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Psychopathological profile and prevalence of dual pathology on patients with alcoholic dependence undergoing outpatient treatment

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Aims. Assess the prevalence of dual pathology in patients with alcohol dependence and describe the psychopathological profile of mental disorders, impulsiveness, ADHD presence and craving.

Method. It is a cross-sectional study about dual pathology, carried out on 102 patients undergoing outpatient treatment. The presence of dual pathology is established by means of the MINI-5 interview and the MCMI-III test; DSM-IV being used as the alcohol abuse criteria. Impulsiveness, ADHD presence, craving and quality of life were measured through SIS, ASRSv1, MACS and SF-36.

Results. The prevalence of dual pathology ranges from 45.1% to 80.4% according to MCMI-III and MINI-5, respectively. The most frequent pathologies are current major depressive episodes, followed by current generalized anxiety disorders, suicide risk and current dysthymia disorders; 73.2% of dual patients present a moderate and intense global score according to MACS, 56.1% got a meaningful score in impulsiveness according to SIS and 41.5% has highly consistent symptoms with ADHD. As regards quality of life, 53.7% of the sample had bad mental health. In the case of dual patients consuming other substances, 30% had a history of bipolar disorders and 10% had a high suicide risk.

Conclusions. The prevalence of psychiatric comorbidity in patients with alcohol dependence undergoing outpatient treatment varies depending on the detection method, MINI being the one identifying a greater number of cases. More than half of dual patients present impulsive behavior, a bad mental health state and high craving levels. Special attention should be paid to dual patients consuming other substances.

Keywords: Alcohol, Dual pathology, Alcoholism, Mental disorders

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Perfil psicopatológico y prevalencia de patología dual de los pacientes con dependencia alcohólica en tratamiento ambulatorio

Objetivo. Estimar la prevalencia de patología dual (PD) en pacientes con dependencia alcohólica y describir el perfil psicopatológico de los trastornos mentales, su impulsividad, hiperactividad y craving.

Metodología. Estudio transversal sobre PD de 102 pacientes en tratamiento ambulatorio. Se determina la presencia de PD mediante la entrevista MINI-5 y el test MCMI-III, utilizando como criterio de abuso o dependencia de alcohol el DSM-IV. Se emplearon además la EIE (impulsividad), ASRSv1 (hiperactividad), EMCA (craving) y SF-36 (calidad de vida).

Resultados. La prevalencia de PD varía del 45,1% (MCMI-III) al 80,4% (MINI-5) dependiendo del instrumento utilizado. Predominan el episodio depresivo mayor actual y recidivante, seguido por el trastorno de ansiedad generalizada actual, el riesgo de suicidio y el trastorno distímico actual; el 73,2% de los pacientes duales presenta una puntuación global moderada-intensa en EMCA, un 56,1% tiene conducta impulsiva y un 41,5% síntomas altamente consistentes con el TDAH. Respecto a la calidad de vida, el 53,7% tenía un mal estado de salud mental. Un 30% de los pacientes con PD y consumo añadido de drogas tenía antecedentes de trastorno bipolar y un 10% riesgo de suicidio alto.

Conclusiones. La prevalencia de comorbilidad psiquiátrica en pacientes con dependencia alcohólica en tratamiento ambulatorio varía dependiendo del método de detección, siendo la MINI la que identifica un mayor número de casos. Más de la mitad de los pacientes con PD tiene conducta impulsiva, mala calidad de salud mental y altos niveles de craving. Requieren especial atención los PD con consumo de otras sustancias.

Palabras clave: Alcohol, Patología dual, Alcoholismo, Trastornos mentales

INTRODUCTION

The World Health Organization[1] (WHO) in 2015 establishes that the harmful consumption of alcoholic drinks causes 3.3 million deaths every year (5.9% of all deaths). Alcohol consumption takes the third place among the risk factors of the global burden of disease; it is the first risk factor in the Western Pacific and America, and the second one in Europe.

In order to improve the diagnosis and treatment of alcohol consumption disorders it should be considered the possibility that other psychiatric pathologies or personality disorders come together. That is to say, what is usually called dual pathology. This is not an official term included in the mental health international classifications (DSM-5, CIE-10), but it is the result of more current approaches which have been going on since the 90s, relating comorbidities among different mental disorders. That is, dual pathology makes reference to the development of a mental disorder and an addictive one in the same person[2].

