



*Full Length Research Paper*

# Analysis of factors of invalidation with parkinson's disease and the ways of their correction (on the example of Tashkent Region)

Rizaev J.A., Raimova M.M., Boboev K.K., Muhammedsaidova I.A.

Tashkent State Dental Institute, Uzbekistan

Accepted 15 July, 2019

In this article, authors identified the role of various factors of disability and identify approaches to their correction in Parkinson's disease on the example of Tashkent region. Analysis of disability by years during 2015-2018 showed that the tendency of increasing number of people with disabilities. In 2015, population with different stage of PD was 258, in 2016, there was an increase of 11.6% (288 people). Compared with the previous year, there was a slight increase in the ratio of people with disabilities in 2017 and 2018 by 4.8% and 8% respectively. Analyses showed the differences between 2015 and 2018, the increase is noted by 25.6%, while the total population of the region is almost the same. Timely correction of managed risk factors and the correction therapy for PD of comorbid pathology help to reduce the risk of early disability in this pathology.

**Keywords:** Parkinson's disease, disability, correction, comorbid pathology, risk factors

## INTRODUCTION

Parkinson's disease (PD) is one of the most common diseases of the nervous system among elderly people [1, 2, 4, 6]. Parkinson's disease is characterized by steady progression, as well as a subsequent decrease in the ability to work and the disability of patients [8, 9]. The timing of the onset of disability and its degree are related both to the characteristics of the clinical form and the course of the disease, and to the timeliness and adequacy of therapy [3, 5, 7]. The clinical picture and features of the course of Parkinson's disease are subjected to numerous studies, however, an analysis of the literature available to us shows that work aimed at identifying (isolating) the factors influencing the timing of the onset of disability and its degree has been insufficiently carried out. Research in this direction is important in predicting both the course of the disease and improving the effectiveness of rehabilitation and prevention of disability in PD.

The aim is to identify the role of various factors of disability and identify approaches to their correction in Parkinson's disease on the example of Tashkent region.

## MATERIAL AND METHODS

The structure and analysis of the disability of PD in Tashkent region was studied on the basis of appealability to medical institutions of Tashkent region and according to the General Health Administration of Tashkent region. The data of patients with a diagnosis of PD with a particular degree of disability during the period of 2015 – 2018 were analyzed, according to the General Directorate of Public Health of Tashkent region. A socio-hygienic method (copying data from recording and reporting documentation), a method of direct observation, clinical and neuroimaging research methods, statistical analyses were carried out. Statistical processing of the results was performed using the software package Statistical 6.0. The significance of differences in groups was assessed using

Student's t-test, the differences were considered significant at  $P \leq 0.05$ .

### RESULTS AND DISCUSSION

Analysis of disability by years (2015-2018) showed a tendency to increase the number of people with disabilities, so if, in 2015, the number of people with varying degrees of disability was 258, then, in 2016, there

was an increase of 11.6% (288 people); compared with the previous year, there was a slight increase in the ratio of people with disabilities in 2017 (by 4.8%), in 2018 by 8%. If we compare 2015 with 2018, the increase is noted by 25.6%, while the total population of the region is almost the same (Figure 1).

Gender- and age-related analysis of disability in PD showed that males dominated in all analyzed years (variation ranged from 61.1% to 63.6%), while the proportion of females was, respectively, from 36.4% to 38.9% (Figure 2).

