

## **Examining the prevalence of headache in parkinsonian patients and its characteristics in patients referred to the neurology clinic of Alavi hospital in Ardabil in 2022**

### **Abstract**

**Background:** Parkinson's disease is the most common movement disorder and the second most common neurodegenerative disease after Alzheimer's, one of the most common non-motor manifestations that Parkinson's patients mention is pain. In general, the frequency and severity of non-motor features increase during the clinical course of the disease, considering that the population of Iran is aging, it is expected that the incidence of Parkinson's disease will increase in the future, which requires careful planning for health care. These are patients, and on the other hand, headache is one of the common non-motor symptoms in these patients, and examining its characteristics from different aspects, including intensity and frequency, and the relationship with motor symptoms, can have a significant impact on managing the symptoms of this disease and improving the quality of life of these patients.

**Aim:** In this study, patients with Parkinson's disease were identified and, by taking a history and completing a questionnaire, the demographic characteristics, severity of motor symptoms, prevalence of headache and its characteristics, including frequency and intensity, were evaluated.

**Materials and methods:** In this study, 94 patients who were diagnosed with Parkinson's disease under the supervision of a neurologist were included in the study according to the inclusion and exclusion criteria and were examined by taking a history and completing a questionnaire.

**Results:** In general, out of 94 patients participating in the study, 59 people, equivalent to 62.7% of the patients, mentioned suffering from headache. In the study, a statistically significant relationship between the prevalence of headache and gender in men was 35.1% and in women was 27.7%,  $P=0.135$ , and there is no significant relationship. In another part of the study, we evaluated the relationship between gender and headache severity, and the result was that in general, men with Parkinson's disease experienced moderate and severe headaches more than women, and with  $P=0.043$ , this relationship It has been significant. In the study of the severity of motor symptoms, according to the available information, the prevalence of headache in different groups of motor symptoms had no significant relationship with the patients' motor symptoms and it was  $P=0.701$ .

The next item that was examined according to the rating of motor symptoms was headache intensity, and in this case, the average headache intensity was  $5.6 \pm 2.2$ , which indicates the average headache intensity in these patients and  $P=0.127$ . It was obtained and there is no significant relationship between movement symptoms and headache severity in these patients.

In examining the relationship between the intensity of motor symptoms and the frequency (days with headache in three months), headache was found to be  $6.8 \pm 14.1$  and it indicates a relatively low frequency of headache in the studied population. In this case,  $P=0.531$  was obtained. and there was no significant relationship between the frequency of headache and the severity of motor symptoms.

**Conclusion:** The prevalence of headache in Parkinson's patients is higher compared to the general population, which can be attributed to the disruption of the serotonergic and dopaminergic system and the creation of oxidative stress and the occurrence of neurodegenerative diseases caused by it

**Key words:** Parkinson's, migraine, tension headache