Perspective
Volume 12:1, 2023

International Journal of Drug Research and Technology

ISSN: 2277-1506 Open Access

Serious Potential Drug Interactions

Amin Zargar*

Department of Joint Bioenergy, University of Miami School of Medicine, Miami, Florida, USA

Introduction

The pharmacokinetics and pharmacodynamics of drugs can be affected by aging-related anatomical and physiological changes and impairments in multiple organs and systems. The study of potential drug-drug interactions, or DDIs, is particularly interested in dementia patients in their older years. A wide range of medications, including antipsychotics, antidepressants, anxiolytics, mood stabilizers and anti-dementia medications, may be prescribed to older adults due to cognitive deficits or neuropsychiatric symptoms (such as mood, behavioral and perception disorders). Cytochrome p450 isoenzymes (CYP1A2, CYP2C19, CYP2D6, CYP3A4, CYP1A2, CYP2D6, CYP3A4 and others) extensively metabolize the majority of these drugs in the liver. These patients have a high rate of associated comorbidity, with 61% having three or more conditions. The most prevalent of these are musculoskeletal, cardiovascular, metabolic/endocrine and gastrointestinal disorders. Many of the medications that are prescribed to treat these disorders are metabolized in the liver by cytochrome p450 isoenzymes that are similar to the psychotropics mentioned earlier. These include antiplatelet drugs like clopidogrel and aspirin, non-steroidal anti-inflammatory drugs like omeprazole, antidiabetic drugs like metformin and others. As a result, there is an increase in prescriptions of poor quality, potential DDIs and adverse As new psychotropic and anti-dementia medications are developed for the treatment of dementia patients over time, clinicians will face new interactions and difficulties.

Description

Age, female gender, polypharmacy and high comorbidity are some of the factors that have been linked to potential DDIs in elderly patients without dementia. DDIs in dementia patients and the factors that are associated with them have only been the subject of limited research to date. Additionally, previous studies' findings have generated controversy. Some studie have found that people with dementia have a lower incidence of potential DDIs than people without dementia. Other studies have looked at specific drugs, mostly those with anticholinergic properties. We are aware that there is a lack of data on the factors that contribute to severe potential DDIs brought on by medications prescribed to dementia patients. As a result, it is essential to identify the most severe potential DDIs and the factors that are associated with these interactions in dementia patients over the age of 65 [1,2].

We utilized the database from the cross-sectional study "Validation of the Quality of Life in Alzheimer's Disease (QOL-AD) scale in Mexican patients with dementia" (16). Primary caregivers and dementia outpatients from various Mexico City health facilities participated in the study. Six general hospitals hosted scheduled interviews with the patients. Patients with dementia who were 60 years of age or older were included in the study, which took place from January 2007 to January 2010. The patients who were accepted into the study had to be able to read and write. If the caregiver could read and write, was unpaid and generally knew more about the patient's environment and care than the patient, they were included. The primary exclusion criteria were as follows: the presence of an acute and/or exacerbated chronic disease within 30 days of the interview that could have affected the quality of the questionnaire responses, as determined by the study's medical staff; decreased alertness (for any reason); severe aphasia; visual and hearing impairments that made it difficult for the patient or caregiver to fill out the questionnaires; and other neurological diseases that could have affected the diagnosis of dementia and the patient's placement in an institutional setting [3,4].

We used data from 181 outpatients who had been diagnosed with dementia clinically and were at least 60 years old. A group of geriatricians dedicated to the study of dementia had previously identified dementia (such as Alzheimer's, vascular, mixed, frontotemporal and Lewy body dementia) using international criteria; These criteria were previously discussed in a publication 17. This research was constrained in a number of ways. It is important to note that the outpatients were recruited from specialized hospitals and this study did not include older adults who lived in the community or were in an institutional setting. As a result, our findings can only be applied to organizations with comparable characteristics. Also, this was a cross-sectional study, so more research is needed to see how caregiver burden and other factors and severe potential DDIs are linked over time [5].

Conclusion

Due to the nature of the study, there was a lack of data on the outcomes of the potential DDIs that were found. Due to the limitations associated with its use in older adults with low education levels, the MMSE scores, which were used as a measure of the severity of dementia, should be considered with caution. Despite these limitations, we believe this study adds to our understanding of the prevalence of potential DDIs and the connections between dementia patients' contributing factors and severe potential DDIs. Numerous serious drug-drug interactions are present in dementia-stricken seniors. Omeprazole, antipsychotics, antiplatelet medications and antidepressants were the most frequently involved drugs in these interactions. Despite their widespread use, anti-dementia medications did not cause significant drug-drug interactions. In order to avoid drug interactions in this population, factors such as the severity of dementia, depression and caregiver burden should be taken into consideration.

References

1. Chiba, Katsuyoshi, Atsushi Sugiyama, Yoshioki Satoh and Hiroyuki Shiinaet al. "Proarrhythmic effects of fluoroquinolone antibacterial agents: Effects as physiologic substrate for torsades." *Toxicol Appl Pharmacol* 169 (2000): 8-16.

2. Clauss, Sebastian, Christina Bleyer, Dominik Schuettler and Philipp Tomsits, et al. "Animal models of arrhythmia: classic electrophysiology to genetically modified large animals." *Nat Rev Cardiol* 16 (2019): 457-475.

3. Cox, James L., Thomas E. Canavan, Richard B. Schuessler and Michael E. Cain, et al. "The surgical treatment of atrial fibrillation: II. Intraoperative electrophysiologic mapping and description of the electrophysiologic basis of atrial flutter and atrial fibrillation." *Ann N Y Acad Sci* 101 (1991): 406-426.

4. Detre, Elke, Morten B. Thomsen, Jet D. Beekman and Karl-Uwe Petersen, et al. "Decreasing the infusion rate reduces the proarrhythmic risk of NS-7: Confirming the relevance of short-term variability of repolarisation in predicting drug-induced torsades de pointes." *Br J Pharmacol* 145 (2005): 397-404.

5. Dunnink, Albert, Thom RG Stams, Alexandre Bossu and Veronique MF Meijborg,

***Address for Correspondence:** Amin Zargar, Department of Joint Bioenergy, University of Miami School of Medicine, Miami, Florida, USA, E-mail: azar@berkley.edu*

Received: 02 January 2023, Manuscript No. IJDRT-23-94732; **Editor assigned:** 04 January 2023, PreQC No. P-94732; **Reviewed:** 16 January 2023, QC No. Q-94732; **Revised:** 21 January 2023, Manuscript No. R-94732; **Published**: 28 January 2023, DOI: 10.37421/2277-1506.2023.12.389

et al. "Torsade de pointes arrhythmias arise at the site of maximal heterogeneity of repolarization in the chronic complete atrioventricular block dog." *EP Europace* 19 (2017): 858-865.

How to cite this article: Zargar, Amin. "Serious Potential Drug Interactions." *Int J Drug Res Tech* 12 (2023): 389.