41 - PARKINSON'S DISEASE: EVALUATION OF SEVERITY AND QUALITY OF LIFE

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INTRODUCTION

Parkinson's disease is a neuroprogressivo disorder of the central nervous system (CNS), characterized by the degeneration of dopaminergic neurons in the substantia nigra pars compacta, generating a series of changes mainly characterized by motor disorders such as tremor at rest, bradicinesias, muscle rigidity, instabilities and a deficit in postural balance and gait (PEREIRA et al., 2009; GOULART et al., 2004; CHRISTOFOLETTI et al., 2009).

Currently, PD affects about 1-2% of the population aged over 65, while in Brazil the prevalence is 3% (PETERNELLA; MARCON, 2009). Due to the increasing aging of the world population, it is estimated that over 40 million people worldwide suffer from motor disorders secondary to PD in 2020 (MORRIS, 2000).

Due to the chronicity and the absence of cure, quality of life (QoL) becomes crucial for the maintenance of these social media (PETERNELLA; MARCON, 2009). Thus, physical therapy becomes important in the treatment of these individuals, whose goal is to slow or mitigate functional and QoL loss (SANT et al., 2008; MELLO; BOTELHO, 2010).

Besides physiotherapy, both neurosurgical resources as conservatives are also used as medicines. As yet there are drugs that can halt the progression of the disease or to avoid it, levodopa is still the most used drug in order to preserve functional independence, psychological wellbeing and autonomy of patients (PEREIRA et al., 2009; BASTO et al., 2003).

Given the importance of physiotherapy, the professional must know and use tools easily applied in order to monitor the progress of patients and the results obtained after the physiotherapy intervention (RITO, 2006). Among the scales commonly used both in research and clinical level highlights the Scale Stages of Hoehn and Yahr disability (HY) and Parkinson's Disease Questionnaire (PDQ-39). These are world-renowned, reliable, valid and may be useful to therapists during patient assessment (GOULART; PEREIRA, 2005).

The first was established in 1967 is quick and convenient, allowing the therapist to know the stages in which the patient is getting a summary of your signs and symptoms (Hoehn; Yahr, 1967; SCHENKMAN et al., 2001), the second developed in 1995, aims to evaluate the quality of life of individuals (JENKINSON et al., 1997).

From these instruments, the healthcare professional need to use them in order to perform more efficient intervention. Furthermore, the investigation of the involvement of people with PD and their quality of life are needed to raise awareness of the patient, their families, and also society in general.

Hence, the present study aimed to evaluate and characterize individuals affected by PD participating in a Therapeutic Group with the Parkinson Association of the Friends of Juiz de Fora (AMIPAR), according to the degree of injury and the same quality of life.

MATERIALS AND METHODS

Participants

After approval of this project by the Research Ethics Committee (CEP / UFJF), all volunteers were elucidated on the objectives of the research and signed an informed consent.

A survey of cross-sectional design with convenience sampling, was developed in AMIPAR of Juiz de Fora - MG. Registered patients receive medications, speech therapy assistance and regular physiotherapy, and participate in a treatment group (TG) that occurs weekly with participation of 20 patients.

Patients who wished to participate voluntarily in the study, and excluded those not available to take part were included in the sample.

Instrumentation

Scale Stages of Hoehn and Yahr Disability Modified (HYM) (SCHENKMAN et al., 2001).

In a modified form, comprises seven stages, with scores ranging from 0 to 5 (SCHENKMAN et al., 2001). Individuals classified in stages 1-3 have mild to moderate disability, while those in stages 4 and 5 show severe disability (GOULART; PEREIRA, 2005; LANA et al., 2007).

Parkinson's Disease Questionnaire (PDQ-39)(CAROD-ARTAL; MARTINEZ-MARTIN; VARGAS, 2007).

Composed of 39 items divided into 8 categories: mobility (10 items); activities of daily living (ADL) (6 items); emotional well-being (6 items); stigma (4 items); social support (3 items); cognition (4 items); communication (3 items) and bodily discomfort (3 items). To calculate the total score of each individual and the score of each dimension, apply the following formula: $100 \times (\Sigma / 4 \times 39)$. The score ranges from 0 (no problem) to 100 (highest level of problem), whereas a low score indicates a perception of better health (LANA et al., 2007).

This scale has been formally validated for English (US), English (UK), German, and Spanish, with translations into many languages, including Portuguese (MARINUS et al., 2002).

