

**Title:** Psychogenic Non-Epileptic Seizures Following Epidural Administration: A Case Report

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**Background:** Psychogenic non-epileptic seizures (PNES) mimic epileptic seizures, but show normal electroencephalogram (EEG) activity. They are often triggered by emotional or physical distress and are a type of conversion disorder. The differential diagnosis for new-onset seizures in the third trimester includes but is not limited to the following: eclampsia, hypoglycemia, stroke, intracranial hemorrhage, PNES, cerebral venous sinus thrombosis (CVST), hypertensive encephalopathy, posterior reversible encephalopathy syndrome (PRES), meningitis or encephalitis, sepsis, new-onset epilepsy, and intracranial tumor. Eclampsia has significant risks of maternal and fetal morbidity and mortality, which should not be missed.

**Purpose:** To report a case of PNES following epidural administration, complicating diagnosis and management.

**Methods:** Case Report.

**Results:** A 34-year-old G4P1203 at 30 weeks of gestation presented with contractions, severe abdominal pain, and nausea/vomiting. Sterile vaginal exam (SVE) revealed a closed cervix. The

patient was given 1 mg IV hydromorphone followed by 4 mg IV morphine 2 hours later with no pain relief. Magnesium, penicillin, and steroids were administered following a SVE revealing cervical progression to 1 cm in the setting of frequent painful contractions. Risks and benefits of an epidural were discussed given her complaints of uncontrolled pain, and she opted to proceed. An epidural containing ropivacaine 0.2% and dexmedetomidine was administered at 3:20 pm. The patient became hypotensive to 76/25 mmHg. She received 15 mg of IV ephedrine and an IV fluid bolus, with improvement in blood pressure. She then expressed difficulty breathing and appeared to have altered consciousness. At 3:40 pm, she began having a seizure-like episode. The seizures ceased with 10 mg IV diazepam, followed by an apparent post-ictal state. Approximately 30 minutes later, the patient was responding to commands. She had a one-time blood pressure (BP) of 150/111 mmHg during one of her seizure-like episodes. However, no additional signs or symptoms of pre-eclampsia with severe features were noted. Her lactate was normal. The patient continued on the current medications for threatened preterm labor, including magnesium. At 4:21 pm, a second cluster of seizures occurred. She was administered 10 mg IV diazepam, along with 5 mg IV midazolam and the seizures terminated at 4:22 pm. The epidural was removed following this second episode. Fetal heart tones were category 1 throughout and visualized in the normal range on bedside ultrasound. Neurology was at bedside at 4:53 pm and recommended 4500 mg levetiracetam loading dose, 5 mg IV midazolam for seizures > 2 min in duration or a cluster of seizures. Computed tomography (CT) scan of the head was negative. CT spine was unremarkable outside of a small amount of air near L1 and L2 secondary to recent instrumentation. The patient had two additional seizures in the CT scanner, one of which was treated with 5 mg IV midazolam. She met criteria for status epilepticus. The episodes continued throughout the night, though less frequently. A continuous video electroencephalogram (EEG) revealed no correlating epileptiform activity, consistent with a diagnosis of PNES. MRI was obtained and ruled out PRES. Psychiatry was consulted. She described the episodes as panic attacks. Coping mechanisms for anxiety management were discussed. There were no further signs of PNES. The patient was discharged on the third day of admission, with resolution of symptoms.

**Conclusion:** The gold standard for PNES diagnosis is video-EEG monitoring to distinguish PNES from epileptic seizures. PNES is more common in patients presenting with psychiatric comorbidities. It is important to thoroughly evaluate and rule out other causes of new onset

seizures. Eclampsia can present suddenly, making correct diagnosis imperative to prevent iatrogenic preterm delivery in the setting of PNES.

**References:**

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