



Non-motor signs in patients with Parkinson's disease at the University Hospital of Point “G”, Mali



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ABSTRACT

Introduction: Despite significant progress in the field of scientific research on Parkinson's disease (PD), the prevalence and pathophysiology of its non-motor signs remains less understood than the classic motor signs of bradykinesia, rigidity, tremor and postural instability. Data covering this topic are rare in Africa, and almost non-existent in sub-Saharan Africa. Thus, this study aims to highlight the frequency of certain non-motor signs in PD patients followed in the Department of Neurology of the University Hospital Point “G”, Bamako, Mali.

Methodology: This is a retrospective and descriptive study from January 2012 to November 2013. We identified records of patients with dopamine-responsive idiopathic Parkinson's disease, and quantified associated non-motor symptoms. Data were analyzed with Epi-Info 2000 version 3.5.5.

Result: During this period we reviewed 60 patient charts of which 68.3% were men. The average age of patients was 66.51 ranging from 25 to 94 years.

Non-motor symptoms were present in 90% of cases, including sensitive disorders in 76.7%, dysautonomia in 73.3%, and psycho-behavioral disorders, including sleep disorders, in 81.7%.

Conclusion: At the end of this study, we observed an important place for non-motor signs in the clinical manifestation of PD patients in general.

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1. Introduction

Long time ignored, non-motors signs in Parkinson's disease are the subject of much scientific research. They are often underappreciated, polymorphic in their clinical manifestations. They can include dysautonomia, psycho-behavioral disturbances, and pain. They can occur at any stage of the disease, and are the source of fluctuation and an important inconvenience in PD subjects. The therapeutic strategy is not well codified [11], it is multidisciplinary.

In Europe, most of the studies on non-motor signs are performed on samples of hospitalized patients [2]. In Africa, data on non motor signs in PD are rare and almost non-existent in sub-Saharan Africa. Thus, the aim of this study is to highlight the frequency of certain non-motor

signs in PD patients in the Department of Neurology at the University Hospital of Point “G”.

2. Methods

We conducted a retrospective descriptive study from January 2012 to November 2013. Records of in- and outpatients with dopa sensitive Parkinson's disease were used. Patients with verticality sight disorders, a pyramidal syndrome, on neuroleptic for more than six months, an early frequent fall, a cerebellar syndrome, a frontal syndrome, an early urinary incontinence, and an early dementia were not enrolled in our study.

Non-motor symptoms were classified as psycho-behavioral including sleep, thinking and cognitive disorders; autonomic including gastrointestinal disturbances, orthostatic hypotension, vesico-sphincter dysfunction and sensory including numbness, tingling, joint or muscle or neurological pain.

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Table 1
Characteristics of psycho-behavioral troubles.

Psycho-behavioral troubles	n	%
Apathy	30	50
Depression	29	48.3
Nightmare	25	41.7
Insomnia	20	33.3
Hallucination	6	10
Hypersomnia	2	3.3

Table 2
Characteristic of dysautonomic troubles.

Dysautonomic troubles	n	%
Hypersalivation	24	40
Deglutition trouble	17	28.4
Constipation	12	20
Orthostatic hypotension	7	11.7
Pollakiuria	7	11.7
Vomiting	7	11.7
Urinary incontinence	6	10
Urinary urgency	3	5
Diarrhea	3	5
Sexual Troubles	3	5

The Unified Parkinson Disease Rating Scale (UPDRS) was used in most of the patients. In the others, there was only a list of various non-motor symptoms appointed. Data analysis was performed with Epi info 2000 software version 3.5.3.

3. Results

We identified 60 patients of which 68.3% men and 31.7% women. The average age of patients was 66.51, ranging from 25 to 94 years. The reported medical histories were high blood pressure in 23.3% of cases, familial tremor in 11.7%, head trauma in 5%, and diabetes 1.7%. The tremor predominant form was the most frequent form of PD with 56.7%. Psycho-behavioral disorders were reported in 81.7% of cases, sleep disorders in 40% of cases and depression in 48.3% of cases (Table 1)

Dysautonomic disorders were reported in 73.3% of cases including gastrointestinal disorders that accounted for 38.3% of cases, and vesico-sphincter disorders for 23.3% of cases (Table 2).

Sensitive disorders were reported in 76.7% of cases (Table 3).

Sleep disorders are dominated by nightmares reported in 41.7% of cases. Gastrointestinal disorders are dominated by hypersalivation reported in 40% of cases.

4. Discussion

Despite the significant progress made in the field of scientific research on Parkinson's disease, non-motor signs remain far uncoded, ambiguous in their pathophysiology and their care. The limitation of our study resided in the fact that all data were not available. In this study, psycho-behavioral disorders were present most of the time with the main event being the disorder of motivation and depression, present half the time. This observation corroborates seen in the literature [6, 10]. It is reported that a minor depression is common and can occur at any stage of the disease while major depression assessed with adapted scales represents 10% [6, 10]. Loukili et al. [9] reported an almost constant depression in a study of 30 patients this difference can be explained by differences in sample sizes or the depression scale

Table 3
Characteristics of sensitive disorders.

Sensitive disorders	n	%	
Sensory signs	Occasional	14	23.3
	Frequent	13	21.7
	Permanent	16	26.7
Atrocious pain	3	5	

tools used. As previously reported [1, 5], sleep disorders were present half of the time with nightmares reported every other case.

The prevalence of autonomic disorders varies across studies, up to 73% for bladder and sphincter disorders [9] and 23 to 70% for hypersalivation [8, 9]. However, in our study, these symptoms were unfrequent and inconstant, respectively. For instance, our lower prevalence of vesico-sphincter disorders may result from the cultural context in Mali. Patients, as long as they can tolerate, don't report them even to their family members except for surgical causes and complication such as bed sore or decubitus ulcer.

Sensitive disorders were usually reported in our study. Here too, the prevalence found in the different studies is variable, reaching 70%, justifying a chronic use of pain killer in some studies [1, 3, 7].

We reported our data to draw the attention of clinicians that non motor symptoms exist in PD patients. They inaugurate the disease and dominate the clinical picture as the disease advances. Whereas some (depression, constipation, pain, genitourinary problems and sleep disorders) are treatable to improve the patients' quality of life, others are refractory and may require novel and more expensive non dopaminergic drugs [4].

5. Conclusion

Our study highlights the importance of non-motor signs in PD patients. A particular care should be taken in addition to the classical manifestations for a better quality of life of PD patients

Conflict of interest

The authors declare that there are no conflicts of interest.

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