Several epidemiological studies[3,4] point out a high comorbidity in dual pathology, rate is higher in individuals undergoing treatment, and this concomitant presence of some disorders has clinical, evolutionary and therapeutical relevant implications. Both the studies carried out in general population and the ones in clinical samples show high prevalence of substance use disorders and other psychiatric disorders[5-7], ranging from 15-80%. This wide range is due to several factors, the following being among them: the heterogeneity of the studied samples, the health care model of addictive disorders, the factors associated with the abused substance, the intercurrent factors and the difficulties in diagnosis. One of the problems presented by dual pathology is that comorbidity is frequently unidentified, and this results in bad therapeutic results, a poor prognosis and greater chances to relapse[8,9].

We don't have much data about the prevalence of dual pathology in Spanish people[7,8,10,11], most of them being in patients with substance use disorders (SUD).

In addictive behaviours, some clinical aspects which affect the evolution and response to treatment should be considered; the most important being high impulsiveness[12], presence of attention-deficit/hyperactivity disorder (ADHD) in adults[13] and craving intensity[14], as it has been proved that it affects the seriousness of alcohol dependence.

Have a better knowledge of the relations among these variables would allow to go into detail about this study field. Important assessment and prevention strategies about the most outstanding factors would be designed in order to reduce their incidence and morbidity.

This study has aimed to assess the prevalence of dual pathology in patients with alcohol dependence undergoing outpatient treatment and describe the psychopathological profile of mental disorders, impulsiveness, ADHD presence and craving.

METHOD

Participants

It is a descriptive study about the prevalence of dual pathology, carried out on 125 patients suffering from alcohol dependence and undergoing outpatient treatment. From 110 people, who agreed to take part in the study and signed the informed consent document, 8 were rejected because of an inappropriate fulfillment of the assessment tests, 15 of them declined to participate in the study for personal reasons, the final sample being made up of 102 patients. This study didn't interfere in the patients' clinical intervention. The methodological, ethical and legal aspects were adopted by the research committee. All the patients agreed to take part in the study and give personal data by signing the suitable informed consent.

Procedures

The inclusion criteria were being 18 years old at least and meet the DSM-IV[15] diagnostic criteria for alcohol dependence or abuse. Those patients who drank alcohol at that moment and showed no intention of giving up that habit were excluded. The information was collected from January to June 2014 during the pre-treatment assessment.

Evaluation instruments

The sociodemographic variables (gender, age, nationality, marital status, home, level of studies and laboral status), personal clinical history (physical and psychiatric), relatives' psychiatric disorders, alcohol consumption pattern [alcohol consumption starting age, other drug use, number of SDU (Standard Drink Unit) consumed a week, consumption pattern] and legal incidents were collected from the medical history data. Polyconsumption was assessed through the question: have you taken any drug in the last 12 months? Say which ones. It is believed there is polyconsumption when two or more substances (except tobacco) are used by the patient apart from alcohol.

As part of the clinical interview patients filled in the Spanish version[16] of the Mini International Neuropsychiatric Interview (MINI-5), which assesses a wide range of mental disorders. The self-administered tests were:

Millon Clinical Multiaxial Inventory – III (MCMI-III): The Spanish adaptation[17] was used for personality assessment

(Axis II), and possible Axis I disorders. 85 or higher score indicates presence of a mental disorder in Axis I and a possible personality disorder in Axis II.

Multidimensional Alcohol Craving Scale (MACS): The Spanish validation[14] is made up of 12 items scored from 1 to 5. The craving global score would be the sum of two factors: desire and drinking behavioural desinhibition. Craving is classified in low, moderate and intense according to under 16 score, between 16 and 40 or over 40, respectively.

State Impulsivity Scale (SIS): The Spanish validation[18] consists of 20 items scored from 0 to 3. The cut-off score is 17 for males and 14 for females.

The Adult ADHD Self-Report Scale (ASRSv1): It is a test to dismiss the symptoms of attention-deficit/hyperactivity disorder (ADHD) in adults. It was validated in Spain[19] and it consists of 18 items divided into two sections, the first 6 belong to Part A and the following 12 to Part B. If 4 or more of the options below are marked in Part A then the patient has symptoms highly consistent with ADHD:

- Items 1, 2 and 3: options 3, 4 and 5.
- Items 4, 5 and 6: options 4 and 5.

Part B provides additional cues about the patient's symptoms.

