107 - PRELIMINARY SURVEY OF THE PATHOLOGICAL MARCH IN THE DISEASE OF PARKINSON AND THE AQUATIC REHABILITATION THROUGH I SWIM HIM CRAWL

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REVISION OF LITERATURE

The disease of Alzheimer of the, characterized by the German neuropathology Alois Alzheimer in 1907, it is an affection progressive and irreversible neurodegenerative of insidious emergence, that it carts loss of the memory and several cognitive disturbances. In general, the one OF THE ONE of late attack, of incidence around of 60 years of age, it happens in a sporadic way, while the one OF THE ONE of precocious attack, of incidence around of 40 years, it shows family appeal. The one OF THE ONE of late attack and the one OF THE ONE of precocious attack is a same and indistinguishable clinical and oncologist unit.

As the life expectancy becomes higher, especially in developed countries, an increase of the prevalence has been observing of the one OF THE. That affection acts about 50% of the cases of insanity in the USA and in Grã-Britain and he/she is considered that it corresponds to the fourth cause of seniors' death in these countries.

Of the point of view neuropathology, it is observed in the individuals' brain with OF THE diffuse cortical atrophy, the presence of great number of senile plates and yarns neurofibilation, granule-vacuolar degenerations and neuronal loss. It is still verified an accumulation of the protein?-amyloidal in the senile plates and of the microtubule in the yarns neurofibrilation. It is believed that the concentration of the senile plates is correlated to the insanity degree in the affected ones.

The alterations observed in the brains of the affected ones can be found also in senior healthy, however no jointly and in such intensity. The course of the disease varies between 5 and 10 years and the reduction of the life expectancy locates around of 50%.

Etiological hypotheses

The genetic factor is considered now as preponderant in the etiopatogenic of the one OF THE he enters several related factors. Besides the genetic component, they were pointed as etiological agents, the toxicity to infectious agents, to the aluminum; to you root free from oxygen, to neurotoxin amino acids and the occurrence of damages in microtubules and associated proteins. It is interesting still to point out that these agents can still act for direct damage in the genetic material, taking to a somatic mutation in the fabrics.

The genetics and the hereditariness of the disease of Alzheimer

The first signs of the disease cannot be noticed easily, what hinders that the own patient identifies them. Some of the symptoms can be: less readable calligraphy or with smaller size, he/she speaks monotonous and less articulate, slower movements of one of the members, among others. "A lot of times the changes are noticed by friends or family. It is important that they are attentive also to the change in the facial expression. Usually the patients lose the spontaneity and they reduce the piscagetion" frequency.

The treatment consists basically of the replacement of the dopamine, substance that decreases progressively with the evolution of the disease. In spite of not having cure, some changes in the life habit provide a great improvement in the patient's quality of life. The physiotherapy and the practice of exercises as swimming, walk and race, allies to the use of the medicines, are essential.

Disturbances of the Movement

That term includes several neurological diseases that you/they present in common some alteration in the movement of the body. Those disturbances are classified in two groups: the ones that present reduction and slowness of the movement and the ones that present movement excess. The first are also called of disturbances rigid-acinétication and the seconds of disturbances hipergenétication.

The Parkinson's disease is the most typical example of syndrome rigid-acinétics (although one of their more common symptoms is the tremor that is hyperkinesias). Examples of disturbances hyperkinetic are: tremors, miocloniens, chorea, dystopias and tics.

The disturbances of the movement are usually caused by lesion or bad operation of certain area of the brain known with nuclei of the base, or ganglions of the base. As sub-specialty inside of the Neurology, the study of the disturbances of the movement is winning growing importance. The ability demanded by the specialist to do the differential diagnosis among several syndromes parkinsonians and to treat patient with Parkinson's disease with the best Farmakis combination it turns more and more important the specialist neurologists' existence in that area.