Procedures

Initially, the subjects were classified according to HYM. Then was applied to the PDQ-39 in the form of an interview in which the questions were always read in the same order, and asked participants to respond using only one of the possible answers in the questionnaire. All recordings were made on individual leaves and each participant received a number as a form of confidentiality of information obtained.

Besides the application of the scale and the questionnaire, the participant was asked to relate how long ago was diagnosed with PD.

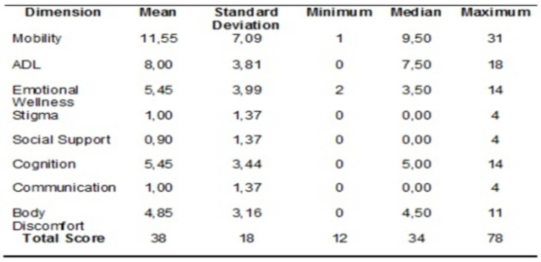
A descriptive analysis of the data (mean, standard deviation, median, minimum and maximum) was performed, and from checking the distribution of the sample, other statistical tests described below were selected in order to classify respondents according to a questionnaire and to assess possible relationships between variables: stage of PD and QoL. For this, we used the SPSS statistical software for Windows (version 19.0).

RESULTS

The sample consisted of 20 patients of both sexes, with a mean age of 71.75 ± 3.04 years ranging between 67 and 78 years, with an average time of diagnosis for 5.55 ± 2.96 years with range 1-12 years, mean score for the HYM was 2.05 ± 0.69, suggesting that the patients had mild to moderate impairment, characterizing bilateral disease without balance deficits.

Table 1 shows the descriptive analysis of the results of the PDQ-39 in each dimension.

Table 1 Descriptive statistics of the values (mean, standard deviation, minimum, median and maximum) of the total score and the score obtained in each dimension referring to the PDQ-39.



Dimension	Mean	Standard Deviation	Minimum	Median	Maximum
Mobility	11,55	7,09	1	9,50	31
ADL	8,00	3,81	0	7,50	18
Emotional Wellness	5,45	3,99	2	3,50	14
Stigma	1,00	1,37	0	0,00	4
Social Support	0,90	1,37	0	0,00	4
Cognition	5,45	3,44	0	5,00	14
Communication	1,00	1,37	0	0,00	4
Body Discomfort	4,85	3,16	0	4,50	11
Total Score	38	18	12	34	78

PDQ-39 = Parkinson's Disease Questionnaire - 39; ADL = Activity of Daily Living
Source - The authors (2014)

The highest rates were in the dimensions mobility (11.55 ± 7.09), ADL (8.00 ± 3.81) and Emotional Well Being (5.45 ± 3.99) and Cognition (5.45 ± 3.44), indicating that these dimensions are the most negatively influence the quality of life of participants.

Held the Shapiro-Wilk statistical test, with significance level of 95%, confirmed that the sample follows a normal distribution, indicating the use of parametric tests.

The Pearson correlation test ($p < 0.01$) showed a significant positive correlation ($r = 0.740$) between the variables stage of disease (score in HYM) and the score of the PDQ-39, indicating that the higher the stage of disease, worse health status perceived by the patient.

These results indicate that there is a greater tendency as the time from diagnosis, the worse the perceived by the patient and also his motor functions affected more health.

DISCUSSION

Currently, the life expectancy for men is 69.1 years while that of women is 76.7 years. And the projections for 2020 reached a level of 72.5 and 79.8 years for men and women, respectively (IBGE, 2000). To the extent that older adults are living longer have higher chronic conditions, such as, for example, in PD, whose signs and symptoms, coupled with a sedentary lifestyle and social isolation, significantly interfere with the perception of QoL (LANA et al., 2007).

The participants in this study had low total score on the PDQ-39, which could indicate us a good QoL. We emphasize that this sample was characterized by individuals on mild to moderate stage of the disease (1-3 of HYM), which may have contributed to this result, and individuals in these stages, according Cutson et al., (1995) still can provide full functionality and independence.

The dimensions most affected by PD, a higher score on the dimensions of "Mobility", "ADL", "Emotional Wellness" and "Cognition" was observed.

