P.6.b.002 Epidemiology and diffusion binge drinking phenomenon in an Italian population of young adults

ARTICLE · SEPTEMBER 2015
DOI: 10.1016/S0924-977X(15)30846-4

11 AUTHORS, INCLUDING:

Stefano Marini
Università degli Studi G. d'Annunzio Chieti e …
38 PUBLICATIONS 113 CITATIONS
SEE PROFILE

Rita Santacroce
Università degli Studi G. d'Annunzio Chieti e …
33 PUBLICATIONS 55 CITATIONS
SEE PROFILE

Giovanni Martinotti
Università degli Studi G. d'Annunzio Chieti e …
257 PUBLICATIONS 2,221 CITATIONS
SEE PROFILE

Laura Orsolini
University of Hertfordshire
51 PUBLICATIONS 31 CITATIONS
SEE PROFILE

All in-text references underlined in blue are linked to publications on ResearchGate, letting you access and read them immediately.

Available from: Matteo Lupi
Retrieved on: 06 December 2015
P.6.b. Addiction – Alcohol (clinical)

**P.6.b.001 Influence of NLPR3 and CARD8 inflammasome on expression of alcohol related psychopathological symptoms in alcohol addicted subjects**

A. Plemenitas1, B. Kores Plesnicar2, V. Dolzan3 1UKC Maribor, Department of psychiatry, Maribor, Slovenia; 2University Psychiatric Clinic, Psychiatric Clinic, Ljubljana, Slovenia; 3Institute of Biochemistry, Pharmacogenetics Laboratory, Ljubljana, Slovenia

**Purpose of the study:** Alcoholism can be viewed as an inflammatory condition with cytokines causing alcohol-induced organ damage. The development and persistence of alcohol addiction may be affected by cortical dysfunction and neurodegeneration, as well as neuroimmune and genetic predispositions [1]. We have shown that oxidative stress resulting from ethanol oxidation can contribute to development of alcohol addiction and high comorbidity rate for other psychiatric disorders [2]. Inflammasomes are a component of the innate immune system, but are also considered as central mediators by which psychological and physical stressors could contribute to the development of psychiatric disorders [3]. Inflammasomes consist of intracellular molecular damage sensors such as NOD-like receptors family pyrin domain containing (NLPRs) and the adaptor apoptosis-associated protein caspase-associated recruitment domain (CARD) [4]. NLPR3 and CARD polymorphisms lead to increased inflammasome activation with a resultant increase in secretion of interleukin-1β [5]. As oxidative stress in alcohol metabolism pathway may lead to activation of inflammasome, we explored whether inflammasome specific single-nucleotide polymorphisms NLPR3 rs35829419 and CARD8 rs2043211 influence alcohol related psychopathological symptoms.

**Methods:** Male Caucasian subjects from Slovenian population aged from 18 to 65 years were included: 88 currently alcohol addicted patients, 99 formerly alcohol addicted individuals and 94 healthy controls. The following questionnaires were employed: Zung Depression and Anxiety Scale, Brief Social Phobia Scale, Yale-Brown Obsessive Compulsive Scale and Obessive Compulsive Drinking Scale and Buss-Durkee Hostility Inventory. All subjects were genotyped for NLPR3 rs35829419 and CARD8 rs2043211. The effects of the two specific single-nucleotide polymorphisms and continuous variables on psychopathological symptoms were investigated with ANOVA using Statistica package, version 7.0 (StatSoft Italia, Vigonza, Padua, Italy) for Windows.

**Summary of results:** Genotype distribution for selected CARD8 rs2043211 did not deviate significantly from the Hardy-Weinberg equilibrium, except for NLPR3 rs35829419 in healthy controls, which was probably due to low frequency of the polymorphic A allele. In formerly addicted subjects CARD8 rs2043211 genotype was associated with Zung Anxiety Scale scores (mean score ± SD AA 29.1 ± 5.6, AT 30.8 ± 7.4, TT 36.4 ± 9.5, p = 0.048, DF = 2, F = 3.140), but not with other psychosymptomatology scores. No significant association between NLPR3 rs35829419 genotype and psychosymptomatology scores was observed in our sample.

**Conclusions:** CARD8 rs2043211 polymorphism shows some influence on the expression of anxiety symptoms in formerly alcohol addicted individuals, which may support the hypothesis of inflammasome as a mediator in the development of psychiatric disorders such as alcohol addiction. CARD8 is implicated in the regulation of both apoptosis and inflammation. On the other hand NLPR3 rs35829419 shows no influence on the expression of alcohol related psychopathological symptoms. Up to date no human studies supported a direct association between CARD8 rs2043211 or NLPR3 rs35829419 and alcohol addiction or psychosymptomatology; thus further investigations on the issue are needed.

**References**


**Disclosure statement:** The study was financially supported by the Ministry of Education, Science, and Sport of the Republic of Slovenia (Grant Nos P1-0170 and P3-0366)

**P.6.b.002 Epidemiology and diffusion binge drinking phenomenon in an Italian population of young adults**

M. Lupi1, T. Acciavattì2, E. Cinosi2, S. Marini2, R. Santacroce3, F. Sarchione2, F. Fiori2, M. Carlucci2, G. Martinotti2, M. Di Giannantonio1, L. Orsolini1, A. Plemenitas1 1Department of Neuroscience and Imaging – University “G. D’Annunzio” – Chieti, Italy; 2University “G. D’Annunzio”, Department of Neuroscience and Imaging, Chieti, Italy; 3Villa San Giuseppe Hospital, Hermanas Hospitalarias, Ascoli Piceno, Italy

**Purpose of the study:** The consumption of alcoholic beverages is considered in Italy, as in many Western countries, as a part of social life in general, but the excessive consumption and the introduction of new lifestyles have changed this tradition dramatically, increasing alcohol-related risks in both personal and social development. The globalization of alcohol consumption patterns has caused the diffusion, also in Italy, of habits more common in the United States and in Northern Europe, such as the binge drinking, mainly involving the youngest population [1]. Aim of the study is to investigate the spread of the binge drinking phenomenon in a population of Italian young adults, and to gain more information about the main motivations, personality, environmental and socio-cultural characteristics of young adults consuming alcohol.

