

INTENSITY OF SYMPTOMS FROM ALCOHOL WITHDRAWAL IN ALCOHOL-DEPENDENT PATIENTS: COMPARISON BETWEEN SMOKERS AND NON-SMOKERS

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SUMMARY

Background: in patients with a dual dependence on alcohol and tobacco, the spontaneous discourse among doctors is not to encourage them to consider preparing to give up both substances. The argument put forward is that withdrawal would be more difficult. We wanted to compare the intensity of withdrawal symptoms in patients hospitalised for alcohol detoxification between smokers and non-smokers.

Subject and methods: We compared patients hospitalised for alcohol detoxification who smoke versus non-smokers who received replacement therapy through benzodiazepines and not nicotine replacement. The blood pressure and the cardiac frequency measure on the first day of hospitalisation, the doses of Diazepam dispensed on the first day, and the Clinical Institute Withdrawal Assessment of Alcohol Scale Revised (CIWA-Ar) score on the second day were compared.

Results: a trend emerged whereby smoking patients undergoing alcohol detoxification showed higher blood pressure, higher cardiac frequency and required higher doses of benzodiazepines on the first day of hospitalisation. Patients who smoke also had higher CIWA-Ar scores on the second day of hospitalisation.

Discussion: from a physiological point of view, the intensity of the symptoms of alcoholic withdrawal seems to be greater in hospitalised patients who smoke vs. non-smokers in the first two days. Does giving up both substances at the same time result in fewer withdrawal symptoms? And in this case, should a double replacement be recommended: benzodiazepines and nicotine replacement therapy?

Conclusion: to be able to refine the recommendations on alcohol-tobacco dual withdrawal programmes, other studies are needed to compare giving up both substances with or without nicotine replacement.

Key words: alcohol – tobacco - withdrawal - blood pressure - cardiac frequency - CIWA

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INTRODUCTION

The links between the phenomena of alcohol and tobacco dependence have been discussed for a long time (Zimmerman et al. 1990) and are increasingly highlighted in the literature (Kalher et al. 2009). Doctors tend to still advise patients to stop one substance at a time, arguing that it would be too difficult to stop everything. In our clinical practice, we have seen situations of patients who have been hospitalised for alcohol detoxification who have been very successful but who have doubled or even tripled their smoking. Plague or cholera?

It is recalled that according to the World Health Organisation, tobacco was the fourth risk factor for disease and death globally in 2000 with alcohol in fifth place (World Health Association 2002).

So-called "illegal" drugs only ranked seventeenth. The three main risk factors globally were, in order: malnutrition, unprotected sex and blood pressure problems. The problem is therefore significant.

The evaluation of tobacco dependence tends to be neglected in psychiatry where it is a factor of poor prognosis with regard to relapses in alcohol-dependent patients (Prochaska 2010). Inversely, alcohol drinking had also an influence on relapses in tobacco cessation treatment (Khaler et al. 2010). Among adolescent

substance users, the approach to tobacco dependence is essential (Ramo et al. 2010).

It is a multi-faceted problem. First of all, in situations of dual dependence the studies lean toward the issues being intertwined (Cooney et al. 2007). The differentiated analysis of the motivations for stopping each of the products needs to be investigated and tobacco abstinence self-efficacy might more accurately predict an individual's future success to cope with the urge to drink than alcohol abstinence self-efficacy (Demmel et al. 2009).

Then a central question would obviously be to see to what extent the patients would be ready to consider giving up both substances (Stotts et al. 2003). But the real issue is finding out what information patients can rely on to make their choice? What advice do they get and what training do caregivers have (Denny et al. 2003)?

We have already addressed the issue on the importance of training in motivational interviewing for post-graduate doctors of psychiatry and its impact on their perceptions about being able to consider preparing a patient to give up both substances (Jacques et al. 2010). We continue to study this question with regard to nurses and post-graduates in internal medicine.

