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Veterans Health Administration
VA North Texas Health Care System

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Background

Psychosis is a common phenomenon that occurs in patients with Parkinson's Disease (PD). According to the American Academy of Neurology's evidence-based review for the evaluation and treatment of depression, psychosis, and dementia in PD, quetiapine has a Level C recommendation (may be considered) while clozapine has a Level B recommendation (should be considered). Despite this suggestion, in many institutions, quetiapine remains the mainstay treatment option for psychosis in PD due to costs and less frequent laboratory monitoring. The purpose of this study is to evaluate the number of hospitalizations in patients with Parkinson's Disease psychosis (PDP). treated with quetiapine when compared to non-antipsychotic measures. The results of this study might indicate whether quetiapine has the potential to decrease PDP hospitalizations and thus potentially reduce healthcare spending costs.

Primary Objectives

- Number of hospitalization due to psychosis after the index date (date PDP was established)

Secondary Objectives

- Time to hospitalization due to psychosis (of those hospitalized) from the index date
- Survival time from index date.

Results

Table 1.

Patient Characteristics	Quetiapine exposure [n=102]	Non-Antipsychotic exposure [n=90]	P-value
Age (mean ± SD)	75.4 ± 7.2	73.4 ± 7.87	0.071
Sex (M) (n) (%)	101 (99)	89 (98.9)	0.929
Race (n) (%)			0.700
White	77 (75)	72 (81)	
Black	4 (3.9)	5 (5.6)	
Other	3 (2.9)	2 (2.2)	
Unknown	18 (17.6)	11 (12.2)	
Months after Anti-PD initiation (mean± SD)	44.5 ± 42	56.4 ± 43.5	0.056
Benzodiazepine use (n) (%)	42 (41.2)	39 (43.3)	0.763
Cholinesterase inhibitor use (n) (%)	47 (46.1)	15 (16.7)	<0.001*
Memantine use (n) (%)	18 (17.7)	7 (7.8)	0.043*
Antidepressant use (n) (%)	75 (73.5)	49 (54.4)	0.006*
Opioid use (n) (%)	36 (35.3)	29 (32.2)	0.654
Depression Diagnosis (n) (%)	40 (39.2)	19 (21.1)	0.007*
Dementia Diagnosis (n) (%)	60 (58.8)	20 (22.2)	<0.001*
Duration of dementia pharmacologic treatment (months) [mean ± SD]	16.2 ± 25	6.9 ± 18.3	0.004*

* = statistical significance

Table 2.

Outcomes	Quetiapine exposure [n=102]	Non-Antipsychotic exposure [n=90]	P-value
Total hospitalization due to psychosis post index date (n) (%)	8 (7.8%)	8 (8.9%)	0.794
Of those with hospitalization (n=16), hospitalization due to psychosis from the index date (months) [mean ± SD]	74.3±33.3 (min-max 1-33 months)	16.0±13.2 (min-max 25-135 months)	0.047*
Survival time from index (months) [mean ± SD]	40.7±3.7	56.5±15.1	0.276

* = statistical significance

Conclusion

The results of this study indicate that there are no differences in PDP hospitalizations when patients are treated with quetiapine compared to non-antipsychotic measures.

Methods

This study includes VA North Texas Health Care System (VANTHCS) patients on current or previous antiparkinsonian treatment from January 1st, 1995 to January 1st, 2018 and will compare outcomes in PDP patients treated with quetiapine to PDP patients who used non-anti-psychotic measures (such as antiparkinsonian dose reduction and discontinuation).

Inclusion Criteria

- Patients with a history of PDP
- Current antiparkinsonian treatment (treatment at time of inclusion into the study)
- History of Levodopa or Levodopa plus dopamine agonist for treatment of PD
- Patients with a history of quetiapine use for the treatment of PD psychosis

Exclusion Criteria

- Antipsychotic medication used for psychosis any time prior to or at the time of PD diagnosis
- History of medical causes of psychosis
- History of primary psychiatric diagnoses
- Usage of anti-PD medications for any condition other than PD
- History of psychotic symptoms before PD diagnosis

Statistical Analysis

- Chi-Square test
- Two-sided t-test
- Wilcoxon rank-sum