

Demographic and Clinical Manifestations of the Patients with Parkinson's Disease in Cienfuegos City

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ABSTRACT

Parkinson's disease (PD) described for the first time in 1817 by James Parkinson, is kept as the second degenerative disorder of the central nervous system. The etiology and the pathogenic mechanisms of the PD are, and possibly will continue to be it during many years, strangers. This paper is the first of its type in our environment where we plan to determine the demographic and clinical manifestations of the patients with PD looked after in our center. We studied 118 patients with diagnosis of idiopathic PD attended on specialized consultation, since June 2010 to the same month of 2011, to those which it was carried to them out survey with demographic, clinical data studies included UPDRS, Hoehn and Yahr scales. Results: the greatest number of patients there contributed it Cienfuegos (49%), there was greater frequency of the male sex on the feminine (71:47), the mean age of beginning was of 62 ± 9.9 , and the mean evolution of 68 months, the greatest number of the UPDRS motor and the Hoehn and Yahr scale showed it the age group from 56 to 64 years. There existed predominance in the rural areas (81:37) and well water (71:47), in addition to of the white race (101:17), 18.8% of patients had family history of PD.

Introduction

Parkinson's disease (PD), described for the first time in 1817 by James Parkinson in its monograph of 66 pages An Essay on the shaking palsy, where he points it out as a condition consisting of "involuntary shaking movements, with reduction of the muscular potency in the passive and active mobility. PD remains as the second degenerative disorder of the central nervous system [1,2]. The etiology and the pathogenic mechanisms of PD are, and possibly will continue to be it during many years, strangers [3]. Has been suggested that the cause of the PD would be multifactorial and would intervene genetic factors, environmental and aging [4,5]. Within its etiology or risk factors deserves special interest the age, then this is directly proportional to degenerative processes, the mean age at beginning is 60 years old, and the incidence increases significantly with the age [3,6]; the forms of early onset of the disease are usually inherited, ,ther investigators believe that the disease is result of a

combination of genetic susceptibility and exposure to one or more environmental factors that trigger the disease [7,8].

PD affects around 50 percent more to men than women, but the reasons of this discrepancy are not clear [9-11]. Although appears in people throughout the world, a number of studies has found a greater incidence in the developed countries, possibly due to the largest exposure to pesticides or toxins in those countries. Other studies have found a risk increased in people who live in rural areas and in those that work in certain professions, although the studies to date are not conclusive and are not clear the reasons of the apparent risks [12-18]. The joint analysis of 5 European Communities did not identify any substantial difference in the prevalence of the PD in the European countries. The general prevalence was 1.6 per 100 populations, and a substantial proportion of the patients with PD clinical specific never had sought medical care. The variable incidence rates in different cultures at least are partly related to the

lack of uniform criteria for diagnosis. With the present article we intended to characterize patients with PD in our province.

Methods

A descriptive study was conducted, to the patients with PD who went to the consultation of this disease of the University Hospital Dr. Gustavo Aldereguía Lima in Cienfuegos city, since the month of June 2010 until the same month of the following year. For the same include all the patients with diagnosis of Idiopathic Parkinson disease [4], in total 118 patients who fulfilled the following criteria: Patients with diagnosis of PD, excluding: Atypical or secondary Parkinsonism. In order to fulfill the research purpose a list or survey was created for the collection of the data, of easy and fast application that included: demographic data (age, onset age, sex, race, origin, schooling), scale scoring: UPDRS, Hoehn and Yahr scales, clinical manifestations at the beginning and in evolutionary stages of the disease. The sample was analyzing according age groups.

Table 1: Clinics characteristics according to age groups.

	Total n=118	≤ 45	46 -55	56 - 64	≥ 65	p
Female: Male	47:71	2:1	1:05	6:15	38:50	
Onset mean age	64,2 ± 9,9	39,0 ± 1,1	47,8 ± 2,4	55,23 ± 5,3	68,4 ± 7,3	<0,001
Evolution Time a	68,0 ± 5,1	50,0 ± 1,1	52,4 ± 28,8	46,9 ± 49,4	74,9 ± 52,2	0,08
UPDRSm	19,1 ± 10,7	14,2 ± 7,8	17,3 ± 8,7	19,6 ± 10,5	19,2 ± 11,3	0,85
Hoehn and Yahr Scale	3,0 ± 1,4	2,0 ± 1,0	2,0 ± 1,0	3,0 ± 0,5	2,0 ± 0,7	0,9

a: Duration in months

Table 2: Demographic characteristics according to age groups.