Secondary Parkinsonismo

They are conditions in that a specific cause can be identified. The main causes are: - powder-encephalitic Parkinsonismo: In the beginning of the decade of 1920, an epidemic of viral encephalitis, denominated lethargic encephalitis attacked millions of people all over the world to disappear before the end of that decade. About 1/3 of the patients they died in the sharp phase. Many of the survivors developed, after months to years, parkinsonism symptoms. The powder-encephalitic parkinsonism was similar to the Parkinson's disease but it differed of this for originating less tremor and more rigidity and acinesis, besides producing involuntary movements in the head and eyes, known as" crises couloirs." At that time of Second World War, about of all the patients' half with parkinsonism had contracted the encephalitis before lethargic years. After that epidemic, new cases of powder-encephalitic parkinsonism practically disappeared in generations been born later to that time. In the days today, encephalitis produced by other viruses cans, temporariament, to cause parkinsonism.

- Parkinsonism medicaments: A reversible form of parkinsonism can be produced by the use of some medications used in psychiatry (haloperidol, chlorpromazine and other), against vomits (metoclopramid) and against vertigos (flunarizina), among others. The retreat or the reduction of the dosage takes to the improvement of the symptoms. However, the complete disappearance of the symptoms can take many months to happen.

- Parkinsonism arteriosclerosis: it is more common in patient hypertensions or in those that present other risk factors for vascular disease. It results of the occlusion of small deep cerebral vases that you/they irrigate the nuclei of the base. With the time, small multiple ischemia focuses in that area produce parkinsonism. I eat the affected vases most of the time if they don't restrict her/it that area, it is common the emergence of other neurological manifestations as muscular weakness and insanity. The tremor is only rare in that parkinsonism form and a lot of times the inferior members are attacked. Medicines antiparkinsonians are not very effective in that parkinsonism form.

- Poisonous Parkinsonismo: Some poisonous substances - as the carbon monoxide and the manganese - they can produce parkinsonism. In the beginning of the decade of 1980, a substance contained in a poison similar to the heroine was responsible for countless cases of parkinsonism in patient users of those drugs. That substance was identified like MPTP (1-methyl-4-fenil - 1,2,3,6-tetrahidropiridina). The parkinsonism produced by MPTP is irreversible and very similar to the Parkinson's disease. The discovery of MPTP turned possible the obtaining of experimental models of great usefulness for the understanding of the causes that you/they take to the Parkinson's disease.

Atypical Parkinsonismo

They are forms more parkinsonism incapacitates, because the degenerative process doesn't limit to the black substance, could attack other areas of the brain. The progression be faster and the medications antiparkinsonians are not as effective as in the Parkinson's disease.

The most common forms are:

He atrophies of multiple systems

Progressive supranuclear paralysis

Degeneration corticobasal

Insanity of bodies of Lewy

- He atrophies of Multiple Systems

As the own name indicates in that pathology several parts of the nervous system can be affected. Those areas can be committed in several combinations. Of that it results certain clinical variability among the patients. The most common symptoms include: slowness of movements, muscular rigidity, lack of motive coordination, difficulty to walk, loss of the balance, hypotension ortostática (fall of the blood pressure in the position in foot), difficulties in the control of the urine and masculine sexual dysfunction, that he/she is classified, depending on the predominant symptom, the atrophy of multiple systems be divide in: - Degeneration estriatonigral = he/she shows for parkinsonism, precocious alteration of the march and posture and laryngeal strider. The tremor is not very evident and the predominant symptoms are the rigidity and the acinesis. The certainty diagnosis can only be made by anatomy-pathological exam after the death.

- He atrophies olive-point-cerebelar = besides parkinsonism, they happen alterations of the balance, he/she marches and motive insubordination (ataxia) because of the degeneration of connections of the cerebellum. Used to have muscular rigidity and the predominant tremor can be of the type postural (tremor that happens with the arms extended to the front) and not of rest. - Syndrome of Shy-Dragger = in that form, symptoms of bankruptcy of the autonomous nervous system prevail. The main manifestations besides the healthy parkinsonism: hypotension postural (that can result in dizziness and even loss of conscience when getting up), problems of the intestinal traffic, urinary disturbances and sexual impotence.

