108 - PRELIMINARY SURVEY OF THE PATHOLOGICAL MARCH IN THE DISEASE OF PARKINSON THROUGH AQUATIC EXERCISES.

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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 supranucleareation paralysis

Degeneration cortical basal

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 the which was described, in details, the condition of the experiment.

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

1) horizontal flexing, with a halter in each hand; shoulders á height of the surface of the water (shoulder inside of water);

2) flexing and elbow extension, with a halter in each hand; shoulders á height of the surface of the water (shoulder inside of water);

3) horizontal flexing, with a halter in each hand; shoulders á height of the surface of the water (shoulder inside of water), inflected knees and walking in the swimming pool in a distance of 6 meters;

4) flexing and elbow extension, with a halter in each hand; shoulders á height of the surface of the water (shoulder inside of water), inflected knees and walking in the swimming pool in a distance of 6 meters.

Observation: - THE schedule was understood between 07h30min hr and 08h00min hr. With the swim trunk garment and bonnet of silicon.

The individuals executed the aquatic exercises for thirty (30) minutes, all of the exercises were executed with 25 repetitions, in 04 series, for 02 times a week, resting, executing the breathing, stopped, with 20 repetitions of to arise and to emerge, to each series of exercises.

In the experiment, it was not analyzed the time nor at the traveled distance, but simply if, the individuals attacked by

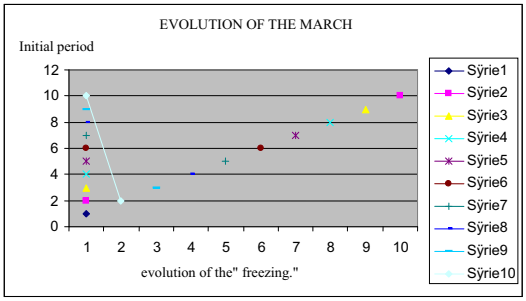
the Parkinson's disease would have an improvement or they would worsen their movements significantly to the they accomplish the march.

RESULTS

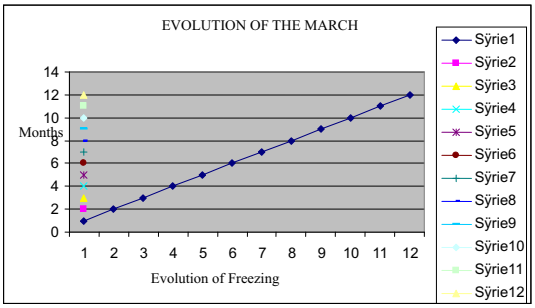
The results were analyzed by the total period of 12 months, with monthly analysis of the evolution of the movements of these individuals' march.

The individuals attacked by the Parkinson's disease, they were analyzed in two moments.

The illustration 01 demonstrates the individuals' result, to the they arrive for the treatment of aquatic exercises, not presenting difficulties in their marches, that is, with the articulations without decrease of movement arch, with normal march. This way, it was evidenced during the 12 months that there was change when they arrived with the normal march, in other words, they lost the march pattern, and the educational ones interfered in the normal movements of their marches.



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 aquatic exercises 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 freezing of the articulations of knees and ankles. Results didn't demonstrate 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 not gets better significant, doing arrive to the point of they execute not the march, having restrictions of movement arch, where they arrived to the maximum threshold of yours "freezing."



CONCLUSIONS AND RECOMMENDATION

The aquatic exercises, with emphasis to 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 study demonstrate difference in the march when the individuals have the locomotion. And, in you analyze them of the march movement when the same ones were with march compromising, disabling his/her acting to the walk, there was not gets better, driving the movements similar to the of when they were "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 aquatic exercises. And that this preliminary survey, it can mirror other researchers to contemplate the 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.

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SUMMARY

The motive loss of march in individuals with Parkinson's disease in the group for a literary abyss. Individuals with Parkinson's disease are attacked severely in the march. This study aims at to verify 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. The result doesn't demonstrate improvement of the march. Was ended that aquatic rehabilitation through the aquatic exercises, doesn't favor the march in individuals with Parkinson's disease.

Word-keys: Parkinson, aquatic exercises, march.

RÉSUMÉ

La perte du motif de marche dans individus avec maladie de Parkinson dans le groupe pour un abîme littéraire. Les individus avec maladie de Parkinson sont attaqués sévèrement dans la marche. Cette étude a l'intention à de vérifier 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, Brésil), pour 12 mois. Le résultat ne démontre pas amélioration de la marche. Été terminé que rééducation aquatique à travers les exercices aquatiques, ne favorisez pas la marche dans les individus avec maladie de Parkinson.

Word-Keys: Parkinson, exercices aquatiques, marche.

EL RESUMEN

La 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. Este estudio apunta a verificar 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. El resultado no demuestra mejora de la marcha. Se acabó que la rehabilitación acuática a través de los ejercicios acuáticos, no favorezca la marcha en los individuos con la enfermedad de Parkinson.

Los palabra-llave: Parkinson, los ejercicios acuáticos, la marcha.

RESUMO

A 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. Este estudo objetiva 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. O resultado não demonstra melhoria da marcha. Conclui-se que reabilitação aquática através dos exercícios aquáticos, não favorece a marcha em indivíduos com doença de Parkinson.

Palavras-chaves: Parkinson, exercícios aquáticos, marcha.