

Clinical commentary

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# Avoiding anaesthetics after multiple failed drug-induced comas: an unorthodox approach to management of new-onset refractory status epilepticus (NORSE)

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# TREATMENT OF REFRACTORY STATUS EPILEPTICUS

- If available direct supervision of treatment by an epileptologist is crucial for the treatment of refractory status epilepticus. Dedicated epileptologist care in these patients could help:
  - classify the seizures and status epilepticus accurately
  - manage the anti-seizure medications accurately
  - determine whether drug induced coma is necessary
  - analyze radiologic, semiologic and electrographic findings to determine the degree of potential neuronal injury
  - determine the level of aggressiveness with anti-seizure drugs and anesthetic agents
  - reassess the progress when all treatments are failing and reverse the course from drug induced coma to awake treatment with non-sedating antiseizure drugs if necessary
  - prevent premature withdrawal of care when patients are in prolonged drug induced coma

# POTENTIAL COMPLICATIONS OF IV ANAESTHETIC USE

- Metabolic abnormalities such as metabolic acidosis
- Bowel ischemia
- Ileus
- Infections such as pneumonia
- Deep vein thrombosis
- Increased risk of death among status epilepticus patients (needs to be further studied, only one study documented this higher risk independent of possible confounders)

# PERAMPANEL USE IN REFRACTORY STATUS EPILEPTICUS

- There are increasing number of reports supporting perampanel use in refractory status epilepticus. However larger randomized controlled trials are needed to determine true efficacy.
- It may make sense at cellular and molecular level to use perampanel in the treatment of refractory status epilepticus since it is a selective non-competitive antagonist of AMPA receptors and there has been increasing number of animal studies showing an increase in synaptic NMDA receptors and a decrease in GABA receptors dependent on the duration of seizures and status epilepticus.