- Bodies of Lewy

They are inclusions citoplasmátics eosinofílics with discolored outlying halo containing material to fibrillate, neurifilaments and tubule, current maybe of a structural degradation starting from an abnormal accumulation of the citoesquelectics. The bodies of Lewy constitute a histological characteristic of the neuronal degeneration of the Parkinson's disease and his/her absence allows to doubt of the diagnosis.

The expression" insanity with bodies of Lewy" was proposed recently, with the purpose of simplifying and of unifying a great number of terminologies used by different authors to refer to the same clinical picture (variant with bodies of Lewy of the disease of Alzheimer, insanity associated with bodies of cortical Lewy, senile insanity of the type bodies of Lewy, disease with bodies of diffuse Lewy and disease of Alzheimer with variations parkinsonians).

Being DCL an insanity of the type Alzheimer, some authors still don't accept to distinguish her/it of the disease of Alzheimer, preferring to consider her/it a variant of this last one. When considered separately of the disease of Alzheimer, the insanity with bodies of Lewy becomes the second insanity neurodegenerative more prevalent (Papka, Rubio and Schiffer, 1998; Tomlinson, 1970).

METHODOLOGY

The sample of the study consisted of 02 subjects, both male one, with age among, 35 and 40 years with treatment in Cemeaes (Macaé-RJ-Brazil), for 12 months. The subjects were chosen close to the project "Cemeaes", not could present any other type of compromising of the physical and mental health. In the perspective of reaching the proposed objective, a detailed questionnaire was applied to identify and to exclude of the experiment any possibility that could contaminate futures results. The subjects signed a consent declaration in which was described, in details, the condition of the experiment.

The place for the execution of the aquatic treatment was in own Cemeaes-Macaé - RJ, where, the selected individuals executed the following ones educational of the swimming:

- The crawl leg, with front breathing;
- The crawl leg, with the head out of the swimming pool, that is, without the front breathing;
- I swim him crawl, with lateral breathing, right and left side, with the use of the board;
- I swim him crawl, with lateral breathing, right and left side, without the use of the swimming pool

The schedule in that it was executed him/it swim crawl, it was understood between 07h30min hr and 08h00min hr. The garment was: it hitches up and bonnet of silicon.

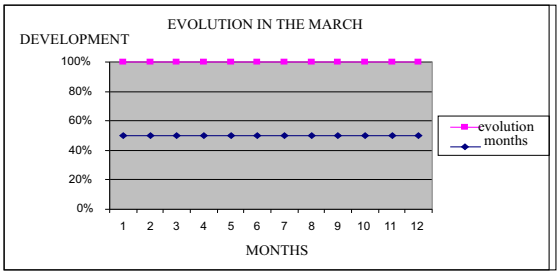
The total time of accomplishment of the exercises, and of each series of exercises it was measured. This way, it was possible to verify what happened during and after I swim him crawl. In the present experiment, the subjects executed the educational ones of the I swim crawl for thirty (30) minutes, resting, executing the breathing, stopped, with 20 repetitions of to arise and to emerge, to each series of exercises that lasted 20 seconds each series. The educational ones for I swim him crawl were executed, two (02) times a week, for 12 weeks.

In the experiment, it was neither analyzed the time nor the traveled distance, but simply if, the individuals attacked by the Parkinson's disease would have an improvement or they would worsen their movements significantly to they accomplish to the march.

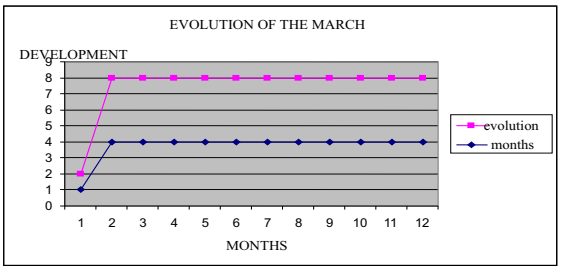
IV-RESULTS

The results described to proceed were analyzed by the total period of 12 months, being analyzed month to month the evolution of the movements of these individuals' march.

