Innovative Strategies and Interprofessional Partnerships to Provide Quality Care to anti-NMDA Paraneoplastic Encephalitis Patient

Lori S. Bechtel, MSN, RN, NE-BC; Ashley Brawner, BSN, RN; Emily Kraus, MSW, LSW; Melissa Rhoads, AD, RN, CNRN
Penn State Hershey Medical Center Neuroscience Critical Care Unit

Introduction
For patients diagnosed with Anti-N-methyl-D-Aspartate (NMDA) paraneoplastic encephalitis, the nursing challenge is to facilitate safe quality care for the patient. Care of these patients requires an interprofessional approach. Nursing care for these patients must include the treatment for the underlying cause as well as the neurologic affects of paraneoplastic syndrome. Working as a team this staff was able to support the patient and her mother in the transition from acute care to post discharge placement and eventual recovery.

Clinical Presentation
- Neurological or psychological disturbance
- Seizures
- Short-term memory deficits
- Neuro-psychiatric symptoms
- Unresponsiveness
- Central hyperventilation
- Atypical movement disorder

Understanding Paraneoplastic Syndromes (PNS)
- Disorders associated with indirect influence of cancer from tumors or metastasis; tumor may be very small.
- Neurologic paraneoplastic conditions affect less than 1% of cancer patients.
- Mechanism unclear that produces neurologic changes – autoimmune, neurotoxicity, infection or nutritional deficiency.
- Treatment of underlying cancer is necessary to treat prolonged effects of PNS.
- Plasmapheresis to remove antibodies is used for symptom relief.
- Astute nursing care required for symptom management.
- Nursing interventions related to treatments that include chemotherapy.

The Case Study
- 27- year old female with history of psychiatric concerns, confusion, tremors, seizures, unresponsiveness.
- One day admission to psychiatric facility for hysterical and illogical thinking.
- Prolonged admission at outside hospital (OSH) for altered mental status with unresponsiveness.
- Two year history of loss of consciousness and memory loss.
- Trach and PEG placed at OSH; EEG on admission showed encephalopathy but no seizure activity.
- Ativan and Propofol infusions to reduce severity.
- Two year history of loss of consciousness and memory loss.
- Plasmapheresis to remove antibodies is used for symptom relief.
- Ativan and Propofol infusions to reduce severity.
- Two year history of loss of consciousness and memory loss.
- Prolonged admission at outside hospital (OSH) for altered mental status with unresponsiveness.
- Two year history of loss of consciousness and memory loss.

Understanding Paraneoplastic Syndromes (PNS)
- Disorders associated with indirect influence of cancer from tumors or metastasis; tumor may be very small.
- Neurologic paraneoplastic conditions affect less than 1% of cancer patients.
- Mechanism unclear that produces neurologic changes – autoimmune, neurotoxicity, infection or nutritional deficiency.
- Treatment of underlying cancer is necessary to treat prolonged effects of PNS.
- Plasmapheresis to remove antibodies is used for symptom relief.
- Astute nursing care required for symptom management.
- Nursing interventions related to treatments that include chemotherapy.

Patient (on left) and mother one year after discharge

COURSE OF TREATMENT
- Plasmapheresis, IVIG, chemotherapy, ventilator support and monitoring.

- COURSE OF TREATMENT: plasmapheresis, IVIG, chemotherapy, ventilator support, and monitoring.
- Weaned off ventilator, but developed episodes of bradycardia related to sinus node dysfunction and episodes of apnea. Developed PEA in one episode.
- Patient was discharged to LTACH with trach and PEG after 8 months in Neuro CC Unit.

References