**Methods:** A questionnaire investigating socio-economic characteristics and alcohol use has been administered to a sample of 4195 Italians subjects, aged between 18 and 26 years old (mean age: 22.05). In this paper, 1311 subjects have been evaluated as a pilot study. The data were collected between September 2013 and January 2014. All participants received a detailed explanation of the design of the study and a written informed consent was systematically obtained from every subject, according
to the Declaration of Helsinki. The selected sample resides in different Italian cities, located in the north, centre and south of the country, to ensure the inclusion of youths from diverse social and provenance contexts.

**Results:** The pilot sample includes 622 males (M: 47.4%) and 689 females (F: 52.6%). 80.5% of the sample habitually consumed alcoholic beverages (M: 86.7% vs. F: 75.3%; p<0.001) and 66.5% of respondents had binge drinking behaviour (M: 79.2% vs. F: 56.8%; p<0.01). Among binge drinkers, 79.8% had binge drinking habits, resulting in habitual alcohol consumption as a predictor of binge (p<0.001). Among binge drinkers, 98.2% consumed alcohol with friends (p<0.001); after a heavy drinking session, 51.1% lost control, 12.4% claimed to be unconscious, 5.1% had been hospitalized, 33.6% had episodes of aggressiveness, 44.9% were sexually uninhibited and 22.7% were taking drugs the following day. Men lost control more frequently than women (p<0.46); they also fainted more frequently after alcohol misuse (p<0.19), were more frequently aggressive (p<0.001) and sexually disinhibited (p<0.033). Women, instead, took more frequently medications the day after a heavy drinking session (p<0.001).

**Conclusions:** In our sample, nearly 80% of young adults who use alcohol are also binge drinkers. These percentages are higher than those evidenced by other Italian and European studies focused on the same type of population and represent a potential risk to public health [2,3]. Data on the effects of alcohol intoxication are also relevant and confirm the impairment of alarm thresholds and the lack of ability to control behaviours already emerged in scientific literature [4–5]. We propose to increase the number of available data in order to have more accurate and meaningful measures.

**References**


**P6.b.003 Nalmefene in alcohol-related disorder and major depressive disorder**

B.O. Plascencia García de Diego1, S.L. Romero Guillena2, J.M. Gonzalez Moreno3, 1De la Merced Hospital, Department of Psychiatry, Osuna, Spain; 2U.S.M.C “Carmona”, U.G.C. Salud Mental area Hospitalaria “Virgen Macarena”, Seville, Spain

**Purpose of the study:** According to the Spanish Association for Dual Pathology (Sociedad Española de Patología Dual), one third of patients with dual pathology meet the diagnostic criteria for major depressive episode. Although antidepressants may improve symptoms of depression, they are not necessarily effective in improving substance abuse. Nalmefene is an opioid receptor modulator, which exhibits antagonist activity at the mu and delta opioid receptors, and partial agonist activity at the kappa opioid receptors. Nalmefene as-needed has been shown to reduce the total amount of alcohol consumption and number of heavy drinking days and to improve liver function and clinical status in two published 6-month studies in patients with alcohol dependence [1,2].

The main objective of this study was to assess the effectiveness and tolerability of nalmefene in alcohol-related disorder co-occurring with major depressive disorder.

**Methods:** The sample included eleven male patients aged 35 to 50 years with primary diagnosis of alcohol-related disorder and depressive disorder, according to the Diagnostic And Statistical Manual of Mental Disorder 5th Edition (DSM 5) in incomplete remission treated with sertraline 100–150mg/24h alone. The patients were instructed to take one tablet (nalmefene 18 mg/24h) on each day they perceived a risk of drinking alcohol (as-needed dosing), preferably 1–2 hours before the anticipated time of drinking.

Patients were examined at baseline, at four and at eight weeks: Alcohol use (Timeline follow-back: TLFB. We used the Timeline Follow-back Procedure to obtain estimates of daily drinking, as well as to record medication intake) Alcohol craving (analogical visual scale, AVS) Hamilton Rating Scale for Depression (HRSD) Self-report of side effects All patients received motivational interviewing and psychosocial support to support them in changing their behaviour and to enhance adherence to treatment.

Both abstinence and reduction were acceptable treatment goals. Statistically significant differences over the course of the study were analyzed using an analysis of covariance model with the SPSS 20.0 program.

**Results:** The number of heavy drinking days (HDDs) decreased from 19 days/month to 5 days/month after one month and to 3 days after eight weeks of treatment. Total alcohol use (TAU) decreased from 108 g/day at baseline to 32 g/day after one month and to 12 g/day after two months (two patients became abstinent from the first month of treatment). Alcohol craving decreased from a mean 9.8 to 2.6 after eight weeks.

The score on Hamilton Rating Scale decreased from a mean 16.8 to 8.2 at week eight.

A total of 75% of patients reported to have experienced slight side effects at initiation of the treatment (generally digestive problems).

**Conclusions:** In this case series, nalmefene proved to be effective in reducing alcohol abuse and was well tolerated by patients with dual pathology including depression. Thus, psychopathological improvement was achieved with this drug.

A new pharmacological approach combined with a brief psychosocial intervention for alcoholism is available and appears to be feasible, safe and efficacious.

**References**