The individuals attacked by the Parkinson's disease, they were analyzed in two moments. The illustration 01 demonstrates the individuals' result, when these arrived for the treatment of the swimming, not presenting difficulties in their marches, that is, without they be with the articulations with decrease of movement arch, with the normal march. This way, it was evidenced during the 12 months that nothing changed when they arrived with the normal march, in other words, they continued with the same march pattern, without the educational ones interfered in the standard movements of their marches.



In this context, the illustration 02 expressed the second moment of the data collection, where it demonstrates a relationship among the moment in that the individuals arrived for the execution of the educational ones for I swim him crawl and the moment in that they leave the treatment. This expressed illustration the individuals beginning the educational ones with difficulties in the march, that is, with the trivalent of the articulations of knees and ankles. Results demonstrated a significant difference between the first and the second moment of answer to the effects of the Parkinson's disease. In the second period, where the individuals arrived "" frozen", that it is the sudden blockade in the walk, with difficulty or temporary immobility to move, for the movement hindered by the decrease of the arch of movement of the articulations and of standard movements extolled for the march, there was a significant improvement, doing arrive to the point of they execute the march without restrictions of movement arch.



V - CONCLUSIONS AND RECOMMENDATIONS

The swimming with the use of the I swim crawl, with emphasis for the improvement of the march in individuals attacked by the Parkinson's disease, it is an attempt of promoting an improvement in the performance and facilitation in the movements of use of these individuals' daily activities. The results of the present research didn't show any difference in the march when the individuals are already without difficulties to move around. However, in you analyze them of the movement of these individuals' march when the same ones were with march compromising, disabling his/her acting to the walk, there was a significant improvement, leading their movements to the movements similar to the of when the same ones were not "frozen", without restrictions to the march.

These results accentuate the need of studies in areas of activities that involve the individuals attacked by the Parkinson's disease and the swimming. And that this experimental model, it can be used as backdrop so that other researchers try to contemplate that clientele attacked by the Parkinson's disease, creating new studies and/or strategies that can serve as justification for the presented study, strengthening like this the research here ended and the one of futures friends, even to try to understand the reason of the march to have changed so much when the same ones if they had with difficulties to walk.

WE HAVE USED DURING THE TREATMENT OF EVIL OF PARKINSON

Some people can ignore some terms used commonly in the goods and you announce that you/they treat of the Evil of Parkinson. Like this to precede him is a list of the more used, with their respective definitions.

ACINESIA - Difficulty or inability to move (to enter and to leave a car, to dress, to turn at the bed, to eat, to take bath, to sit down and to get up of a chair, etc...). he gets confused, ace times, with the bradicinesis.

BRADICINESIA - Slowness or it lacks of movement. It is one of the symptoms of the Evil of Parkinson, a lot of times painful, same when the patient executes simple tasks. He/she gets confused, the times, with the acinesia.

CONSTIPATION OR OBSTIPAÇÃO - Constipation.

KOREA - excessive motive Activity almost was arriving to an inquietude; contraction movements and casualness incontrolations and with spasms. It is not symptom or characteristic of the Evil of Parkinson.

DISARTIA - Difficulty or bad word articulation.

DISNESIA - I Move involuntary abnormal, similar to tick nervous, provoked most of the time, for the use certain lingering medicines, especially the elodea or L-dopa.

DYSPHAGIA - Difficulty to swallow (to swallow) foods.

DYSFUNCTION POSTURAL - Unbalance or tendency to fall, is also another important characteristic of the Evil of Parkinson.

DISTONIA - A type of involuntary movement, that it is slow, associated á vigorous muscular contractions or spasms.