ASRSv1 has been used on alcoholic patients. Its psychometric properties have been analysed showing its usefulness for ADHD screening[20].

The Short Form-36 Health Survey (SF-36): It was validated in Spain[21]. It consists of 36 items, dealing with 8 health state dimensions: Physical functioning (PF), social functioning (SF), role-physical (RP), bodily pain (BP), general health (GH), vitality (V), role-emotional (RE), mental health (MH). The over or under 50 values show a better or worse health state, respectively. Besides, dimensions mentioned above can be grouped in two components: PCS (Physical Component Summaries) made up of the first four dimensions and MCS (Mental Component Summaries) made up of the other four ones.

Data analysis

A descriptive study of the variables was carried out using mean calculation and standard deviation for the quantitative variables, and absolute and relative frequencies for qualitative variables. The qualitative variables were compared in dual and non-dual patients by means of Chi-square and Fisher Test, and the differences in quantitative variables were analyzed by means of Student's T test/ANOVA or nonparametric tests (Mann-Whitney/Kruskall-Wallis). The correlation in quantitative variables was carried out by means of Pearson and Spearman tests.

Statistical Package for the Social Sciences (SPSS), version 21 was used for the statistical treatment of data.

RESULTS

The sample is made up of 102 patients (76.5% males). Their age ranges from 27-78 years old with a mean age of 47 years old (DT 9.81). The socio-demographic features of the sample are shown in table 1.

15.7% had legal incidents before beginning heavy drinking and 11.8% after it. More than one third of the patients (35.3%) had a first degree relative suffering from a psychiatric pathology. Regarding medical history, 29.4% suffered from any, the most frequent being HBP (13.7%), followed by neoplasia (5.9%).

The starting mean age for alcohol consumption in both sexes is 16.4 years old. The consumption pattern of the sample is mainly daily (94.1%) and the average weekly consumption is 68.1 SDU (72.85 SDU/week males and 52.67 SDU/week females) having a mode of 56 SDU, 28 SDU minimum and 154 SDU maximum. The most consumed drinks were both fermented and distilled ones (54.9%), and distilled drinks (35.9%).

66.7% used tobacco and eight out of ten patients had consumed drugs some moment in their life, the most consumed being: cocaine (35.3%), marijuana (15.7%) and cannabis (11.8%). 21.6% of the sample presented polyconsumption in the last 12 months, 24.4% in the case of those suffering from dual pathology; 90.9% of those suffering from dual pathology presented polyconsumption.

The prevalence of dual pathology varies depending on the assessment tool it is used. It ranges from 45.1% in the case of MCMI-III to 80.4% in the case of the interview MINI-5.

MINI-5 revealed that 76.9% males and 91.7% females of the sample suffered from dual pathology. 24.4% of them consumed other substances. The prevalence rates of the most frequent psychiatric pathologies were: current major depressive episode MDE (56.1%), MDE lifetime (53.7%), current generalized anxiety disorder (48.8%) and dysthymia (36.6%); it should be noted that 43.9% of those suffering dual pathology presented suicide risk, this one being higher in half cases. In patients with dual diagnosis who also abused other substances, generalized anxiety disorder was the most prevalent one (70%) followed by current and lifetime MDE (40% each); 30% presented bipolar disorder history (past manic episode/hipomanic episode) and 10% a high current suicide risk (Table 2).

The analysis of dual pathology/diagnosis in MCMI-III Axis I shows that the most frequent clinical syndromes are: anxiety disorder (41.5%), thought disorder (17.1%) and

Table 1 Sociodemographic data of the sample

VARIABLES	Complete Sample[a] %	Dual Pathology[b] %	Without Dual Pathology[c] %	Dual Pathology + Polyconsumption[d] %
GENDER				
Male	76.5	73.2	90	80
Female	23.5	26.8	10	20
AGE (years)				
Average	47.41	47.27	48	45
Range	27-78	27-66	33-78	27-60
NATIONALITY				
Spanish	98	97.6	100	100
Other country (non – EU)	2	2.4	-	-
MARITAL STATUS				
Single	21.6	22	20	60
Married	33.3	31.7	40	-
Wildow/er	2	-	10	-
Separated	2	-	10	-
Divorced	41.2	46.3	20	40
HOME				
One's own house	64.7	65.9	60	70
Rented house	29.4	29.3	30	10
Social housing	2	2.4	-	10
Reinsertion house	3.9	2.4	10	10
LEVEL OF EDUCATION				
No studies	5.9	7.3	-	10
ESO	66.7	68.3	60	90
High school/Professional training studies	13.7	12.2	20	-
University Education	13.7	12.2	20	-
LABORAL STATUS				
Unemployed	41.2	41.5	40	40
Active	41.2	39	50	40
Retired	15.7	17.1	10	20
Disabled	2	2.4	-	-

[a] N=102. [b] n=82. [c] n=20. [d] n=20.

