# Association Between Migraine Headaches and Dementia in More than 7,400 Patients Followed in General Practices in the United Kingdom

Author: Kostev K, Bohlken J, Jacob L Dementia

#### Background

Most previous studies focusing on the migraine headache-dementia relationship have failed to simultaneously adjust for several common comorbidities.

#### Objectives

The goal of this retrospective cohort study was to investigate the association between migraine headaches and dementia in general practices in the UK.

#### Methods

The current study sample included patients who received a migraine diagnosis in one of 67 general practices in the UK between January 1997 and December 2016 (index date). Patients without migraine diagnoses were matched 1:1 to patients with migraine diagnoses based on propensity scores using a greedy algorithm and derived from the logistic regression using age, sex, index year, and co-diagnoses. The main outcome of the study was the association between migraine headaches and the incidence of dementia within 10 years of the index date.

#### **Results** -

This study included 7,454 individuals with or without migraine diagnoses. Mean age was 67.7 years (SD=5.8 years), and 72.9% of patients were women. Within 10 years of the index date, 5.2% of participants with and 3.7% of those without migraine headaches were diagnosed with dementia (log-rank p<0.001). The

respective figures were 5.8% and 3.6% in women (log-rank p<0.001) and 4.5% and 3.4% in men (logrank p=0.722). We observed a positive association between migraine diagnoses and all-cause dementia (hazard ratio [HR]=1.43) as well as Alzheimer's disease (HR=1.87). Sensitivity analyses further revealed that these associations were only significant in women (all-cause dementia: HR=1.65; Alzheimer's disease: HR=2.27).

#### Conclusion

Migraine diagnoses were positively associated with allcause dementia and Alzheimer's disease in women.

#### J Alzheimers Dis. 2019;71(1):353-360. doi: 10.3233/JAD-190581.

If you would like to read any of the studies in its entirety, please, contact us to obtain the full version of a publication. Also, our research director is at your disposal if you have any further questions. Thank you for your interest!

#### ΚΟΝΤΑΚΤ

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# One-Year Persistence with Donepezil, Memantine, and Rivastigmine in More than 66,000 Elderly Patients Followed in Poland

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#### Background

Previous studies have suggested that there are substantial differences between countries in terms of persistence with antidementia drugs and that the management of dementia is likely to be populationspecific.

#### **Objectives** ·

The aim of this study was to analyze the oneyear persistence with donepezil, memantine, and rivastigmine in more than 66,000 elderly patients followed in Poland.

#### Methods

This study included patients who were prescribed donepezil, memantine, or rivastigmine for the first time in general and neuropsychiatric practices in Poland between September 2016 and December 2017 (index date; N=66,030). The primary outcome of the study was the one-year persistence with donepezil, memantine, and rivastigmine. Non-persistence was defined as a gap of at least 90 days without antidementia therapy. The secondary outcome was the identification of variables significantly associated with treatment non-persistence.

#### **Results** -

After 12 months of follow-up, 42.2% of donepezil users, 46.0% of rivastigmine users, and 65.9% of memantine users were persistent (log-rank p-value <0.001). Memantine (hazard ratio [HR]=0.58) and rivastigmine users (HR=0.92) were less likely to discontinue treatment one year after initiation than donepezil users. Furthermore, a younger age (60-64 years: HR=1.32; 65-74 years: HR=1.13) and therapy initiated by a neuropsychiatrist (HR=1.11) were positively associated with therapy discontinuation, while we observed a negative association between the prescription of anti-psychotic drugs and nonpersistence (HR=0.81).

#### Conclusion

One-year persistence with donepezil, memantine, and rivastigmine was low in elderly patients followed in Poland, and was influenced by age, physician specialty, and co-therapy.

J Alzheimers Dis. 2019;70(3):899-905. doi: 10.3233/JAD-190508.

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# Association Between Hearing and Vision Impairment and Risk of Dementia: Results of a Case-Control Study Based on Secondary Data

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#### Introduction

Hearing and vision loss are highly prevalent in elderly adults, and thus frequently occur in conjunction with cognitive impairments. Studies have shown that hearing impairment is associated with a higher risk of dementia. However, evidence concerning the association between vision loss and dementia, as well as the co-occurrence of vision and hearing loss and dementia, has been inconclusive.

#### **Objectives** -

To assess the association between: (i) either hearing or vision loss and the risk of dementia, as well as between; and (ii) the combination of both sensory impairments and the risk of dementia.

