

NEUROLOGICAL PARANEOPLASTIC SYNDROMES IN LUNG CANCER PATIENTS

P. Stefens-Stawna¹, T. Piorunek², H. Batura-Gabryel², W. Kozubski¹, S. Michalak^{3,4}

¹Chair and Clinic of Neurology,

²Department of Pulmonology, Allergology and Respiratory Oncology, and

³Department of Neurochemistry and Neuropathology, Poznan University of Medical Sciences, Poland;

⁴Neuroimmunological Unit, Polish Academy of Sciences, Poland

Background: Lung cancer is recognized among the most frequent causes of neurological paraneoplastic syndromes (NPS). The neurological syndromes in subjects with systemic malignancy remain a clinical and diagnostic challenge. The aim of the study was to evaluate the frequency, clinical NPS manifestation, as well as association with onconeural antibodies in patients with lung cancer. **Material and methods:** Fifty patients (29 males, 21 females) hospitalized in Neurological Clinic with NPS diagnosis and Department of Pulmonology, Allergology and Respiratory Oncology Poznan University of Medical Science with the diagnosis of lung cancer participated in the study. Neurological examination, clinimetric evaluation with the use of modified Rankin scale (mR), Barthel index (BI) and testing for the presence of onconeural antibodies by means of indirect immunofluorescence as a screening and Western blotting as confirmation test were performed in all cases. **Results:** The majority of lung cancer patients (70%) aged 61±11 had NPS symptoms. Their clinimetric evaluation according to mR (1.0; 0.0-4.02) and BI (100.0; 7.44-100.0) scoring revealed good neurological condition and activity of daily living. We have found polyneuropathy/neuropathy (30%), cerebellar syndrome (12%) and motor neuron disease (6%) as the most frequent NPS. In 16% the presence of coexisting onconeural antibodies was found, in 20% well-defined onconeural antibodies were observed (anti-Hu, anti-amphiphysin, anti-Ri, anti-CV2, anti-Ma/Ta, anti-Yo), and in 18% anti-neuronal antibodies have been detected. **Conclusions:** Neurological paraneoplastic syndromes are associated with majority of lung cancers. Besides onconeural and anti-neuronal antibodies, the coexistence of antibodies was observed.