Table 2 Prevalence of psychiatric pathologies by gender, according to MINI 5.0 interview

	MINI 5.0		Both[a]			Dual Pathology[b]			Dual Pathology + Polyconsumption[c]		
			B	♂	♀	B	♂	♀	B	♂	♀
A	MDE Current		**45.1**	41	58.3	**56.1**	53.3	63.6	**40**	37.5	50
	MDE Lifetime		**43.1**	38.5	58.3	**53.7**	50	63.6	**40**	37.5	50
	MDE with melancholic features Current		**17.6**	10.3	41.7	**22**	13.3	45.5	**10**	12.5	-
B	Dysthymia (past 2 years)		**29.4****	23.1	50	**36.6**	30	54.5	**10**	12.5	-
C	Suicidality (pastmonth)		**35.3***	33.3	41.7	**43.9**	43.3	45.5	**10**	12.5	-
	Suicide risk:	Low	**22.2**	30.8	-	**22.2**	30.8	-	**-**	-	-
		Moderate	**27.8**	38.5	-	**27.8**	38.5	-	**-**	-	-
		High	**50**	30.8*	100	**50**	30.8	100	**100**	100	-
D	Hypomanic Episode		**15.7**	15.4	16.7	**19.5**	20	18.2	**30**	25	50
	Type:	Current	**12.5**	16.7	-	**12.5**	16.7	-	**-**	-	-
		Past	**87.5**	83.3	100	**87.5**	83.3	100	**100**	100	100
	Manic Episode		**9.8**	7.7	16.7	**12.2**	10	18.2	**30**	25	75
	Type:	Current	**20**	33.3	-	**20**	33.3	-	**-**	-	-
		Past	**80**	66.7	100	**80**	40	100	**100**	100	100
E	Panic Disorder Current (past month)		**23.5**	15.4	50	**29.3**	20	54.5	**-**	-	-
	Panic Disorder Lifetime		**11.8**	7.7	25	**14.6**	10	27.3	**-**	-	-
F	Agoraphobia		**9.8**	5.1	25	**12.2**	6.7	27.3	**-**	-	-
G	Social Phobia		**17.6**	23.1	-	**22**	30	-	**-**	-	-
H	Obsessive-Compulsive Disorder		**19.6**	20.5	16.7	**24.4**	26.7	18.2	**30**	25	50
I	Posttraumatic Stress Disorder		**7.8**	5.1	16.7	**9.8**	6.7	18.2	**-**	-	-
K	Drug Dependence (Non-alcohol) Current		**7.8**	10.3	-	**9.8**	13.3	-	**30**	37.5	-
	Drug Abuse (Non-alcohol) Current		**21.6**	23.1	16.7	**24.4**	26.7	18.2	**100**	100	100
L	Psychotic Disorders Current		**3.9**	5.1	-	**4.9**	6.7	-	**10**	12.5	-
	Psychotic Disorders Lifetime		**2**	2.6	-	**2.4**	3.3	-	**-**	-	-
	Mood Disorder with psychotic features		**2**	2.6	-	**2.4**	3.3	-	**-**	-	-
O	Generalized Anxiety Disorder Current		**39.2**	38.5	41.7	**48.8**	50	45.5	**70**	45	50
P	Antisocial Personality Disorder Lifetime		**11.8**	15.4	-	**14.6**	20	-	**10**	12.5	-

MDE: Major Depressive Episode. B: Both. ♂: Male. ♀: Female. The "J" category is omitted since dependence was considered an inclusion criterion of this study.

[a] B (N=102). ♂ (n=78). ♀ (n=24).

[b] B (n=82). ♂ (n=60). ♀ (n=22).

[c] B (n=20). ♂ (n=16). ♀ (n=4).

* p=0.001. **p=0.011.

dysthymia disorder, drug dependence and major depression (9.8% for each of them), with an average of 2.45 disorders per patient apart from alcohol dependence. When drug abuse is taken into account, the prevalence is anxiety disorder (30%) and thought disorder (20%) (Table 3).