DOPAMINE - chemical Substance of the brain, entrusted of the communication among a nervous and other cell (neurotransmitters). The excessive and progressive death of the neurons provokes the lack or dopamine reduction, and in consequence, the Evil of Parkinson.

FESTINAÇÃO - short foots, with the feet dragging. He sorts things out own of walking of the parkinsonians, in that the patient, leaving slowly, it is going accelerating the step gradually.

"FREEZING" OR FREEZING - I Block sudden in the walk. Difficulty or temporary immobility to move.

HYPOTENSION ORTOSTÁTIC - A fast blood pressure fall caused possible fainting.

IDIOPATHY - Disease of origin unknown, causeless apparent.

MICROGRAFIA - Change of the manual writing, in that the writing is going reducing of size.

"ON - OFF" (EFFECT CALLS - it TURNS OFF) - Abrupt motive flotation, in that the patient alternating agitation periods and of blockades, with moments of well-being and absence of the symptoms parkinsonians.

PALIDOTOMIA - Surgery that consists of a lesion in the internal pale nucleus (PALE GLOBE).

SIALORRÉIA PTIALISMO - salivation Excess.

BLACK SUBSTANCE - Group of cells that forms that structure, that it produces and it guarantees the supply of the dopamine to the organism. It is spoken in the singular, but actually they are two located in the insides of the two cerebral hemispheres. She is similar to the olive pit and much pigmented, for that he has an almost black color.

THALAMOTOMY - Surgery that consists of a lesion of the ventral-lateral thalamus.

TREMOR OF ACTION - A tremor that increases when a member or body moves voluntarily.

TREMOR OF REST - involuntary Tremor of a member or body. Quite common in the parkinsonians, it is more evident in rest and he/she decreases when taking place a voluntary movement.

BIBLIOGRAPHY:

-Alzheimer's disease. Neurosci Lett 1999;262:171-4.

Mann DMA, Iwatsubo T, Nochlin D, Sumi SM, Levy-Lahad E, Bird TD. Amyloid (Ab) deposition in chromosome 1-linked Alzheimer's disease: the Volga-German families. Ann Neurol 1997;41:52-7.

-Blacker D, Wilcox MA, Laird NM, Rodes L, Horvath SM, Go RCP et al. Alpha-2 macroglobulin is genetically associated with Alzheimer's disease. Nature Genetics 1998;19:357-60.

-CNN - Nova York - EUA, 23/06/2002.

-CRYSTAL, H.A. - Dementia with Lewy Bodies. www.emedicine.com/neuro/topic91.htm - 2002.

-CRUZ, Jaunilson Francisco da. Os Efeitos da Natação como Estratégia da Melhoria da Força Muscular em Indivíduos Acometidos por Paralisia Cerebral Espástica.. FIEP BULLETIN. Foz do Iguaçú - RJ, 2005.

-CRUZ, Jaunilson Francisco da, CONTESSOTTO, F., CORREA, E. A. A Marcha Patológica na Doença de Parkinson e a Reabilitação Aquática. In: 21 Congresso Internacional de Educação Física - FIEP 2006 / III Congresso Brasileiro Científico da FIEP, 2006, FOZ DO IGUAÇU.

-DINIZ, B.S.O.; TAVARES, A. - As bases biológicas da Doença de Alzheimer. *Rev Med Minas Gerais 11*(2): 92-7, 2001.

-Folha On-line e Reuters - 2003.

-Katzman R. Alzheimer's disease. N Engl J Med 1986;314:964-73. Ying W. Deleterious network hypothesis of Alzheimer's disease. Med Hypoth 1996:46:421-8.

-Kim T-W, Pettingell WH, Jung Y-K, Kovacs DM, Tanzi RE. Alternative cleavage of Alzheimer-Associated presenilins during apoptosis by a caspase-3 family protease. Science 1997;277:373-6. Marx J. New gene tied to common form of Alzheimer's. Science 1998; 281:507-8.

