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CLINICAL CASE OF PROGRESSIVE SUPRANUCLEAR PARALYSIS (STEELE-RICHARDSON-OLSHEWSKI SYNDROME)

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Abstract. *Progressive supranuclear palsy is a rare neurodegenerative disease affecting the central nervous system [1], characterized by progressive impairment of voluntary eye movements, bradykinesia, muscle rigidity with simultaneous dystonia of the axial muscles, and dementia [1]. PSP, also known as Steele-Richardson-Olszewski syndrome, affects men and women equally [5]. In the early stages, patients with PSP often have trouble walking, balancing, and falling backward, often many times a day; some find it difficult to walk and feel like their feet are glued to the floor; patients experience difficulty with eye movements, especially downward gaze, as well as difficulty opening the eyes[5]. This disease is an atypical form of Parkinson's disease. In this disease, degeneration of neurons in the basal ganglia and brain stem is observed with the presence of neurofibrillary tangles containing excessively phosphorylated tau protein[1]. Progressive supranuclear palsy with Richardson syndrome (PSP-SR): classic progressive supranuclear palsy with progressive supranuclear ophthalmoplegia and severe balance impairment (most common form, in ≥ 70% of cases) [3]. At the moment, the etiology of this pathology is unknown. Patients with PSP have a poor prognosis, which is associated with early cognitive impairment, dysphagia, and death within 10 years due to aspiration.*

Keywords: *progressive supranuclear palsy (PSP), dementia, gaze pathology, muscle rigidity, bradykinesia, discoordination, aspiration.*

Relevance. Currently, there is insufficient information about new methods of diagnosis, treatment and prevention of complications in PNP. There is some difficulty in diagnosing and selecting effective therapy for patients with this pathology. Since the use of antiparkinsonian drugs relieves symptoms much less effectively than in patients with a typical form of Parkinson's disease.

The purpose of the study. To describe a clinical case of Progressive supranuclear paralysis (Steele-Richardson-Olshevsky syndrome) in old age.

Research objectives.

1. To analyze the theoretical concepts of Progressive supranuclear paralysis.

2. To carry out a theoretical analysis of the symptoms, methods of diagnosis and treatment of patients with PNP.

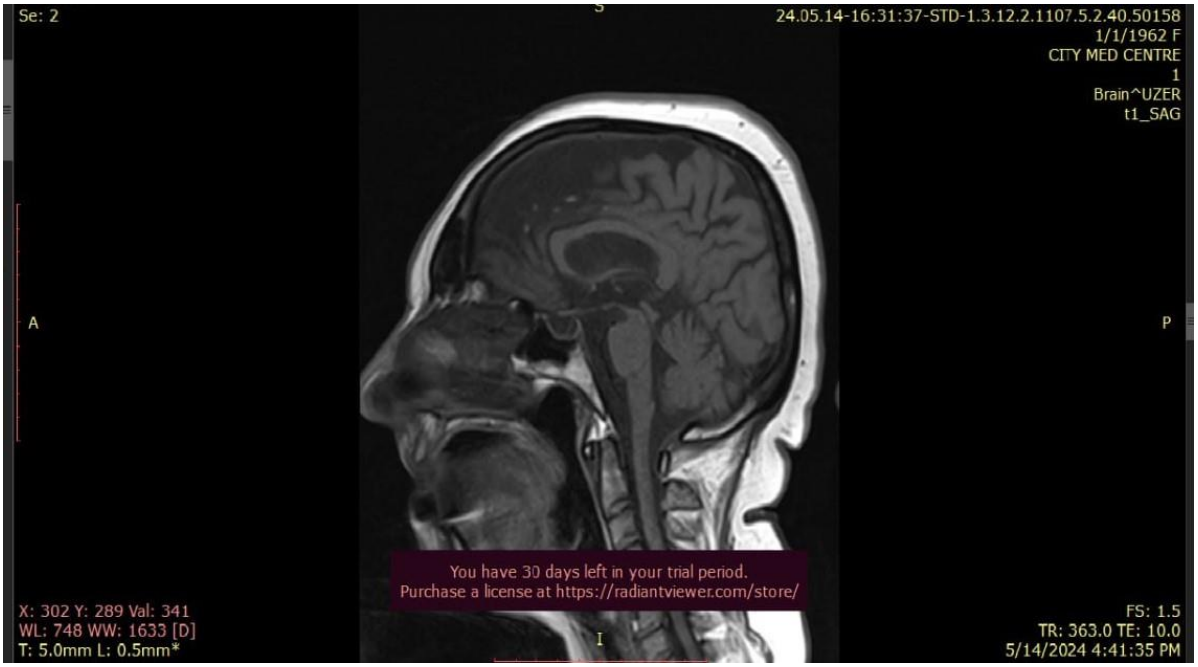
Materials and methods. Patient S., 62 years old, was admitted with complaints of slowness of movement, tremor in the hands, weakness, inability to move independently due to weakness of the muscles of the lower extremities, slowness of speech, difficulty opening the eyes. The first symptoms were a slowdown in hand movement and tremor, which appeared in 2019. Within 5 years, the above symptoms worsen, leading to a loss of independence in movements. Anamnesis of life: without peculiarities of development.