As regards personality disorders assessed with MCMI-III Axis II, the categories which show the highest frequency in dual pathology were: schizoid and schizotypal, antisocial and borderline, and avoidant (4.9% for each of them). When other substance consumption was added, schizotypal, narcissistic and avoidant (10% each) were the most prevalent categories (Table 4).

Regarding craving (MACS), almost three-quarters of the patients presented a moderate or intense global score (64.7% vs 7.8%). Females show higher moderate-intense craving than males (91.6% vs 66.7%). On a scale of "Desire to drink", males obtained a higher score in "Behavioural disinhibition". The intensity of craving was higher in the dual patients, who obtained highest scores out of the three categories and even higher when there was drug consumption. This demonstrates that this last group shows a significant deviation in the global score (p=0.028) (Table 5.)

The table 6 displays the results of impulsiveness (SIS), ADHD symptoms (ASRSv1) and quality of life related to health (SF-36) in all the sample groups. 52.9% presents impulsive behaviour (51.3% males vs 58.3% females). 37.3% presents ADHD symptoms (35.9% males vs 41.7% females). As regards quality of life, 17.6% and 45.1% present bad physical and mental health state, respectively. The presence of dual pathology is related to a worse quality of life both in the physical aspect (p=0.021) as in the mental one (p=0.000). When other drugs are consumed the prevalence increases even more showing significant deviation for ADHD symptoms (p=0.019) and SF-36 Mental Component Summaries (p=0.000) (Table 6).

DISCUSSION

The socio-demographic features of this study are very similar to the ones appearing in other studies about dual pathology and addictive disorders, both in the average age and gender distribution[10,22]. The number of males is greater (76.5%) as it happens in most studies about dual pathology; the fact that there are fewer women could be due to a lower prevalence of women and/or the social stigma which limits them attend treatment sessions[23].It is remarkable that women undergoing treatment in this study present differentiating features which show higher clinical severity such as higher impulsivity levels, higher prevalence of consistent symptoms with ADHD, and a greater number of females reached a high score in the intense case in desire to drink section.

The average starting age for alcohol consumption in both sexes is 16.4 years old, matching that shown in a study carried out by EDADES[24] 2011/12. The average consumption is 68.1% SDU/week; these figures reveal heavy drinking levels characteristic of people who attend treatment and widely overcome the high-risk alcohol consumption limits.

82.4% of the sample consumed other substances at some time in their life, the most consumed being cocaine, marijuana and cannabis. These substances linked to alcohol are also the most consumed according to other studies about dual pathology as the one carried out in Navarra[25]. And cocaine is the most consumed in another study made in Madrid[10].

About 21.6% of the cases presented polyconsumption (tobacco not included) in the past 12 months. This percentage increases a bit in the case of dual patients (26.6% males vs 18.2% females). Males' greater consumption coincides with other studies[26,27] and a recent systematic review[28] which analyses 40 researches about dual pathology. There is a significant association between drug abuse and the presence of dual pathology (p=0.014), therefore, drug abuse in patients attending an addiction treatment centre for alcohol dependence could mean they suffer from dual pathology. In that case, the use of the suitable tools to confirm it would be recommended.

The prevalence of dual pathology according to the interview MINI 5 (80.4%) is within the described range in other studies[5,6,7], this high figure may be conditioned by the fact that mental disorders are highly detected by the professionals working on addictions, as it is revealed in other researches[8,10].

There is a significant association between females and the presence of dual pathology (p=0.013), as it is confirmed in other study[29] stating that females present a higher probability of suffering psychiatric comorbidity.

The most prevalent mental disorders coincide with some published studies, these ones being lifetime and current MDE[8,30] and generalized anxiety disorder[8,31]. Half the sample present high risk suicide which is more significant in females. 15-25% of all suicides affect alcoholic patients[5], the risk being higher when they suffer dual pathology[8,10], that is why this aspect requires further research[32].