-Levy-Lahad E, Wasco W, Poorkaj P, Romano DM, Oshima J, Pettingel WH et al. Candidate gene for the chromosome 1 familial Alzheimer's disease locus. Science 1995;269:973-7.

-Oliveira JRM, Galindo RM, Maia LGS, Brito-Marques PR, Otto PA, Passos-Bueno MR, et al. The short variant of the polymorphism within the promoter region of the serotonin transporter gene is a risk factor for late onset Alzheimer's disease. Mol. Psych. 1998;3:438-41.

-LUCKING, C.B.; BRICE, A. - Alpha-Synuclein and Parkinson's Disease. *Cell Mol Life Sci 57* (13-14): 1894-908, 2000.

-Papassotiropoulos A, Bagli M, Feder O, Jessen F, Maier W, Rao ML, et al. Genetic polimorphism of cathepsin D is strongly associated with the risk for developing sporadic.

-PAPKA, M.; RUBIO, A.; SCHIFFER R.B. - A Review of Lewy Body Disease, an Emerging Concept of Cortical Dementia. *J Neuropsychiatry Clin Neurosci 10:* 267-79, 1998.

-Pericak-Vance MA, Bebout JL, Gaskall PC, Yamaoka LH, Hung WY, Alberts MJ et al. Linkage studies in familial Alzheimer disease: evidence for chromosome 19 linkage. Am J Hum Genet 1991;48:697-9.

-POLYMEROPOULOS, M.H.; LAEDAN, C.; LEROY, E. et al. - Synuclein gene identified in families with Parkinson's disease. *Science 274:* 1197-9, 1997.

-Revista "Galileu", 20/01/2005.

-Santa Cruz & Baruco Comunicação Empresarial, 2004. Harman D. A hypothesis on the pathogenesis of Alzheimer's disease. Ann NY 1996;786:152-68. Kachaturian ZS. Diagnosis of Alzheimer's disease. Arch Neurol 1985;42:1097-105.

-Schellemberg G, Bird T, Wijsman E, Orr H, Anderson L, Nemens E et al. Genetic linkage evidence for a familial Alzheimer's disease locus on chromosome 14. Science 1992; 241:1507-10.

-SCHIPPER, HM. - Heme oxygenaase-1: role in brain aging and neurodegeneration. *Exp Gerontol 35*(6-7): 821-30, 2000.

-Smith MAC. Aspectos citogenéticos do envelhecimento [dissertação]. São Paulo: Unifesp/EPM; 1996.

-St.George-Hyslop PH, Tanzi RE, Polinsky RJ, Haines JL, Nee L, Watkins PC, et al. The genetic defect causing familial Alzheimer's disease maps on chromosome 21. Science 1987;235:885-90.

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PRELIMINARY SURVEY OF THE PATHOLOGICAL MARCH IN THE DISEASE OF PARKINSON AND THE AQUATIC REHABILITATION THROUGH I SWIM HIM CRAWL.

SUMMARY

To minimizes motivates loss of march in individuals with Parkinson's disease in the group is the literary abyss. Individuals with Parkinson's disease plows attacked severely in the march. Being known that the Parkinson's disease is compromising of the central nervous system, for the loss of cells of the black substance and dopamine, causing sensation of fatigue, less readable calligraphy, speaks monotonous, depression, lapses of memory, muscular pains, part paresis, and manifestations practice medicine as tremor, rigidity, iciness, bradicinesis, and symptoms no motors as: depression, insomnia, cognitive disturbances, of the speech, breathing, urinary, dizziness and that the dopamine plays important part, being neurotransmitter of the ganglions of the base influencing the operation of this circuit and facilitating the direct road and inhibiting the indirect road, we have as objective verifies the use of aquatic exercises as strategy of march improvement in individuals with Parkinson's disease. Used 02 individuals, male, with age among 35/40 years with treatment in Cemeaes (Macaé-RJ-Brazil), for 12 months.

That is a degenerative cerebral disease, characterized by progressive loss of the memory and of other cognitive functions, that you/they harm the patient in their activities of daily life and in his/her social and occupational acting.

