PARANEOPLASTIC LIMBIC ENCEPHALITIS ASSOCIATED WITH LUNG ADENOCARCINOMA: A DIAGNOSTIC CHALLENGE

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Dear Editor,

Paraneoplastic limbic encephalitis (PLE) is a rare neurological syndrome characterized by abnormal immune responses that are triggered by neoplasms (Adiguzel et al. 2015). Clinical manifestations include cognitive impairment, seizures, confusion, memory deficits, personality changes, as well as psychiatric symptoms such as irritability, anxiety, depression, hallucinations, hypersomnia, insomnia, narcolepsy, cataplexy and weight changes (Gultekin et al. 2000, Honnorat & Antoine, 2007, Shen et al. 2018). Here, we describe the case of a 47-year-old female patient who initially presented with headaches, confusion followed by depressed mood, diminished pleasure, feelings of worthlessness and indecisiveness, and slowing down of thought, ultimately leading to the diagnosis of PLE, secondary to lung adenocarcinoma.

The patient's clinical journey began with sudden-onset throbbing headaches, nausea, vomiting, and photophobia-phonophobia. Despite multiple previous visits to the Neurology, Emergency Department and Neurosurgery, initial MRIs and EEGs showed normal results and the patient was treated for migraines. Subsequently, the patient exhibited escalating behavioral abnormalities along with depressive symptoms culminating in self-harm attempts. Psychiatric consultation suggested dissociative or conversion disorders; however, the patient's lethargy, cognitive deficits, and distorted orientation were inconsistent with these diagnoses.

The presence of persistent symptoms, altered consciousness, and abnormal CSF analysis ensued further clinical evaluations. Imaging revealed a solid mass in the lung, multiple nodular lesions, and metastatic formations in the liver, vertebrae, and lymph nodes. Subsequent bronchoscopy confirmed adenocarcinoma of the lung. A comprehensive review of clinical and imaging findings, as well as tumor pathology supported the diagnosis of PLE secondary to lung adenocarcinoma.

This case underscores the challenges of diagnosing PLE due to its complex presentation, often involving neuro-psychiatric symptoms. The clinical course can be subtle, leading to misdiagnosis or delays in proper assessment. The neuro-psychiatric manifestations can emerge months before cancer diagnosis (Adiguzel et al. 2015). Thus an index suspicion of PLE should be considered in patients presenting with ambiguous symptoms similar to our case.

Although no definitive treatment for PLE exists, early tumor detection remains vital for optimal outcomes (Joubert & Hannorat, 2014). In addition to tumor resection and chemotherapy, immunomodulatory treatments such as steroids, intravenous immunoglobulins (IVIG), or plasmapheresis can be considered (Lawrence et al. 2014). Our case highlights the importance of interdisciplinary collaboration and the need for a broad differential diagnosis, especially when neurological and psychiatric symptoms coexist.

In conclusion, we present a challenging case of PLE associated with lung adenocarcinoma, emphasizing the diagnostic complexity posed by the interplay of neurological and psychiatric symptoms. Timely recognition of the diverse presentation of PLE is crucial for initiating prompt oncological intervention and guiding appropriate supportive care. We hope this case adds to a better understanding of the clinical spectrum of PLE and underscores the significance of early identification and treatment.

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