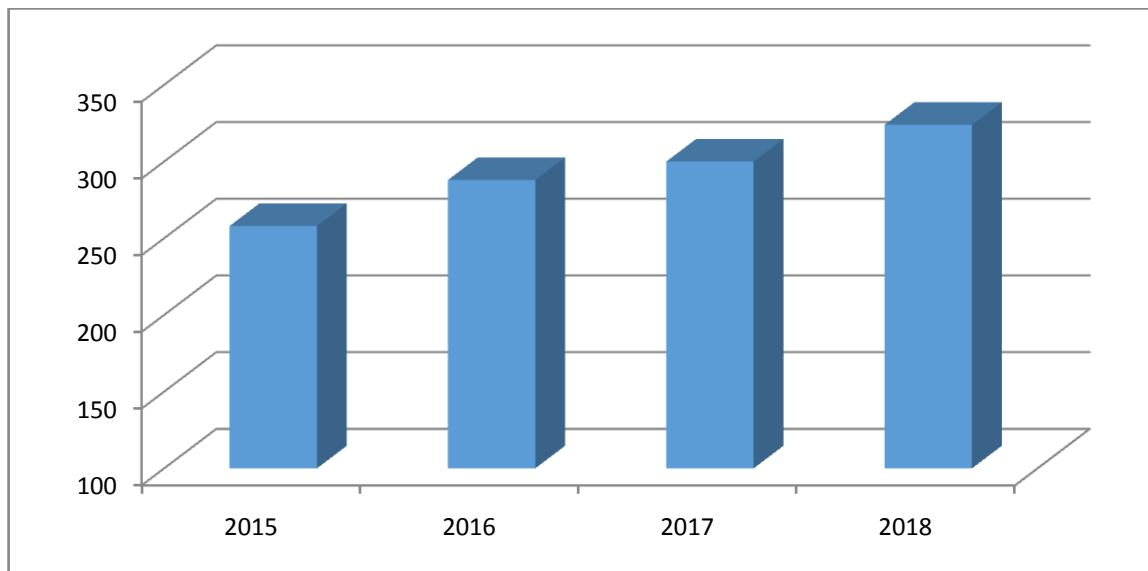


Figure 1: People with disability after PD in Tashkent region

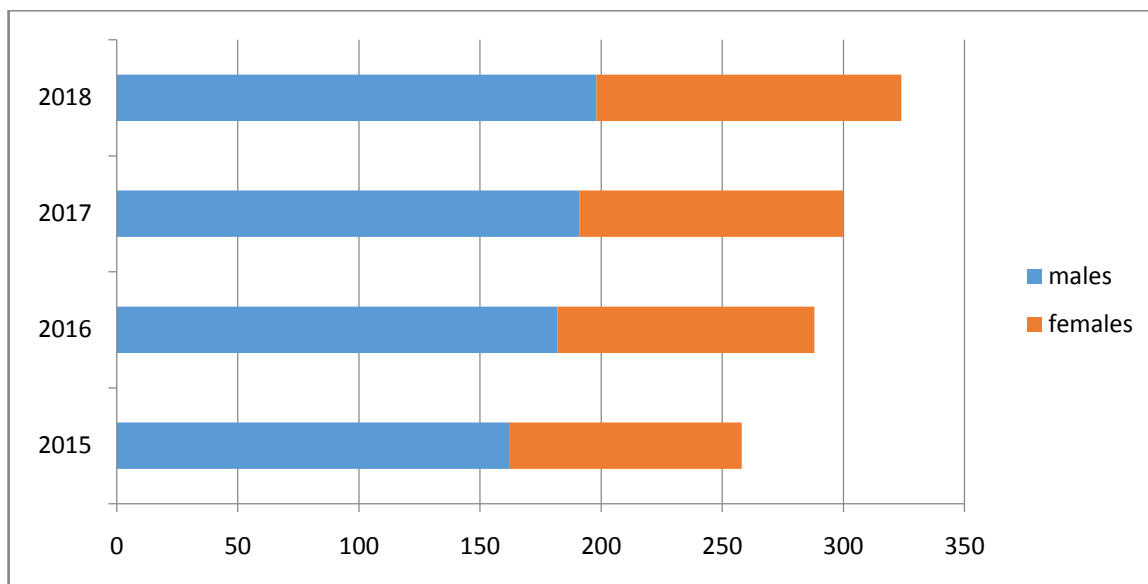
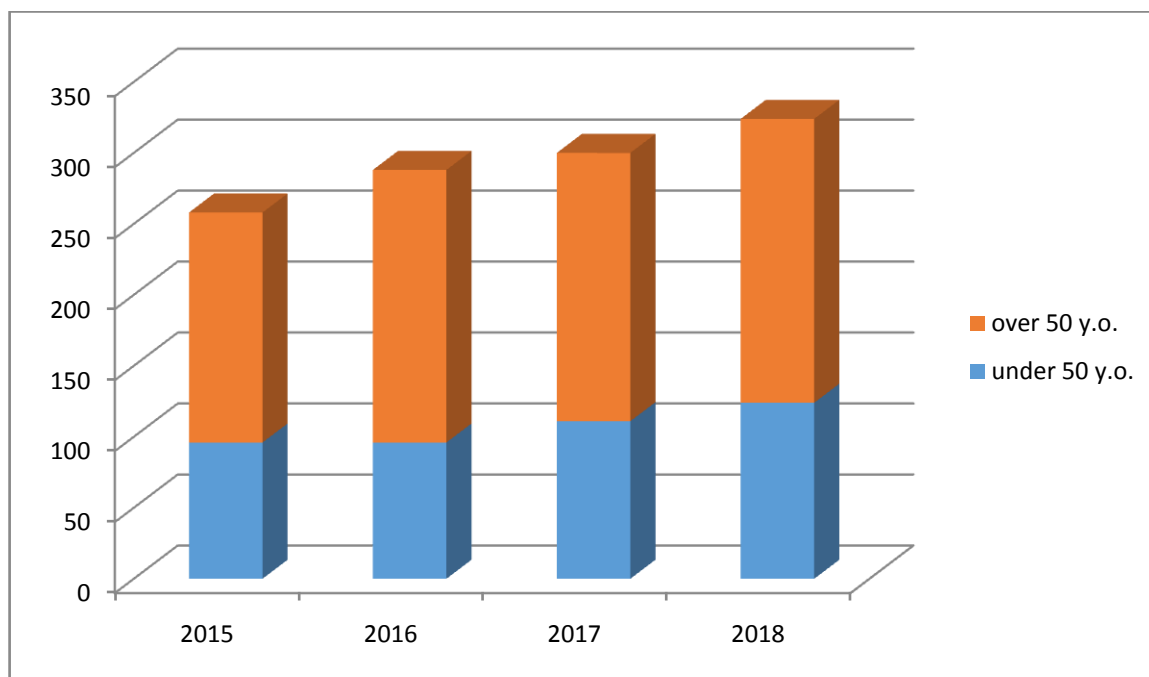


