to measure the physical capabilities. In the left column is the name of test, is easy find online description and methods. The second column shows which is the main ability that this test measures. Under the word "normal", you can see values founded in supposedly normal persons. The others columns show measures found in the pre and post-tests, interpretation and statistical significance. As you can see most of the parameters listed are under the interpretation "better".

The **Table Nr.2** is a vision of yes-no responses to the thirty-six questions designed to measure the perceptions of the effects of the practice of TCC as part of treatment.

They perceived a physical improvement in eighty five per cent of the answers, mental improvement in ninety five per cent, emotional improvement in seventy seven per cent and in a cent per cent of the answer they said that had a great improvement in their mood

Discussion

We emphasize the marked adhesion and the great mood improvement.

To finish and as conclusion of the project we say, it is clear that Tai Chi Chuan can be used in chronic diseases treatments as an intervention to treat physical and mental aspects of patient, generating this a better perception of quality of life.

Currently a Tai Chi Chuan's polyclinic was founded in the Institute, where patients with medical indication of the treating physician introduced them into the practice according their potentials.

This is an encouragement to not falter or surrender on the mission to be recognized this ancient Martial Arts and its therapeutic value for the modern Western medicine.

PHYSICAL ASSESSMENT			Normal	Patients pre Test	Post one year test	Interpretation	Statistics
CHAIR STAND TEST	STRENGTH-POWER OF LEGS	MEDIA ± SD	>12 REPS IN 30 SECONDS	10±0.3	14±0.4	Better	P=<0,01
8 FEET UP TO GO TEST	AGILITY BALANCE MOVEMENT COORDINATION	MEDIA ± SD	<10 TIME IN SECONDS	9±0.3	7,5±0.4	Better	P=<0,02
LEG EXTENSION STRENGTH TEST	LEGS STRENGTH WEIGHT IN GRAMS	MEDIA ± SD	----- WEIGHT IN GRAMS	5,0±1.0	5,8±1.2	Better	P=<0,05
CHAIR STAND & REACH TEST	FLEXIBILITY	MEDIA ± SD	<-2,5 CENTI-METERS NOT ENOUGH	-2±2.0	1±2.0	Better	P=<0,05
4 STAGE BALANCE TEST	STATIC BALANCE	MEDIA ± SD	>10 TIME IN SECONDS	>10 >10 7 9	>10 >10 >10 >10	Better	Global P=<0,03
STORK BALANCE STAND TEST	BALANCE	MEDIA ± SD	>10 TIME IN SECONDS	12,5±10	28,9±9	Better	P=<0,01

Table Nr. 1. Physical capabilities

Table Nr. 2. Questionnaire of perceptions.

QUESTIONNAIR Tai Chi Chuan improved...?	Number of positives answer	QUESTIONS Tai Chi Chuan improved ...?	Number of positives answer
<u>PHYSICAL:</u>		<u>EMOTIONAL</u>	
1-your balance in positions	10	1- do you feel positive emotional effects ?	10
2-your balance in the movements	10	2-do you feel more confident in yourself ?	10
3-do you feel more strongly ?	5	3-do you feel more potential for things ?	10
4-can you stand longer ?	10	4 -more positive with problems ?	4
5-could you stay in one foot ?	5	5- improved their quality of life?	10
6-can you now stay in one foot ?	10	6-feel less pressure with the problems?	5
7-do you feel that you can move faster?	8	7-less stress, more calm	5
8-do you feel more flexible ?	10		
9-pain decreases during practice ?	8		
10-are movements more comfortable ?	10		
11-morning stiffness decreases ?	6		
12-do you feel physical improvements ?	10		
POSITIVE RESPONSES	85,00%	POSITIVE RESPONSES	77,00%
<u>MENTAL:</u>		<u>ANIMIC:</u>	
1-improved your concentration ?	10	1-did you feel improvement in your life ?	10
2-did your daily activity improve ?	10	2-has a desire to keep coming ?	10
3-pay attention in movements now ?	10	3-feel that could change your life ?	10
4-do you feel more relaxed ?	8	4-has a desire to keep learning ?	10
5-and more energetic the next day ?	8	5-feel more connected to yourself ?	10
6-do you sleep better ?	10	6-during practice, feel as if meditating ?	10
7-if tense, try to relax like in Tai Chi ?	10	7-practice, generates optimism ?	10
8-do you feel like the mind is stilled?	10	8-Tai Chi is a positive discovery	10
		9-I feel fortunate to be able to practice	10
POSITIVE RESPONSES	95,00%	POSITIVE RESPONSES	100,00%

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