	Total n=118	≤ 45	46 - 55	56 - 64	≥ 65
Schooling	Primary	Primary	Primary	Secondary	Primary
Origin (Rural:Urban)	81:37	3:1	3:3	17:04	58:29
Race (white: Black)	101:17	4:0	5:1	18:3	74:13
Origin of the Water(Well:Water Supply System)	71:47	3:1	4:2	16:5	48:39
Family History of PD	22 (18,8%)	1	2	6	13

PD: Parkinson’s disease

It becomes evident in the study sample that 18.8% of the patients had preceding family history of PD. In Tables 2 and 3 we see the onset form predominance in the right upper limb, although a sizable number of patients made them symmetrically. The greatest percentage of the patients had both at the beginning

Table 3: Beginning place according to age groups.

	Total n=118	≤ 45 (%)	46 a 55 (%)	56 a 64 (%)	≥ 65 (%)
Right arm	56,3	0	4,2	14,1	38,0
Left arm	40,6	0	2,9	4,3	33,3
Right leg	15,9	0	1,4	5,8	8,7
Left leg.	10,4	1,5	0,	1,5	7,5
Symmetric	16,2	0	0	4,4	11,8

Data taken from conducted survey

Results

As a result of the present work we have to with regard to the variables related to the beginning of the disease (Table 1); the onset age was superior in the group of patient over 65 years old (68.4 ± 7.3, p<0,0001), superior even to the mean of the taken sample (64,2±9,9), exists a clear predominance of the male sex (71:47), being the general evolution time of 68 months without a significant variation between groups. The UPDRS scale showed a mean of 19,1±10,7 without significance between groups (p=0,08) being the majority between a second and third stage of the Hoehn and Yahr scale. In almost all the patients the school level did not go from primary (Table 2), with clear predominance of people who live in rural areas (81:37), although the majority of the patients belong to the provincial head. An unequal distribution appears with regard to the race with white predominance (101:17), in addition to of the patients who take well water on those which do it of the water supply system with a relation of 71:47.

and in their evolution a predominance of tremor form, basically the young people. The majority of the patients had an onset form bit a beginning as in the current state of the disease of the tremor form on the rigid-akinetic without significant difference among the studied age groups (Table 4).

Table 4: Forms of presentation according to age groups.

		Total n=118	≤ 45 (%)	46 - 55 (%)	56 - 64 (%)	≥ 65 (%)	p (%)
Onset	Tremor	69,6	100	40	69,2	70,0	0,9
	Rigid-Akinetic	30,4	0	60	30,8	30,0	0,6
Current stage	Temblor	56,5	100	100	50	55,6	0,6
	Rigid-Akinetic	43,5	0	0	50	44,4	

Data taken from conducted survey

Discussion

In our Province of Cienfuegos, small Southerner locality of Cuba with a population of no more than 450 000 inhabitants, have observed a striking increase of the incidence of patients with PD in the consultation specialized for this disease, finding as characteristic that is significant the predominance of the male sex and although some authors have reported this predominance [19], in our sample the relation is almost of 2:1, the onset mean was in the sixth decade, same result that in others latitudes [7,20,21]. A striking datum is that, despite the fact that the average of the time of evolution was only of 68 months, the values of the motor UPDRS and of the Stage of Hoehn and Yahr was significant with an average of 19.13 and 3 points respectively. The demographic factors related to these patients were shown among the average ranges proposed by the literature, as the schooling, a predominance in the rural areas, specifically those which have as principal water supply that of well, rich in electrolytes.

Having in addition: the race (predominance of white race) and family history of PD with 18%, contrasts with other authors who show lower values, except in certain localities [22-24]. The beginning predominates widely by the right arm what could be with regard to the predominance of the diestrums in the sample perhaps by the increase of the motor activity of that limb, with an anatomic and functional representation, although 16% had a symmetrical beginning. Carrying out the analysis with regard to the onset form prevails the tremor form although the percentages are being equalized to the rigid-akinetic form as there establishes it the own natural history of disease without significant significance between groups.

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