Risk of Dementia Associated with Lithium or Valproic Acid

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BACKGROUND

• Neurocognitive Disorder (NCD), commonly known as dementia, is a chronic syndrome of deterioration in cognitive function beyond what is expected from normal aging. 
• It is one of the major contributors of disability and dependency in the elderly. 
• Common risk factors include: bipolar disorder, family history of NCD, smoking, alcohol abuse, hypertension, head injuries, stroke, other cardiovascular diseases, hyperlipidemia, and diabetes mellitus.
• There has been controversial evidence suggesting lithium may be neuroprotective against dementia while valproate (VPA) may have negative effects on cognition.
• However, few studies have directly compared the effects of lithium versus VPA and the studies focused on cognitive impairment; whether cognitive impairment can be directly translated into increased risk for dementia remains unclear.

METHODS

Inclusion Criteria

- ≥ 50 years of age at the time of last medical visit
- DSM-IV or DSM-5 diagnosis of bipolar disorder
- Prescribed with either lithium or VPA for ≥ 12 consecutive months
- Retrospective chart review

Exclusion Criteria

- Diagnosis of NCD prior to lithium or VPA use
- Diagnosis of schizoaffective disorder or schizophrenia
- History of traumatic brain injury (TBI)

RESULTS

Reasons for exclusions

- Did not receive ≥12 months of medications (n=978)
  - Age < 50 yo at time of last visit (n=380)
  - No bipolar disorder (n=139)
  - Schizophrenia (n=14)
  - Schizoaffective (n=32)
  - History of TBI (n=27)
  - NCD before lithium or VPA (n=2)

1954 charts reviewed

Study population (n=382)

Baseline Characteristics

- Mean age: Lithium (n=58) 61.5 years; VPA (n=58) 61.4 years; Combination (n=58) 61.9 years
- Male sex (%): Lithium (49 (84.5%); VPA (50 (86%); Combination (54 (93%)

Race

- Caucasian (%): Lithium (45 (77.6); VPA (50 (86.0)); Combination (40 (69%)
- African American (%): Lithium (12 (20.7%); VPA (7 (12.1%)); Combination (16 (27.6%)
- Other (%): Lithium (1 (1.7%); VPA (1 (1.7%)); Combination (2 (3.4%)

Past psychiatric medications

- SGA (%): Lithium (46 (79.3%); VPA (48 (82.8%)); Combination (52 (89.7%)
- Antidepressants (%): Lithium (51 (87.9%); VPA (56 (96.5%)); Combination (48 (82.8%)
- Benzodiazepine (%): Lithium (31 (53.4%); VPA (33 (56.9%)); Combination (35 (60.3%)

CONCLUSIONS

Based on the results found in this study, there were no significant differences in the prevalence of dementia in bipolar patients who received at least 12 consecutive months of lithium, valproate, or both medications.