Most studies on dual pathology use the MINI interview to detect comorbidity[8,10,11,33], not paying attention to the possible presence of personality disorders in alcoholic patients. It may even happen that not considering them may difficult the effectiveness of interventions, as in substance use disorders (SUD). Therefore, since the MCMI-III test detects fewer cases of dual pathology than the MINI interview, its utility may lay on the capacity to detect personality disorders in its Axis II[34-36], despite there are no

Table 3 Total prevalence of the medical symptoms according to MCMI-III Axis I, by gender

MCMI-III AXIS I	Complete Sample[a]			Dual Pathology[b]			Without Dual Pathology[c]			Dual Pathology + Polyconsumption[d]		
	CS	♂	♀	CS	♂	♀	CS	♂	♀	CS	♂	♀
Anxiety disorder	**37.3**	30.8	58.3	**41.5**	33.3	63.6	**20**	22.2	-	**30**	25	50
Somatoform disorder	**2**	2.6	-	**2.4**	3.3	-	**-**	-	-	**-**	-	-
Post-Traumatic stress	**5.9**	5.1	8.3	**7.3**	6.7	9.1	**-**	-	-	**10**	12.5	-
Bipolar disorder	**5.9**	7.7	-	**4.9**	6.7	-	**10**	11.1	-	**10**	12.5	-
Dysthymia disorder	**7.8**	2.6*	25	**9.8**	3.3	27.3	**-**	-	-	**10**	-	50
Major depression	**7.8**	5.1	16.7	**9.8**	6.7	18.2	**-**	-	-	**-**	-	-
Drug dependence	**13.7**	15.4	8.3	**9.8**	10	9.1	**30**	33.3	-	**20**	25	-
Thought disorder	**13.7**	17.9	-	**17.1**	23.3	-	**-**	-	-	**20**	25	-
Delusional disorder	**2**	-	8.3	**2.4**	-	9.1	**-**	-	-	**10**	-	50

CS: Complete Sample. ♂: Male. ♀: Female. The "Alcohol Dependence" category is omitted since it was considered an inclusion criterion of this study.
[a] CS (N=102). ♂ (n=78). ♀ (n=24).
[b] CS (n=82). ♂ (n=60). ♀ (n=22).
[c] CS (n=20). ♂ (n=18). ♀ (n=2).
[d] CS (n=20). ♂ (n=16). ♀ (n = 4).
* p=0.011.

studies on dual pathology prevalence using this tool to detect disorders in its Axis I. Regarding Axis II, the categories on personality disorders found differ from other studies[37].

Almost three-quarters of the patients suffering from dual pathology present a moderate or intense craving global score, an indication of greater alcoholic dependence[38]; that is the reason why it is an important point to be evaluated by professionals in the design of therapeutic strategy, and that way making the recovery process[14] easier.

Patients who suffer from dual pathology present a slightly greater craving than patients who don't suffer from it (73.2% vs 70%), and it is even higher when drug consumption is involved (90%), a significant difference in the latter group regarding the global score (p=0.028). MACS[14] Spanish validation indicates that the craving intensity may be modulated by the intensity of alcohol dependence and pshychiatric and addictive comorbidity. This scale is sensitive to the changes in the evolution of alcoholic patients, and therefore, it can be useful in planning and evaluation of results in alcoholism treatment.

The analysis of the compulsive behaviour as a estate, although it is increasingly present in dual patients, more than in non dual patients (56.1% vs 40%), show no significant differences between these two groups; in spite of this, considering it is important since the high impulsivity can be modified by pharmacological treatment or psicotherapy, as it is widely known, transitory variations in levels of impulsivity respond to environmental or biological changes[18]. Numerous studies have associated the high impulsivity with drug consumption[12,39], thus, alcohol dependent patients present higher impulsivity levels than other clinical control groups and healthy control groups[40].

Consistent symptoms with ADHD are present in a bit more than a third of the sample, slightly increasing (41.5%) on dual patients and reaching 60% when other drug consumption is involved; this fact matches with several studies which point out a high prevalence of heavy drinking on ADHD patients[19,41]. Other studies indicate that a higher psychiatric comorbidity[42] could be conditioned by ADHD presence in adults. From a physical and pathological point of view, you can explain that addictive diseases in ADHD are so prevalent because there are substances stimulating the release of neurotransmitters (dopamine, especially) reducing this way the princeps symptoms of ADHD. Alcohol consumption may have a suppressive effect over the symptoms of this disorder, so it may sometimes lead to a temporary improvement of insomnia that they often suffer[13]. All the above underlines, on the one hand, the importance of communicating ADHD patients about the possible risks of

Table 4 Total prevalence of the prototypes according to MCMI-III Axis II, by gender

