



# Overcoming Procrustes: Bedside ECT in the ICU

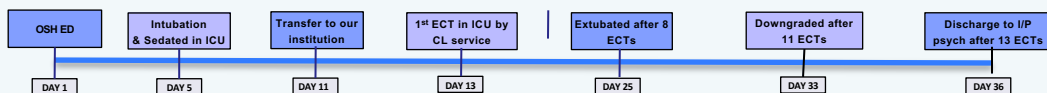
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## Introduction:

- Catatonia is a neuropsychiatric syndrome with constellation of psychomotor signs and symptoms that result in abnormalities of movement and behavior. It may present as akinetic, excitatory or malignant type, the latter variant is potentially life threatening due to complications from dysautonomia, hyperthermia and altered consciousness [1].
- Typically, catatonia has a robust response to lorazepam. In refractory or life-threatening cases, Electroconvulsive Therapy (ECT) is the gold standard [2]. In general hospitals with ECT availability, treatment is typically performed in the operating room (OR).
- Numerous logistical and clinical barriers can present when administering ECT for treatment of malignant catatonia in the OR.
- We present a case with malignant catatonia successfully treated with ECT performed at bedside in the intensive care unit (ICU).

## Conclusions:

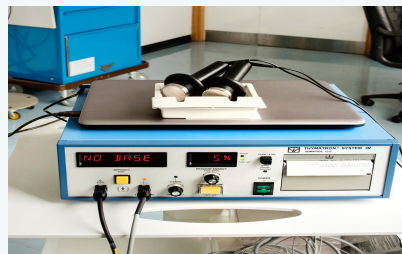
- ECT is typically performed in ORs or ambulatory surgery suites. Main requisites for the procedure include an ECT machine and an anesthesia workstation.
- During bedside ECT, we found that coordinating schedules between the anesthesiology team and ICU staff to be challenging at times. However, this proved to be less cumbersome than competing for OR and PACU space in a busy tertiary center, while also reducing the potential risks related to frequent transfer of an intubated and sedated patient with malignant catatonia to and from OR.
- Our experience shows that administering ECT at bedside is safe, more streamlined and utilizes fewer resources.
- In addition, this case also implies that ECT services should be an integral part of the C/L service to mitigate complications from life-threatening conditions such as catatonia.



Timeline of Events

## Case:

- 31-year-old female with bipolar 1 disorder, presented to an outside hospital with erratic behavior.
- In the emergency department, she was administered lorazepam, olanzapine, ziprasidone, chlorpromazine, valproic acid, and diphenhydramine for agitation, along with scheduled diazepam, zolpidem, lithium and amantadine. Subsequently, she developed dysautonomia and was intubated and sedated.
- Due to a lack of ECT services, she was transferred to our institution's ICU for further management.
- ECT was started while the patient still required sedation with propofol, fentanyl, dexmedetomidine, and lorazepam. A combination of pre-treatment with caffeine, flumazenil, and hyperventilation was used to achieve therapeutic seizures during ECT treatments.
- After eight sessions of ECT, the patient was successfully extubated, sedation gradually weaned off and was downgraded to the floor.
- She received three additional ECT treatments and was eventually transferred to an inpatient psychiatric hospital.



## References:

- [1] Taylor MA, Fink M. Catatonia in psychiatric classification: a home of its own. Am J Psychiatry. 2003 Jul;160(7):1233-41. doi: 10.1176/appi.ajp.160.7.1233. PMID: 12832234.
- [2] Girish K, Gill NS. Electroconvulsive therapy in Lorazepam non-responsive catatonia. Indian J Psychiatry. 2003 Jan;45(1):21-5. PMID: 21206808; PMCID: PMC2951534