EDITORIAL

Abstinence and heavy drinking raise risk of dementia

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THE RISK OF DEMENTIA IN OLD AGE IS GREATER IN INDIVIDUALS WHO ABSTAIN FROM ALCOHOL and those who consume more than 14 units per week from midlife than for those who drink moderately, according to findings from a large prospective cohort study.[1]

Data were collected as part of the Whitehall II study, an ongoing cohort study of men and women originally employed by the civil service in London. The study recruited 10,308 participants (6,895 men), aged 33-55 years, between 1985 and 1988. Follow-up clinical examinations have been carried out every four or five years since baseline and alcohol consumption assessed by questionnaire. Each wave takes two years to complete and the most recent was for 2015/16.

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The investigators used longitudinal data on participants' alcohol consumption spanning nearly three decades and accessed information on the development of dementia through comprehensive tracing of electronic health records. The national hospital episode statistics database was used to identify admissions for alcohol-related chronic disease.

The mean age of participants assessed for alcohol consumption in midlife was 50.3 years. Among the 10,231 participants alive in 1991 to 1993, 9,087 had at least two measurements of alcohol consumption between 1985/88 and 1991/93 and complete data on covariates. Of these participants 397 had a diagnosis of dementia recorded over a mean follow-up of 23.2 years. Being older, female, less educated and having a low occupational position were associated with a greater risk of dementia.

Mean age at dementia diagnosis was 76.1, 75.7, and 74.4 years (P = 0.13) in the abstinence, 1-14 units/week, and > 14 units/week groups respectively.

After adjustment for sociodemographic factors alcohol abstinence was associated with a greater risk of dementia hazard ratio (HR) 1.47 (95% CI: 1.15-1.89) compared with those who consumed alcohol at a level of 1-14 units/week.

For those drinking > 14 units/week, a 7 unit increase in weekly alcohol consumption was associated with a 17% (95% CI: 4-32%) increase in the risk of dementia. Having a CAGE score > 2 (compared with a CAGE score of 0) and alcohol-related hospital admission were both associated with increased dementia risk. HR 2.19 (95% CI: 1.29-3.71) for the former and HR 4.28 (95% CI: 2.72-6.73) for the latter.

Alcohol consumption trajectories from midlife to early old age showed a higher risk of dementia, compared with long-term consumption of 1-14 units/week, for: long-term abstinence HR 1.74 (95% CI: 1.31-2.30); decrease in consumption HR 1.55 (95% CI: 1.08-2.22); and long-term consumption > 14 units/week HR 1.40 (95% CI: 1.02- 1.93).

Although earlier studies have suggested a J shaped relationship between alcohol consumption and the risk of developing dementia, these studies have been subject to a number of data limitations. This large robust prospective cohort study following up individuals for a mean of 23 years has shown an increased risk of dementia in people who abstain from alcohol in midlife or who consume > 14 units/week.

The study authors conclude: 'These results support the recent downward revision of UK guidelines that moved the recommended alcohol consumption limit to 14 units/week in men compared with 21 units/week before, bringing them in line with women.'

Analyses using the alcohol dependence scale (CAGE) and hospital admission data for alcohol-related chronic disease 'strengthen the evidence that excessive alcohol consumption is a risk factor for dementia,' they add.

The authors also suggest that the threshold for harmful alcohol consumption should be revised downwards, to the UK threshold of 14 units/week for men and women, in countries where this is currently higher to promote cognitive health in older age.

REFERENCE
1 Sabia S, Fayosse A, Dumurgier J et al. Alcohol consumption and risk of dementia: 23 year follow-up of Whitehall II cohort study. *BMJ* 2018;362:k2927

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