MCMI-III AXIS II	Complete Sample[a]			Dual Pathology[b]			Without Dual Pathology[c]			Dual Pathology + Polyconsumption[d]		
	CS	♂	♀	CS	♂	♀	CS	♂	♀	CS	♂	♀
Schizoid	**3.9**	5.1	-	**4.9**	6.7	-	**-**	-	-	**-**	-	-
Avoidant	**3.9**	5.1	-	**4.9**	6.7	-	**-**	-	-	**10**	12.5	-
Depressive	**2**	-	8.3	**2.4**	-	9.1	**-**	-	-	**-**	-	-
Dependent	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Histrionic	**2**	2.6	-	**2.4**	3.3	-	**-**	-	-	**-**	-	-
Narcissistic	**2**	2.6	-	**-**	-	-	**-**	-	-	**10**	12.5	-
Antisocial	**5.9**	5.1	8.3	**4.9**	3.3	9.1	**10**	11.1	-	**-**	-	-
Sadistic	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Compulsive	**5.9**	7.7	-	**2.4**	3.3	-	**20**	22.2	-	**-**	-	-
Negativistic	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Masochistic	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Schizotypal	**3.9**	2.6	8.3	**4.9**	3.3	9.1	**-**	-	-	**10**	12.5	-
Bordeline	**3.9**	2.6	8.3	**4.9**	3.3	9.1	**-**	-	-	**-**	-	-
Paranoid	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Cluster A	**7.8**	7.7	8.3	**9.8**	10	9.1	**-**	-	-	**10**	12.5	-
Cluster B	**13.7**	12.8	16.7	**14.6**	13.3	18.2	**10**	11.1	-	**10**	12.5	-
Cluster C	**9.8**	12.8	-	**7.3**	10	-	**20**	22.2	-	**10**	12.5	-

CS: Complete Sample. ♂: Male. ♀: Female.
[a] CS (N=102). ♂ (n=78). ♀ (n=24).
[b] CS (n=82). ♂ (n=60). ♀ (n=22).
[c] CS (n=20). ♂ (n=18). ♀ (n=2).
[d] CS (n=20). ♂ (n=16). ♀ (n = 4).

studies on dual pathology prevalence using this tool to detect disorders in its Axis I. Regarding Axis II, the categories on personality disorders found differ from other studies[37].

Almost three-quarters of the patients suffering from dual pathology present a moderate or intense craving global score, an indication of greater alcoholic dependence[38]; that is the reason why it is an important point to be evaluated by professionals in the design of therapeutic strategy, and that way making the recovery process[14] easier.

Patients who suffer from dual pathology present a slightly greater craving than patients who don't suffer from it (73.2% vs 70%), and it is even higher when drug consumption is involved (90%), a significant difference in the latter group regarding the global score (p=0.028). MACS[14] Spanish validation indicates that the craving intensity may be modulated by the intensity of alcohol dependence and pshychiatric and addictive comorbidity. This scale is sensitive to the changes in the evolution of alcoholic patients, and therefore, it can be useful in planning and evaluation of results in alcoholism treatment.

The analysis of the compulsive behaviour as a estate, although it is increasingly present in dual patients, more than in non dual patients (56.1% vs 40%), show no significant differences between these two groups; in spite of this, considering it is important since the high impulsivity can be modified by pharmacological treatment or psicotherapy, as it is widely known, transitory variations in levels of impulsiv-

Table 5 Results of MACS, by gender

		Complete Sample[a]			Dual Pathology[b]			Without Dual Pathology[c]			Dual Pathology + Polyconsumption[d]		
		CS	♂	♀	CS	♂	♀	CS	♂	♀	CS	♂	♀
Desire to drink	M	**68.6**	64.1	83.3	**70.7**	66.7	81.8	**60**	55.6	100	**90**	87.5	100
	I	**7.8**	7.7	8.3	**7.3**	6.7	9.1	**10**	11.1	-	**-**	-	-
Behavioural desinhibition	M	**37.3**	41	25	**34.1**	40	18.2	**50**	44.4	100	**50**	62.5	-
	I	**17.6**	15.4	25	**22**	20	27.3	**-**	-	-	**20**	12.5	50
Global score	M	**64.7**	59	83.3	**65.9**	60	81.8	**60**	55.6	100	**90***	87.5	100
	I	**7.8**	7.7	8.3	**7.3**	6.7	9.1	**10**	11.1	-	**-**	-	-

CS: Complete Sample. ♂: Male. ♀: Female. M: Moderate. I: Intense.
[a] CS (N=102). ♂ (n=78). ♀ (n=24).
[b] CS (n=82). ♂ (n=60). ♀ (n=22).
[c] CS (n=20). ♂ (n=18). ♀ (n=2).
[d] CS (n=20). ♂ (n=16). ♀ (n = 4).
* p=0.028.