During the examination, the neurological status: The patient is conscious, inhibited, the position is passive, oriented in time and place, answers questions with difficulty and slowly. Eye

movement is incomplete, cannot look down without moving his head. There are no vertical seccades. The pupils are the same D=S. Nystagmus is absent. The trigger area of the face is missing. The face is symmetrical. Smoothness of the nasolabial triangle is absent. The tongue occupies a central position, the tongue in the center. There are no swallowing disorders. Pharyngeal reflex is triggered. Hearing is not impaired. Muscle tone is reduced. Tendon reflexes: triggered from the arms and legs. Muscle strength is weakened. Static coordination tests are impossible to investigate due to the limitation of the patient's movements. The Romberg test- can't stand, falls back. Sensitivity is preserved. There are no meningeal symptoms.

Movements are slow, rigidity and tremor in the hands, which increases during functional tests. During the examination, Levadopa 125 mg was given. Functional tests were performed 45 minutes after taking the pill. Based on complaints, anamnesis, and initial examination, a preliminary diagnosis was made: Parkinson's disease, atypical form, Progressive supranuclear paralysis (Steele-Richardson-Olshevsky syndrome). An MRI scan of the brain was prescribed at the outpatient stage.

Results. The patient's condition did not improve while taking Levodopa 125 mg, and rigidity and tremor did not decrease during functional tests.



According to the results of MRI of the brain (3 Tesla), the diagnosis was made: Progressive supranuclear paralysis; there are signs of atrophy of the midbrain, frontal and temporal lobes, tubercles of the quadriplegia, as well as an increase in the size of the third ventricle, an amplification of the signal from the near-conductive gray matter in T1 mode. The symptom of "hummingbird" is positive. The ratio of the size of the midbrain and the bridge is = 0.62.

This diagnosis was made on the basis that during neuroimaging in patients with PNP, atrophy of the midbrain, the bridge covering, the substantia nigra, the red nucleus, the frontal and temporal lobes, the tubercles of the quadriplegia, as well as an increase in the size of the third ventricle, an amplification of the signal from the near-conductive gray matter can be detected. The ratio of the size of the midbrain and the bridge is less than 0.52 [2]. In the later stages, MRI reveals a characteristic decrease in the size of the midbrain, best seen in the mid-frontal projection, as a result of which the midbrain begins to resemble hummingbirds or emperor penguins in shape [4].

Conclusion. This clinical example shows the features of the course, difficulties in diagnosing and treating Progressive supranuclear palsy with Richardson's syndrome in an elderly patient. Taking into account the high risk of complications in such patients and the similarity of clinical and instrumental signs, differential diagnosis with a typical form of Parkinson's disease and multisystem atrophy was required.

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