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FEATURES OF CLINICAL MANIFESTATIONS OF RESTLESS LEGS SYNDROME IN PARKINSON'S DISEASE

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ABSTRACT

The article presents the results of the analysis of clinical manifestations of restless legs syndrome in patients with Parkinson's disease based on the assessment scale of the International Restless Legs Group, sleep scale, Epworth Sleepiness Scale, questionnaire for patients with Parkinson's disease and mental status assessment scale. It has been established that restless legs syndrome is a common phenomenon in patients with Parkinson's disease, significantly worsening the quality of sleep and life of patients and accompanied by pain in the lower extremities, fatigue and dyspnea during sleep.

KEYWORDS. *Parkinson's Disease, Restless Legs Syndrome, IRLS, PDSS, PDQ-39, MMSE, ESS*

INTRODUCTION

Restless legs syndrome (RLS) is a sensorimotor disorder characterized by unpleasant sensations in the lower extremities that occur at rest, usually in the evening and at night, forcing the patient to make movements that alleviate the symptoms [1,2]. According to a number of authors, the incidence of restless legs syndrome is 2-15% [3,4].

In 2003, following a meeting of the National Institutes of Health, the International Restless Legs Syndrome Working Group developed diagnostic criteria for the disorder, which were updated in 2014 by Richard P Allen et al. [6] These criteria made it possible to differentiate the clinical manifestations of RLS from similar symptoms in other diseases. A thorough analysis of world literature has revealed a number of reasons that contribute to the development of the syndrome we are studying, among which we should highlight systemic autoimmune diseases, hyperhomocysteinemia, peripheral neuropathies, diabetes mellitus, pregnancy, and iron deficiency. [3,11].

In recent years, there have been increasing reports of the development of restless legs syndrome in Parkinson's disease [1,13,14], accounting for 0.5-19.5% [7], predominantly in women. RLS is represented by a sensory and motor component. The sensory component manifests itself in the form of itching, burning, a feeling of distension or compression. The motor component of RLS is predetermined and triggered by the changes that form the sensory component as a result of pathological changes in the afferent link, but are sometimes involuntary. According to Likhachev et al. (2016), RLS in Parkinsonism is based on disturbances in the somatosensory system, consisting of changes in the complex interaction between its peripheral, spinal and cerebral links [5]. Despite multifaceted studies on the etiopathogenesis, clinical course, early diagnosis and treatment of restless legs syndrome in patients with Parkinsonism, this problem has not lost its relevance due to numerous complications (sleep disorders, anxiety-depressive disorders, limitation of social and everyday activity), significantly reducing the quality of life.

PURPOSE

To study the nature of clinical manifestations of restless legs syndrome in patients with Parkinson's disease.

MATERIALS AND METHODS

The study was conducted on the basis of the Multidisciplinary Clinic of Samarkand State Medical University in the period 2024-2025. We examined 80 patients with Parkinson's disease (PD) aged 50-70 years (mean age 65.03±2.71 years), including 32 (40%) males and 48 (60%) females. All patients signed an informed consent to participate in the study and to process personal data obtained during the study. During the examination, 58.8% (n=47) of patients who made up the main group were found to have symptoms of RLS. The comparison group consisted of 33 (41.2%) patients with Parkinson's disease without signs of RLS. To identify the syndrome we studied, we used the International Restless Legs Syndrome Study Group (IRLS) assessment scale [12], which includes 10 criteria, the PDSS sleep scale [8], and the Epworth Sleepiness Scale (ESS) [10], Parkinson's Disease Questionnaire (PDQ-39) [9] and cognitive impairment scales (MMSE) [15]. The obtained results were statistically processed using Excel 2016 and

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STATISTICA 12.0 programs. Mann-Whitn (U) and Student (t) criteria were applied, the results were considered reliable at a value of $p<0.05$.

RESULTS

When studying the severity of the clinical manifestations of restless legs syndrome using the IRLS scale, 12 (25.5%) patients were found to have a light degree of severity, 21 (44.7%) had a average degree and 14 (29.8%) patients had a severe degree (Fig.1). The mean value of the scale was 13.91±7.24 s.

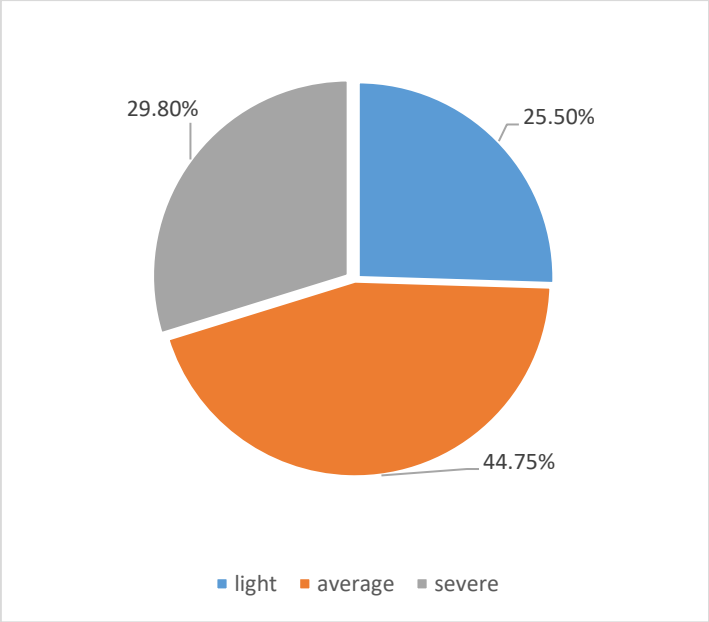


Fig 1. Results of analyzing the severity of clinical manifestations of RLS according to the IRLS scale

Comparative analysis of clinical manifestations is presented in Table 1. When sleep quality and sleep disturbance were analyzed in patients with and without SBS, significant differences were found in PDSS (29.68 ± 13.21 and 19.94 ± 10.16 respectively, $p < 0.05$) and PDQ-39 (28.31 ± 10.92 and 22.34 ± 15.16 respectively, $p < 0.001$) scales. By scrutinizing the results of the Parkinson's disease questionnaire, it was found that the feeling of bodily discomfort, insomnia and daytime sleepiness were more severe in patients in the main group. On the ESS scale, the differences between the compared groups were insignificant (9.71±4.29 and 8.61±6.15, $p >0.05$). The same was observed in the study of cognitive impairment, in the patients of the main group the sum of scores on the MMSE scale amounted to 26,45±5,8, in the comparison group 26,21±5,15.($p >0,05$).

Table 1
COMPARATIVE ANALYSIS OF CLINICAL MANIFESTATIONS BASED ON EVALUATION SCALES

Scale	Main group (n=47)	Comparison group (n=33)	p
PDSS	29,68±13,21	19,94±10,16	<0,05
PDQ-39	28,31 ± 10,92	22,34 ± 15,16	<0,001
ESS	9,71±4,29	8,61±6,15	>0,05
MMSE	26,45±5,8	26,21±5,15	>0,05

The results of our study showed that restless legs syndrome is a frequent phenomenon in patients with Parkinson's disease, significantly impairing the quality of sleep and life of patients and accompanied by lower extremity pain, fatigue and dyspnea during sleep. The symptoms that we identified correlated with the severity of the course of VLS, respectively, the clinical manifestations were more severe in the patients of the main group.

CONCLUSION

Thus, the obtained results allow us to develop effective tactics for the management of such patients, including early diagnosis and treatment, which will significantly improve the quality of life of patients with Parkinson's disease.

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