Figure 2: Gender characteristics of disability in Parkinson's disease

When considering the age structure, the patients were divided into 2 subgroups: people in 1st group - patients

under 50 years old, and 2nd group - patients over 50 years old (Figure 3).



**Figure 3:** Age structure of patients with disability in PD in Tashkent region

When considering the degree of disability of patients with PD, which is a reflection of the gradation of patients into disability groups, it was revealed that, in all the analyzed years, the overwhelming number of patients had a second disability group (from 70% to 65.9%), patients at the first (from 13.1% to 16.9%) and the third (from 14.8% to 20.5%) group.

Next, we analyzed the factors that had an impact on the degree and speed of the onset of disability. Among patients with the third group of disability, patients with the trembling form prevailed, they accounted for over 80%, in the second group of disability, the distribution according to the forms of the disease revealed the prevalence of the mixed and trembling forms of the disease (40.7% and 36.2%), in the first group the patients 40 patients with a mixed form of the disease (72.7%). The degree of disability was also influenced by the presence of comorbid pathology, such as cerebrovascular and cardiovascular diseases, the degree of intellectual disorders and the onset of terms, as well as the choice of initial therapy. A stronger positive correlation was noted in relation to the frequency of the second and first disability groups in PD with hypertension and ischemic heart disease ( $r=0.9$ ) and the first group with a younger age of debut of the disease and initiation of therapy with drugs containing levodopa ( $r=0.8$ ). The degree and time of disability in Parkinson's disease was greatly influenced by the early development and subsequent progression of levodopa-induced dyskinesias and motor fluctuations.

Correction of cardiovascular and antihypertensive therapy, later prescription and correct titration of the dose of levodopa drugs, use of dopamine agonists and dopamine receptors in early therapy of PD, as well as their subsequent use contributed to the later onset of postural instability and drug complications and, accordingly, lengthening the onset of and reduce the level of disability in Parkinson's disease.

## CONCLUSION

Thus, the analysis of disability showed a gradual increase in the number of persons with disabilities during Parkinson's disease in the studied period, the prevalence among them of males, the second group of disability (from 70% to 65.9%), and a significant proportion of able-bodied patients (under 50 years old) of age (from 33.3% to 38.2%). Timely correction of managed risk factors and the correct starting therapy for PD of comorbid pathology help to reduce the risk of early disability in this pathology.

## REFERENCES

1. Goncharova Z.A., Rabadanova E.A., Gelpey M.A. Epidemiological analysis of Parkinson's disease in Rostov-on-Don. *Saratov Scientific Medical Journal* 2017; 13 (1): p. 135–139.
2. Goncharova Z.A., Rabadanova E.A. et al. Modern aspects of epidemiology and early diagnosis of Parkinson's disease 2014; 3: p. 15–21.

3. Goncharova Z.A., Rabadanova E.A., Gelpei M.A. Early diagnosis of Parkinson's disease by general practitioners. In col.: Zemstvo medicine: from traditions to innovations: To the 150th anniversary of Zemstvo medicine in Russia. Rostov-on-Don, 2014; p. 81–85.
4. Katunina E.A., BezdolnyYu.N. Epidemiology of Parkinson's disease. Journal of Neurology and Psychiatry. S.S. Korsakova 2013; 113 (12): p. 81–88.
5. Krivonos O.V. Regional model of the organization of medical care for patients with Parkinson's disease in modern socio-economic conditions // Saratov Journal of Medical Scientific Research. 2013. Vol. 9, № 4.-p. 867-869.
6. Levin OS, Fedorova N.V. Parkinson's disease. M.: MEDpress-inform, 2012; p. 352.
7. Tokareva N.G., Ignatieva O.I., Stepashina N.A. et al. Evaluation of the effectiveness of treatment in patients with Parkinson's disease // Modern problems of science and education. - 2018. - № 4 - p. 29-34.
8. Shindryaeva N.N. Analysis of Disability in Parkinson's Disease // Postgraduate Bulletin of the Volga region 2011.-№5-6.-p.103-106.
9. Shindryaeva Natalya Nikolaevna. Extrapyramidal disorders: clinical-epidemiological and medico-social aspects: dissertation ... of Doctor of Medical Sciences. -Moscow, 2014.-p. 307.
- 10.