Previous literatures elapse on individuals (Cruz, 2006) that used aquatic exercises, that you/they computed the following results: with duration exercises of + 30 minutes, making 20 breathings to each series of exercises, they happened an intense muscular fatigue, committing the natural movements, how to elevate arms or walk, and the patients didn't get to finish the exercises. With exercises of 3 series of 20 repetitions with dumbbells for the hands, there was not alteration in those patterns.

With the present study it is aimed at to study the influences of the swimming as strategy for the improvement of the march in individuals attacked by the Parkinson's disease, with age between 35 and 45 years.

Word-keys: Parkinson, swimming, march.

ÉTUDE PRÉLIMINAIRE DE LA MARCHE PATHOLOGIQUE DANS LA MALADIE DE PARKINSON ET LA RÉÉDUCATION AQUATIQUE À TRAVERS JE LE NAGE CRAWL.

RÉSUMÉ

Minimiser perte du motif de marche dans les individus avec maladie de Parkinson dans le groupe pour un abîme littéraire. Les individus avec maladie de Parkinson sont attaqués sévèrement dans la marche. Être su que la maladie de Parkinson compromet du système nerveux central, pour la perte de cellules de la substance noire et dopamine, causer sensation de fatigue, calligraphie moins lisible, parle monotone, dépression, défaillances de mémoire, douleurs musclées, partie paresis, et les manifestations sont doctor comme tremblement, rigidité, acinesis, bradicinesis, et symptômes aucuns moteurs comme: dépression, insomnie, troubles cognitifs, de la parole, respirer, urinaire, vertige et que la dopamine joue partie importante, être neurotransmetteur des ganglions de l'influencer bas l'opération de ce circuit et faciliter la route directe et inhiber la route indirecte, que nous avons comme objectif vérifie l'usage d'exercices aquatiques comme stratégie d'amélioration de la marche dans les individus avec maladie de Parkinson. Utilisé 02 individus, mâle, avec âge parmi 35/40 années avec traitement dans Cemeaes (Macaé RJ-Brazil), pour 12 mois.

C'est une maladie cérébrale dégénérative, a caractérisé par perte progressive de la mémoire et d'autres fonctions cognitives, ces you/they font du mal au malade dans leurs activités de vie journalière et dans son suppléant social et professionnel.

Les littératures antérieures s'écoulent sur les individus (Cruz, 2006) ces exercices aquatiques usagés, ces you/they ont calculé les résultats suivants: avec les exercices de la durée de + 30 minutes, faire 20 respirations à chaque série d'exercices, qu'ils sont arrivés à une fatigue musclée intense, en commettant les mouvements naturels, comment élever des armes ou marcher, et les malades n'ont pas commencé à finir les exercices. Avec exercices de 3 séries de 20 répétitions avec les haltères pour les mains, il n'y avait pas modification dans ces modèles.

Avec l'étude présente qu'il est eu l'intention à d'étudier les influences de la nage comme stratégie pour l'amélioration de la marche dans les individus attaquée par la maladie de Parkinson, avec âge entre 35 et 45 années.

Word-Keys: Parkinson, nager, marche.

LOS PRELIMINARES INSPECCIONAN DE LA MARCHA PATOLÓGICA EN LA ENFERMEDAD DE PARKINSON Y LA REHABILITACIÓN ACUÁTICA A TRAVÉS DE MÍ NÁDELO EL ARRASTRAMIENTO.