#### Methods –

This case-control study was based on a 5-year data set that included patients aged 65 years and older who had initially been diagnosed with dementia diseases by one of 1,203 general practitioners in Germany between January 2013 and December 2017. In total, 61,354 identified dementia cases were matched to nondementia controls, resulting in a sample size of 122,708 individuals. Hearing loss and vision loss were identified using the ICD-10 diagnoses documented in the general practitioners' files prior to the initial dementia diagnosis. Multivariate logistic regression models were fitted to evaluate the associations between visual and/ or hearing impairment and the risk of dementia and controlled for sociodemographic and clinical variables.

#### Results

Hearing impairment was documented in 11.2% of patients with a dementia diagnosis and 9.5% of patients without such a diagnosis. Some form of vision impairment was documented in 28.4% of patients diagnosed with dementia and 28.8% of controls. Visual impairment was not significantly associated with dementia (OR = 0.97, CI = 95% 0.97-1.02, p = 0.219). However, patients with hearing impairment were at a significantly higher risk of developing dementia (OR = 1.26, CI = 95% 1.15-1.38, p < 0.001), a finding that very likely led to the observed significant association of the combination of both visual and hearing impairments and the risk of dementia (OR = 1.14, CI = 95% 1.04-1.24, p = 0.005).

#### Discussion –

This analysis adds important evidence that contributes to the limited body of knowledge about the association between hearing and/or vision loss and dementia. It further demonstrates that, of the two, only hearing impairment affects patients' cognition and thus contributes to dementia risk.

#### Front Aging Neurosci. 2019 Dec 20;11:363. doi: 10.3389/ fnagi.2019.00363. eCollection 2019.

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# Treatment Patterns of Patients with All-Cause Dementia in Russia

Author: Kostev K, Osina G Dementia

#### Background

Studies on prevalence or the therapy of dementia are rare or non-existent in Russia.

#### **Objectives** -

The purpose of this study was to analyze the prescription patterns of antidementia therapy in Russia in 2018.

#### Methods -

This retrospective cross-sectional study was based on the IQVIA Russia LRx database, which covers approximately 11% of all patients enrolled in federal or regional reimbursement state healthcare programs. We descriptively analyzed the proportions of patients treated with antidementia drugs, antipsychotics, antidepressants, and benzodiazepines.

#### **Results** -

A total of 12,051 dementia patients were available for analysis. Of those, 6,394 patients had a vascular dementia (VaD) diagnosis, while 3,413 were diagnosed with dementia in other diseases (DOD), 1,128 with Alzheimer's disease (AD), and 1,116 with unspecified dementia (UD). The therapy with the highest patient proportion was antipsychotics, with 74% of VaD patients, 73% of UD patients, and 47% of DOD patients receiving these drugs. The proportion of patients treated with antidementia drugs was 68% in AZ, 56% in VaD, 45% in UD, and only 9% in DOD. Antidepressants were a relatively rare therapy in dementia patients (between 4% and 12%), and 30% of DOD patients received benzodiazepines, while the proportions of patients receiving this therapy class in other dementias was low (7-10%). Most patients were treated with old-generation drugs.

#### **Conclusion** -

The proportion of older drugs prescribed in Russia is higher than in Western Europe, which may likely be due to their low prices, resulting in a higher chance for successful health insurance reimbursement claims.

#### J Alzheimers Dis Rep. 2020 Jan 25;4(1):9-14. doi: 10.3233/ ADR-190144.

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# The Role of the Treating Practice in Persistence Among Dementia Patients in Germany and the UK

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#### Background

There is a lack of studies investigating the role of physicians with regard to persistence among dementia patients.

#### **Objective** -

The aim was to analyze the rate of persistence with antidementia medication in Germany and the UK by focusing on the role of the treating physician.

#### Materials and methods

Dementia patients who had received at least 1 prescription for antidementia drugs in 240 general practices in Germany and 73 general practices in the UK between January 2013 and December 2016 were included. Persistence was defined as the time between therapy initiation and therapy discontinuation, the latter being defined as a gap of at least 90 days without antidementia therapy. The prevalence of persistent patients per practice was also estimated. High practice persistence was defined as > 60% of patients completing at least 12 months of therapy.

#### Results

A total of 3,863 patients in Germany and 3,342 patients in the UK were analyzed. In Germany, 55.2% of patients were continuing therapy after 12 months, while the figure in the UK was 80.2%. The proportion of patients with a persistence of at least 12 months per practice ranged from 0 to 80% in Germany and from 0 to 85% in the UK. The prevalence of practices with good persistence was lower in Germany than in the UK (9.6 versus 54.8%).

#### Conclusion

Physicians play an important role with respect to the persistence of the dementia patients they treat. Further studies are needed to better understand the role of physicians of other specialties in patients' adherence.

#### Int J Clin Pharmacol Ther . 2020 May;58(5):247-253. doi: 10.5414/CP203670

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