



Contents lists available at ScienceDirect

Clinical Nutrition

journal homepage: <http://www.elsevier.com/locate/clnu>

Original article

Alcohol drinking patterns and risk of functional limitations in two cohorts of older adults

Luz M^a León-Muñoz ^{a, b, **}, Pilar Guallar-Castillón ^{a, b}, Esther García-Esquinas ^{a, b},
Iñaki Galán ^{a, c}, Fernando Rodríguez-Artalejo ^{a, b, *}^a Department of Preventive Medicine and Public Health, Universidad Autónoma de Madrid/Idipaz, Madrid, Spain^b CIBER of Epidemiology and Public Health (CIBERESP), Madrid, Spain^c National Centre for Epidemiology, Instituto de Salud Carlos III, Madrid, Spain

ARTICLE INFO

Article history:

Received 30 November 2015

Accepted 10 May 2016

Keywords:

Alcohol

Functional limitations

Cohort study

SUMMARY

Background & aims: Several studies have found that moderate alcohol intake is associated with lower risk of functional limitations in older adults. However, no previous investigation has assessed this association in older adults from Mediterranean countries, who show characteristic drinking patterns.

Methods: Data were taken from the UAM and the Seniors-ENRICA cohorts in Spain, comprising community-dwelling people aged ≥ 60 years. At baseline, participants in both cohorts were classified as non-drinkers, ex-drinkers, moderate drinkers and heavy drinkers (the threshold between moderate and heavy intake was ≥ 40 g/day in men and ≥ 24 g/day in women). The Seniors-ENRICA cohort allowed assessment of a Mediterranean Drinking Pattern (MDP), defined as moderate alcohol intake, with wine preference ($\geq 80\%$ of alcohol consumed as wine) and drinking only with meals. The incidence of limitation in mobility, agility, and instrumental activities of daily living (IADL) was ascertained in each cohort at the end of a 3.5-year follow-up. Analyses were adjusted for sex, age, education, lifestyle, BMI, chronic conditions, and functional limitations at baseline others than the studied limitation.

Results: Compared with non-drinkers, ex-drinkers showed a higher risk of IADL limitation (pooled adjusted odds ratio [paOR]: 1.63; 95% confidence interval [CI]: 1.04–2.21). By contrast, moderate drinkers had a lower risk of limitations in mobility (paOR: 0.80; 95% CI: 0.63–0.97), agility (paOR: 0.82; 95% CI: 0.65–0.99) and IADL (paOR: 0.54; 95% CI: 0.39–0.69). Among individuals reporting poor or fair health, the MDP was associated with lower risk of mobility limitation (aOR: 0.51; 95% CI: 0.27–0.97).

Conclusion: In older adults, moderate alcohol consumption, as well as the MDP in specific subgroups, is associated with lower risk of functional limitation. These results should not serve to promote alcohol intake, because older adults are particularly vulnerable to its harmful effects.

© 2016 Elsevier Ltd and European Society for Clinical Nutrition and Metabolism. All rights reserved.

1. Introduction

Due to the progressive aging of the population, health and social care systems are facing a growing burden of chronic disease and disability [1]. Alcohol consumption is a major cause of disease burden worldwide, mostly from liver disease, cancer, and injuries [2]. However, certain drinking patterns may have beneficial health effects. Specifically, moderate and regular alcohol consumption has been consistently associated with lower risk of cardiovascular disease [3], diabetes [4], and cognitive decline [5].

With regards to disability, in some studies alcohol intake has been linked to lower frequency of limitations in activities of daily living (ADL) [6–9], instrumental activities of daily living (IADL) [10] and in walking 2–3 blocks and climbing stairs [10], but one

Abbreviations: MDP, Mediterranean Drinking Pattern; IADL, Instrumental activities of daily living.

* Corresponding author. Department of Preventive Medicine and Public Health, School of Medicine, Universidad Autónoma de Madrid, Calle del Arzobispo Morcillo 4, 28029 Madrid, Spain. Tel.: +34 91 497 27 61; fax: +34 91 497 53 53.

** Corresponding author. Department of Preventive Medicine and Public Health, School of Medicine, Universidad Autónoma de Madrid, Calle del Arzobispo Morcillo 4, 28029 Madrid, Spain. Tel.: +34 91 497 27 61; fax: +34 91 497 53 53.

E-mail addresses: luz.leon@uam.es (L.M. León-Muñoz), fernando.artalejo@uam.es (F. Rodríguez-Artalejo).

<http://dx.doi.org/10.1016/j.clnu.2016.05.005>

0261-5614/© 2016 Elsevier Ltd and European Society for Clinical Nutrition and Metabolism. All rights reserved.

investigation found an increased risk of IADL and ADL limitation, particularly among heavy drinkers [11]. Moreover, one study has shown that the inverse association between moderate alcohol consumption and physical limitations could be largely explained by poor health of former drinkers, and that the apparently protective effect of heavier drinking was partly due to less healthy former heavy drinkers who moved to lower drinking categories [12]. However, the cross-sectional design of these studies did not allow for causal inference. Only a few prospective studies on this issue have been conducted among older adults [13–18]. Most of them have found a protective effect of alcohol on disability, although in one study the health effects of alcohol were mostly explained by the associated health behaviors [16], whereas in another study the protection of alcohol was observed only in those reporting good health [17], and in yet another the benefits of alcohol were restricted to relatively young individuals [18].