EL RESUMEN

Para minimizar pérdida del motivo de marcha en los individuos con la enfermedad de Parkinson en el grupo para un abismo literario. Se atacan individuos con la enfermedad de Parkinson severamente en la marcha. Conociéndose que la enfermedad del Parkinson está componiendo del sistema nervioso central, para la pérdida de células de la substancia negra y dopamina, que causando sensación de fatiga, la caligrafía menos leíble, habla monótono, depresión, los lapsos de memoria, los dolores musculares, paresis de la parte, y manifestaciones practican la medicina como el temblor, rigidez, acinesis, bradicinesis, y síntomas ningún motor como: la depresión, el insomnio, las perturbaciones cognoscitivas, del discurso, respirando, urinario, el vértigo y que la dopamina juega que la parte importante, siendo neurotransmitter del ganglions del influenciar bajo el funcionamiento de este circuito y facilitando el camino directo e inhibiendo el camino indirecto, que nosotros tenemos como el objetivo verifica el uso de ejercicios acuáticos como la estrategia de mejora de la marcha en los individuos con la enfermedad de Parkinson. Usado a 02 individuos, el varón, con la edad entre 35/40 años con el tratamiento en Cemeaes (Macaé-RJ-Brasil), durante 12 meses.

Las literaturas anteriores pasan en los individuos (Cruz, 2006) eso usó los ejercicios acuáticos, ese computaron los resultados lo siguiente: con los ejercicios de duración de + 30 minutos, haciendo 20 respiraciones a cada series de ejercicios, que ellos pasaron una intensa fatiga muscular, mientras comprometiendo los movimientos naturales, cómo elevar los brazos o caminar, y los pacientes no consiguieron terminar los ejercicios. Con los ejercicios de 3 series de 20 repeticiones con las pesas para las manos, no había ninguna alteración en esos modelos.

Con el estudio presente que se apunta a estudiar las influencias de la natación como la estrategia para la mejora de la marcha en los individuos atacado por la enfermedad del Parkinson, con la edad entre 35 y 45 años.

La palabra-llave: Parkinson, nadando, la marcha.

ESTUDO PRELIMINAR DA MARCHA PATOLÓGICA NA DOENÇA DE PARKINSON E A REABILITAÇÃO AQUÁTICA ATRAVÉS DO NADO CRAWL.

RESUMO

Minimizar perda motora de marcha em indivíduos com doença de Parkinson nos leva para um abismo literário. Indivíduos com doença de Parkinson são severamente atacados na marcha. Sabendo-se que a doença de Parkinson é afecção do sistema nervoso central, pela perda de células da substância negra e dopamina, ocasionando sensação de cansaço, caligrafia menos legível, fala monótona, depressão, lapsos de memória, dores musculares, paresia de dimídio, e manifestações clinicas como tremor, rigidez, acinesia, bradicinesia, e sintomas não motores como: depressão, insônia, distúrbios cognitivos, da fala, respiratórios, urinárias, sialorréia, tonturas e que a dopamina desempenha importante papel, sendo neurotransmissor dos gânglios da base influenciando o funcionamento deste circuito e facilitando a via direta e inibindo a via indireta, temos como objetivo verificar o uso de exercícios aquáticos como estratégia de melhoria de marcha em indivíduos com doença de Parkinson. Utilizados 02 indivíduos, do sexo masculino, com idade entre 35/40 anos com tratamento no Cemeaes (Macaé - RJ - Brasil), durante 12 meses.

Essa é uma doença cerebral degenerativa, caracterizada por perda progressiva da memória e de outras funções cognitivas, que prejudicam o paciente em suas atividades de vida diária e em seu desempenho social e ocupacional.

Literaturas anteriores decorrem sobre indivíduos (Cruz, 2006) que utilizaram exercícios aquáticos, que computaram os seguintes resultados: com exercícios de duração de $\pm$ 30 minutos, fazendo 20 respirações a cada série de exercícios, aconteceu uma fadiga muscular intensa, comprometendo os movimentos naturais, como elevar braços ou andar, e os pacientes não conseguiram terminar os exercícios. Com exercícios de 3 séries de 20 repetições com halteres para as mãos, não houve alteração nesses padrões.

Com o presente estudo objetiva-se estudar as influências da natação como estratégia para a melhoria da marcha em indivíduos acometidos pela doença de Parkinson, com idade entre 35 e 45 anos.

Palavras-chaves: Parkinson, natação, marcha.