Similar results were found by (JENKINSON et al., 1997; LANA et al, 2007; JENKINSON et al., 2006; JENKINSON et al., 1995; PETO; JENKINSON; FITZPATRICK, 2001; SŁAWEK; DEREJKO; LASS, 2005) dimensions "mobility" and "ADL". This can be expected because the physical and motor conditions are the most affected in PD. Already in dimension "Emotional Wellness", it is possible that this result reflects the impact that the diagnosis of the disease generates the individual, taking it almost exclusively perceived negative aspects, such as rejection, sadness, depression and disappointment at know incurable disease prognosis (PETERNELLA; MARCON, 2009). According Muslimovic et al., (2005), are common newly diagnosed with PD presenting cognitive deficits in executive function and memory, corroborating the results found in the dimension "Cognition" individuals.

However, with the total score of the PDQ-39 was not found in the available literature a cutoff indicating which values represent good or poor QoL. Jenkinson et al., (1997) points out the statistical analysis and interpretation of data as a problem, due to its complexity.

During application of the PDQ-39, some limitations were observed, such as: difficulty answering a question that has more of an idea, which is the case of question 33 (Had disturbing dreams or hallucinations ?), the presence of the double negative utterance of two of the three items of the scale "Social Support" and questionable difference between the response alternatives "sometimes" and "occasionally", and this problem is present both in the Portuguese version and in the version of England, Sweden and the United States. In addition, aspects that are relevant for the PDQ-39, are not included as medication, nutrition, dyskinesias, sexual problems, problems with sleep and mental (CAROD-ARTAL; MARTINEZ-MARTIN; VARGAS, 2007). However, according to Carod-Artal et al., (2007), the Brazilian version of the PDQ-39 is reliable and valid for the assessment of patients with PD in Brazil.

Physiotherapy logo in the early stages of PD may preserve and improve motor function in these patients. This statement can be supported by Morris (2006), which highlights the continuity of exercises to maintain effectiveness, and adapted according to the needs of the patient.

Besides classifying PD in stages, Cutson et al., (1995) suggested that the adoption of exercises in the initial phase may be more successful than in the late stages and could be difficult for the patient to learn the exercises correctly and possible deformations are already installed.

Goulart et al., (2005) indicated in their study that muscle strengthening and aerobic conditioning were effective in improving functional performance and QoL of subjects with mild to moderately affected PD.

This study found that there was significant relationship between stage of PD and the commitment of motor skills. Thus, the adoption of therapeutic action associated with regular physical activity, these patients may allow functionality for maintaining the ADL and, consequently, improves their QoL.

CONCLUSION

The results of this study should be viewed with caution due to the small number of patients interviewed and also because they have been selected only participants who fit the early stages of PD.

Furthermore, studies with patients suffering from PD in its various stages and with larger samples are needed for this evolution in knowledge about the benefits of physiotherapy treatment is elucidated.

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PARKINSON'S DISEASE: EVALUATION OF SEVERITY AND QUALITY OF LIFE

ABSTRACT

Introduction: Parkinson's disease (PD) is a neurodegenerative disorder of the central nervous system characterized by resting tremor, muscle rigidity, bradykinesia and postural instability. Objective: The aim of this paper is to assess and characterize PD sufferers according to the stage of the disease and quality of life. Materials and methods: The patients were approached in a Therapeutic Group which happened in a specialized institution. The sample was made of 20 patients, of both genders, with an average age of 71,75±3,04 years old and an average time of the diagnosis of the disease of 5,55±2,96 years old. To assess the stage of the disease it was used Hoehn e Yahr Staging Scale of Incapacity (HY), and to assess the patients' quality of life Parkinson's Disease Questionnaire (PDQ-39) was conducted. Results: The analysis of HY revealed an average score of 3,0, characterizing a mild bilateral impairment. In PDQ-39 the total average score was 38,20 since the Mobility, ADL, Emotional Well-being and Cognition were the most stricken by PD. Conclusion: It was verified that the researched patients did not fill the most advanced stages of the disease and present the quality of life and mobility impaired by PD.

KEYWORDS: Parkinson's disease; Quality of Life; Physiotherapy.