Table 6 Results of SIS, ASRSv1 and SF-36, by gender

		Complete Sample[a]			Dual Pathology[b]			Without Dual Pathology[c]			Dual Pathology + Polyconsumption[d]		
		CS	♂	♀	CS	♂	♀	CS	♂	♀	CS	♂	♀
EIE[e]		**52.9**	51.3	58.3	**56.1**	56.7	54.5	**40**	33.3	100	**50**	50	50
ASRSv1		**37.3**	35.9	41.7	**41.5**	40	45.5	**20**	22.2	-	**60****	62.5	50
SF-36[f]	PCS	**17.6**	15.4	25	**22***	20	27.3	**-**	-	-	**20**	25	-
	MCS	**45.1**	35.9	75	**53.7*****	43.3	81.8	**10**	11.1	-	**80*****	75	100

CS: Complete Sample. ♂: Male. ♀: Female. PCS: Physical Component Summaries. MCS: Mental Component Summaries.
[a] CS (N=102). ♂ (n=78). ♀ (n=24).
[b] CS (n=82). ♂ (n=60). ♀ (n=22).
[c] CS (n=20). ♂ (n=18). ♀ (n=2).
[d] CS (n=20). ♂ (n=16). ♀ (n = 4).
[e] ≥17 points in male and ≥ 14 points in female.
[f] ≤49 points.
* p=0.021; ** p=0.019; *** p=0.000.

ity respond to environmental or biological changes[18]. Numerous studies have associated the high impulsivity with drug consumption[12,39], thus, alcohol dependent patients present higher impulsivity levels than other clinical control groups and healthy control groups[40].

Consistent symptoms with ADHD are present in a bit more than a third of the sample, slightly increasing (41.5%) on dual patients and reaching 60% when other drug consumption is involved; this fact matches with several studies which point out a high prevalence of heavy drinking

on ADHD patients[19,41]. Other studies indicate that a higher psychiatric comorbidity[42] could be conditioned by ADHD presence in adults. From a physical and pathological point of view, you can explain that addictive diseases in ADHD are so prevalent because there are substances stimulating the release of neurotransmitters (dopamine, especially) reducing this way the princeps symptoms of ADHD. Alcohol consumption may have a suppressive effect over the symptoms of this disorder, so it may sometimes lead to a temporary improvement of insomnia that they often suffer[13]. All the above underlines, on the one hand, the importance of communicating ADHD patients about the possible risks of alcohol or any other drugs abuse, and also prevent addictive conducts; on the other hand, surveillance of ADHD in alcohol or any other substances abuse or overconsumption in adults.

17.6% of the sample has a bad quality of life when talking about physical aspect and 45.1% mentally speaking, worsening in dual pathology patients and even more when there is additional drug consumption within the last year. There is an impoverishment of the social role in dual pathology patients who consume drugs; this can be explained in a worse integration in alcoholic not consuming drugs circles or in the regular population. The use of tools evaluating the quality of life can be useful when used for a therapeutic purpose, so that both therapist and patient can use this information for a better understanding of alcoholism and that way, promoting significant changes of the problem[43].

The origin of the sample is a methodological limitation to considerate, since it does not allow extrapolating results to general population, because they are patients attending an outpatient facility for alcohol treatment and rehabilitation with an attention model mixing self-help and treatment given by a specialized technical team. Another limitation is making the dual pathology evaluation without considering sometime of abstinence, which can influence the general state of the patient and the results, as it is shown in revised studies. These results must be confirmed in wider and from different source samples.

Dual Pathology prevalence in patients with an alcoholic dependence who attend an outpatient facility is really high, what is more, proving that the current consumption of other substances is associated to higher moderate-intense craving prevalence, consistent symptoms in ADHD and a worse state of mental health. Therefore, consumption of other drugs in patients demanding attention for alcohol dependence/abuse could be criteria to apply in screening tests for dual pathology. One of the possible challenges would be to identify possible clinic indicators which may show dual pathology, and therefore, to apply screening protocols in order to select diagnostic tools to make use of, and in their short versions if possible.

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CONFLICT OF INTERESTS

The authors declare no conflict of interests.

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