None of the investigations mentioned above has been carried out in older adults from Mediterranean countries. This is important because in these populations there is a traditional drinking pattern characterized by a moderate alcohol intake, mainly from wine and with meals [19]. This pattern, called the Mediterranean drinking pattern (MDP), has been progressively abandoned by young adults but is still common in older individuals [20,21]. Moreover, the MDP has recently been associated with lower risk of frailty [22] and mortality [23]. However, we are not aware of any previous study on the association between the MDP and functional limitation in older adults.

Therefore, we analyzed data from two prospective cohorts of people aged 60 years and older in Spain to assess the association between drinking patterns, including the MDP, and the risk of functional limitation. We also assessed if the study associations varied with the age and health status of the study participants.

2. Methods

2.1. Study participants and design

2.1.1. UAM (Universidad Autónoma de Madrid) cohort

The methods of this cohort have been published elsewhere [24]. This cohort was established in 2001 with 4008 people representative of the Spanish non-institutionalized population aged ≥ 60 years. Data were collected at the participants' homes through a health interview and a physical examination conducted by trained personnel. In 2003 we contacted 3249 (80.9%) of the initial participants; of these, 243 were deceased (7.5%), and the remaining 3006 provided updated information. For the purpose of this study, we excluded the individuals with baseline limitation in mobility ($n = 1553$), agility ($n = 1764$) or IADL ($n = 1076$). Additionally, we excluded subjects without data on functional limitations at baseline or at the end of follow-up, as well those lacking information on potential confounders. Thus, the analyses on limitations in disability, agility and IADL were conducted, respectively, among 1225, 1031 and 1811 subjects.

All participants of the UAM cohort gave informed consent. The Ethics Committee of the La Paz University Hospital in Madrid approved the study.

2.1.2. Seniors-ENRICA cohort

The study methods have been described previously [22,25]. This cohort comprised 2614 community-dwelling Spanish individuals aged ≥ 60 years, who were recruited in 2008–2010. Information was collected at study enrollment in three stages. First, a phone interview was used to obtain data on socio-demographic factors, lifestyle, morbidity and disability. Then, two home visits were performed. In the first visit, nurses collected blood and urine

samples, while in the second lay personnel conducted a physical examination, recorded a diet history and obtained information on prescribed medications and functional limitations. In 2012, we performed a new wave of data collection to obtain updated information. Among the 2614 cohort participants in 2008–10, 115 were lost and 95 had died during follow-up. From the 2404 remaining subjects, we excluded 790 with limited mobility, 865 with agility limitation, and 271 with IADL disability at baseline. Moreover, we excluded subjects without data on functional limitations and other study variables, so that the analyses on limitations in mobility, agility or IADL were performed, respectively, with 1506, 1426 and 1644 subjects.

Study participants consented in writing to take part in the investigation, after receiving appropriate information. The study obtained the approval of the Ethics Committee of the La Paz University Hospital in Madrid.

2.2. Study variables

2.2.1. Alcohol consumption

In the UAM cohort, alcohol consumption in the previous year was assessed with a semi-quantitative food frequency questionnaire at baseline. The average alcohol intake (g/d) was calculated according to the alcohol content of each type of alcoholic beverage (spirits, sweet liquors, wine, beer and cider). Study participants were classified as non-drinkers, ex-drinkers, moderate drinkers, and heavy drinkers (the threshold between moderate and heavy intake was ≥ 40 g/d in men and ≥ 24 g/d in women) [26].

In the Seniors-ENRICA cohort, consumption of alcoholic beverages at baseline was estimated with a validated diet history [21,27]. This diet history collects data on the consumption of 34 alcoholic beverages in the preceding year, and the alcohol intake is estimated using standard composition tables. According to the average alcohol intake, individuals were classified as non-drinkers (including occasional drinkers with average intake close to zero), ex-drinkers (those reporting having stopped drinking at least a year before the interview), moderate drinkers, and heavy drinkers (using the same threshold of moderate-heavy drinking as above) [26]. Among drinkers, preference for a particular alcoholic beverage (e.g., wine) was defined as $>80\%$ of an individual's total alcohol intake consumed as that beverage [28]. Drinkers were also grouped into three categories: those who drank only with meals (lunch and dinner), those who drank only outside of meals, and those who drank at any time [28]. Finally, the MDP was defined as moderate consumption of alcohol (without binge-drinking), with preference for wine and only during meals [20–22]. Binge-drinking was considered to be an intake of ≥ 80 g of alcohol in men (≥ 60 g in women) during any drinking occasion in the previous month [29].

2.2.2. Functional limitations

Limitations in mobility, agility, and the IADL were ascertained at baseline and at the end of follow-up, using the same procedures in both cohorts. Mobility limitation was defined as an affirmative response to any of the three following questions: (i) "Do you experience any difficulty in picking up or carrying a shopping bag?"; (ii) "Do you experience any difficulty in climbing one flight of stairs?"; and (iii) "Do you experience any difficulty in walking several city blocks (a few hundred meters)?" [30] Agility limitation was ascertained as a positive answer to the question: "Do you experience any difficulty in bending or kneeling" [24]. Finally, disability in IADL was assessed with the Lawton and Brody Scale [31]. This scale evaluates the individual's ability to use the telephone, go shopping, prepare meals, do housework, do laundry, use different means of transportation, take medication, and manage

Download English Version:

<https://daneshyari.com/en/article/5571982>

Download Persian Version:

<https://daneshyari.com/article/5571982>

[Daneshyari.com](https://daneshyari.com)