

## **Abstract**

Paraneoplastic neurologic syndrome is a rare entity caused by neuronal injury due to autoimmune mechanisms evoked by an underlying malignancy. We report an uncommon case of paraneoplastic neurologic syndrome associated with breast carcinoma.

A 63-year-old diabetic woman was admitted with a three-week history of rapidly progressive, disabling vertigo and ataxia and one episode of involuntary jerky movements of limbs with preserved consciousness. She had neck rigidity, positive cerebellar signs, negative pyramidal and extrapyramidal signs, and normal cranial nerves and was observed to have myoclonic-type movements in right upper and lower limbs. She had video electro-encephalography evidence of focal seizures with a left-sided origin, imaging evidence of bilateral temporal cystic encephalomalacia, mild lymphocytic cerebrospinal fluid pleocytosis with normal sugar, negative paraneoplastic and autoimmune encephalitis antibody panels, and imaging and cytological evidence of left breast malignancy. During the evaluation she clinically deteriorated despite empiric immunotherapy with immunoglobulin and steroids and developed multiple complications including sepsis, pulmonary embolism and cardiac arrest. She underwent left mastectomy and axillary clearance after eleven weeks of progressive neurologic symptoms but lacked an apparent neurological recovery. However, her seizure activity, which was poorly controlled with combinations of antiepileptic drugs, was aborted postoperatively.

A high clinical suspicion coupled with early detection and treatment of the underlying malignancy is crucial for a better outcome in paraneoplastic neurologic syndrome as the permanent neuronal loss may occur early in the disease process.

