Title: Safety and Efficacy of Electroconvulsive Therapy for the Treatment of Agitation and Aggression in Patients with Dementia


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Background:
- BPSD = Behavioral and Psychological Symptoms of Dementia – occur in 60-80% of individuals with Alzheimer Disease (AD). Aggressive and nonaggressive verbal and physical symptoms.
- Affect quality of life of both patients and caregivers
- Account for
  o ↑ acute hospitalizations and ↑ use of psychotropic medications
- Associated with
  o ↑ functional impairment
  o premature institutionalization
  o ↑ mortality
  o ↑ caregiver distress and burden
  o ↑ total health costs
- Treatment: environmental and psychopharmacological
- ECT valuable in late life major depressive disorder with or w/o psychotic features. Also: indications for acute mania, psychotic disorders, catatonia

This Article:
- Retrospective evaluation of ECT for treatment of agitation in dementia non responsive to usual behavioral and pharmacologic interventions

Methods:
- Retrospective chart review of inpatient geriatric neuropsychiatry unit between 2004 – 2007
  - Inclusion criteria:
    o Dx of dementia DSM IV TR
    o Tx with ECT for agitation/aggression during index admission
  - Exclusion criteria:
    o if patients were tx’d with ECT primarily for depressive disorder
    o if patients had received ECT for BPSD during a previous admission
Methods (cont’d):
- Reviewed and rated by 3 board certified psychiatrists using
  - Pittsburgh Agitation Scale (PAS)
  - Clinical Global Impression Severity (CGI-S), &
  - Clinical Global Impression Improvement (CGI-I) Scales
- Primary Outcomes: change from pre to post ECT scores on PAS and CGI scales
- Secondary Outcomes:
  - change in Global Assessment of Function Scale score from admission → discharge
  - occurrence of adverse events during treatment
- Also collected: comorbid medical and psychiatric dxs, psych meds, length of stay, length of stay before receiving ECT
- Medical burden measured by Cumulative Illness Ratings Scale for Geriatrics (CIRS-G), based on 14 organ systems including psych illness

ECT Procedure:
- Consent obtained by inpatient treatment team from patient’s legal healthcare representative
- Frequency and duration depended on tolerance and clinical response
- Both unilateral and bilateral treatment used
- Methohexital, succinylcholine, propofol

Statistical Analysis:
- Analysis of Variance used to analyze PAS total and subscale scores, CGI, GAF and # of psychotropic trials, pre- and post- ECT
- McNemar’s test used to analyze a change in mood, anxiety, and psychotic sx from pre to post ECT

Results:
- 16 patients total: 15 female, 1 male
- Overall: each received average of 9 treatments. 12 received bilateral only
- Table 1: Demographics
- Table 2: Psychotropic medications on admission up until discharge.
- Table 3: Patients showed significant decreases
  - PAS: pre-ECT of 11.0 ± 5.0 → post-ECT of 3.9 ± 4.3
  - On CGI: pre-ECT of 6.0 ± 0.6 → post-ECT of 2.1 ± 1.6 post-ECT
  - Statistically significant ↓ in aberrant vocalizations, motor agitation, aggressiveness, and resisting care
  - Statistically significant ↓ in irritability, depressive, anxiety, and delusional symptoms
  - Nonsignificant reduction (data on Table 3) in # of meds from pre → post ECT
- Figure 1 = graphic representation of Table 3
Author’s Conclusions:
- Acute ECT can be an efficacious treatment for agitation and aggression in dementia patients when behavioral and pharmacological interventions have failed
- ECT used for treating a biological illness with behavioral complications
- **Strengths:** largest case series reported to date on efficacy and safety, offers quantitative analysis of outcome with PAS and CGI scales, excludes patients with current/prior dx of mood disorder or psychotic disorder
- **Limitations:** small sample size, retrospective assessment, no behavioral rating scales or neuropsych testing, no control group, mostly female sample,

Reviewer’s Critique:
- Concur with author’s sentiment in that there is a need for good prospective studies with enough power (n), presence of a control group, or that studies effects of ECT (acute and maintenance) on cognitive ability, quality of life

Summary for Practice Implications:
- ECT can be considered when patient’s aggression/agitation have failed nonpharmacologic and pharmacologic interventions
- Important: informed discussion with patient’s family before and during all phases of treatment