MALADIE DE PARKINSON: ÉVALUATION DE LA GRAVITÉ ET DE LA QUALITÉ DE VIE

RÉSUMÉ

Introduction: la maladie de Parkinson (MP) est une maladie neurodégénérative du système nerveux central, généralement caractérisé par le tremblement au repos, une rigidité musculaire, une bradykinésie et une instabilité posturale. Objectif: L'objectif de cette étude était d'évaluer et de caractériser le PD selon le stade de la maladie et de la qualité de vie. Matériel et méthodes: Les patients ont été approchés dans un groupe thérapeutique menée dans une institution spécialisée. L'échantillon était composé de 20 patients des deux sexes, avec un âge moyen de 71,75 ± 3,04 années et le temps écoulé depuis le diagnostic signifie de 5,55 ± 2,96 années de la maladie. Pour évaluer le stade de la maladie, nous avons utilisé les étapes d'échelle de Hoehn et Yahr invalidité modifiés (Hym); et d'évaluer la qualité de vie des patients, nous avons appliqué Questionnaire maladie de Parkinson (PDQ-39). Résultats: L'analyse de HYM révélé un score moyen de 3,0, avec une atteinte bilatérale doux. Dans le PDQ-39, le score total moyen était de 38.20, et la mobilité, l'ADL, Bien-être émotionnel et dimensions de la cognition ont été les plus touchés par PD. Conclusion: Il a été constaté que les patients interrogés ne correspondaient pas à des stades plus avancés de la maladie et a montré la qualité de vie commis par le DP.

MOTS-CLÉS: maladie de Parkinson; Qualité de vie; Physiothérapie.

ENFERMEDAD DE PARKINSON: LA EVALUACIÓN DE LA GRAVEDAD Y LA CALIDAD DE VIDA

RESUMEN

Introducción: la enfermedad de Parkinson (PD) es un trastorno neurodegenerativo del sistema nervioso central, por lo general se caracteriza por temblor en reposo, rigidez muscular, bradicinesia e inestabilidad postural. Objetivo: El objetivo de este estudio fue evaluar y caracterizar la PD de acuerdo con la etapa de la enfermedad y la calidad de vida. Materiales y métodos: Los pacientes fueron abordados en un grupo terapéutico realizado en una institución especializada. La muestra estuvo constituida por 20 pacientes de ambos sexos, con una edad media de 71,75 ± 3,04 años y el tiempo medio desde el diagnóstico de 5,55 ± 2,96 años de la enfermedad. Para evaluar la fase de la enfermedad, se utilizaron las Etapas Escala de Incapacidad de Hoehn y Yahr Modificados (HYM); y para evaluar la calidad de vida de los pacientes, se aplicó el Cuestionario de la Enfermedad de Parkinson (PDQ-39). Resultados: El análisis de HYM revelaron una puntuación media de 3,0, con una afectación bilateral leve. En el PDQ-39, la puntuación total media fue de 38,20, y la movilidad, la AVD, el bienestar emocional y dimensiones Cognición fueron los más afectados por la EP. Conclusión: Se encontró que los pacientes encuestados no encajaban en las etapas más avanzadas de la enfermedad y mostró la calidad de vida cometidos por la DP.

PALABRAS CLAVE: enfermedad de Parkinson; Calidad de Vida; Fisioterapia.

DOENÇA DE PARKINSON: AVALIAÇÃO DA SEVERIDADE E QUALIDADE DE VIDA

RESUMO

Introdução: A doença de Parkinson (DP) é um distúrbio neurodegenerativo do sistema nervoso central, geralmente caracterizada por tremores de repouso, rigidez muscular, bradicinesia, e instabilidade postural. Objetivo: O objetivo deste estudo foi avaliar e caracterizar portadores de DP de acordo com o estágio da doença e qualidade de vida. Materiais e métodos: Os pacientes foram abordados em um Grupo Terapêutico realizado em uma instituição especializada. A amostra foi composta por 20 pacientes, de ambos os sexos, com média de idade de 71,75±3,04 anos e tempo médio de diagnóstico da doença de 5,55±2,96 anos. Para avaliar o estágio da doença, utilizou-se a Escala de Estágios de Incapacidade de Hoehn e Yahr Modificada (HYM); e para avaliar a qualidade de vida dos pacientes, foi aplicado o Questionário de Doença de Parkinson (PDQ-39). Resultados: A análise de HYM revelou um escore médio de 3,0, caracterizando um comprometimento bilateral leve. No PDQ-39, a média do escore total foi de 38,20, sendo que as dimensões Mobilidade, AVD, Bem Estar Emocional e Cognição foram as mais acometidas pela DP. Conclusão: Verificou-se que os pacientes pesquisados não se enquadraram nos estágios mais avançados da doença e apresentaram qualidade de vida comprometida pela DP.

PALAVRAS – CHAVE: Mal de Parkinson; Qualidade de Vida; Fisioterapia.