Background Alzheimer’s disease (AD) is the main cause of dementia in developed countries. Sleep disturbances have been shown to increase the risk of AD; however, benzodiazepine (BZD) consumption has also been shown to increase this risk in some cohort studies.

Purpose The objective of the study was to assess the risk of AD incidence in a cohort of patients exposed to BZD.

Material and methods Community-based retrospective cohort study from 1 January 2002 to 31 December 2015. Consumption was expressed in defined daily doses (DDD) accumulated by individuals. Three DDD intervals were established (1–90, 90–180 and >180). All approved BZD were included in the Medicines Catalogue of the Spanish Medicines Agency, as well as the BZD analogues (zopiclona, zolpidem). The patients treated with BZD during the 5 years immediately prior to diagnosis were excluded. The development of AD was analysed by the Chi² test and adjusted logistic regression models. Cox proportional hazards models were also used to consider the time to AD development.

Results The cohort included 84,543 individuals consuming BZD and similar, with an average age in 2002 of 65 years. During follow-up, 584 new cases of AD were diagnosed. In the Cox models adjusted for year of birth, sex and comorbidities, taking as a reference the first category of BZD consumption (1–90 DDD), there was a 12-fold increase in the risk of developing AD in participants with cumulative consumption from 90 to 180 DDD (Hazard ratio (95% CI): 11.6 (3.8–35.7), P-value<0.001) and 78 times higher in participants with more than 180 accumulated DDD (Hazard ratio (95% CI): 78.0 (29.1–208.8), P-value<0.001). The study according to type of BZD revealed slightly higher incidences of AD in the participants in the highest category of consumption (>180 DDD) of BZD of intermediate-long action 1.20% with respect to those of short-intermediate action 1.11%.

Conclusion The long-term use of BZD increases the risk of developing AD. The establishment of new treatments with BZD should be restricted to the most serious cases and programmes of deprescription should be developed.

REFERENCES AND/OR ACKNOWLEDGEMENTS
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