Firstly the approach to dual withdrawal is certainly not about imposing, but questioning in a more systematic way than right now (Elingstad et al. 1999).

In relation to the ideas received, we wanted to compare the intensity of the symptoms of alcohol withdrawal in alcoholic patients who smoke and who continue to smoke, versus alcoholic patients who do not smoke.

SUBJECTS AND METHODS

The study was primarily observational. The inclusion criteria were as follows:

- Patients presenting themselves spontaneously for a consultation with a request for hospitalisation who were considering alcohol detoxification;
- Aged between 40 and 50 years old;
- Presence of an alcohol dependence (depending on D.S.M. IV criteria) with or without nicotine addiction (assessed by Fagenstroem's simplified test) and without other psychiatric or somatic co morbidities;
- Evolving alcohol dependence from 5 to 10 years;
- Daily alcohol consumption between 5 and 10 units per day;
- For the alcohol-dependent patients, smokers were withheld who were not considering stopping

smoking during the hospitalisation and who therefore did not receive any nicotine replacement.

The parameters measured were blood pressure and cardiac frequency at 6.00 pm on the first day of hospitalisation; the doses of Diazepam dispensed on the first day, the CIWA-Ar score (Sullivan et al. 1989) at 8.00 am on the second day of hospitalisation.

The statistic treatment of the results was made with parametric methods and two-tailed. The average comparison was made with t-Test of Student.

The link between qualitative variables was analyzed with a multiple regression.

RESULTS

The two groups of non-smokers alcohol-dependent (n=24) and smokers alcohol-dependent (n=24) are comparable. The sex ration is the same in the two groups: female (n=9) and male (n=15).

This is the results of the average of the four factors studied (Table 1).

These results were treated with t-Test of Student (Table 2).

Table 1. Average of the four factors studied

	N	Average	Average standard error
Cardiac frequency			
Non Smoker	24	91.52	2.33
Smoker	24	99.04	2.24
Systolic Blood Pressure			
Non Smoker	24	12.92	0.17
Smoker	24	13.56	0.25
Diazepam (mg)			
Non Smoker	24	46.80	1.80
Smoker	24	58.26	2.85
CIWA			
Non Smoker	24	16.04	0.89
Smoker	24	19.70	1.07

Table 2. Results assessed by Student 's t-Test

t-Test	t	p
Cardiac Frequency	-2.324	0.025
Systolic Blood Pressure	-2.124	0.040
Diazepam (mg)	-3.452	0.001
Ciwa	-2.640	0.011

In a statistically significant way, cardiac frequency and blood pressures measured on the first day were higher in smoking alcohol-dependent patients. The doses of Diazepam dispensed were also higher on the first day

for the smoking alcohol-dependent patients. The CIWA-Ar scores were the highest on the second day.

With a binary logistic regression for each variable, we obtain these following results in table 3.

Table 3. Binary logistic regression for each variable

	A	STD error	p	OR
Cardiac Frequency	0.062	0.29	0.035	1.064
Systolic Blood Pressure	0.619	0.308	0.045	1.857
Diazepam (mg)	0.085	0.03	0.004	1.089
CIWA	0.162	0.068	0.017	1.176

The fourth factors studied explained the difference between the two groups. The systolic blood pressure seems to be the more significant.

DISCUSSION

Our selection criteria focused on patients in the "pre-contemplation" stage concerning any tobacco dependence and in the "preparing to change" stage concerning alcohol. Patients who smoke were not prompted to give up smoking from when they had stated their desire to not stop smoking.

The results are therefore not biased by the stress which could have been induced by being told to stop smoking. Our study's design does not allow conclusions to be drawn for patients under 40 years old and over 50 years old. The study does not assess the situation of patients who are in a "pre-contemplation" stage in relation to alcohol and who may have been forced to give up alcohol for somatic reasons.

Although our inclusion criteria limited the disparity in the population of alcohol-dependent patients with or without tobacco dependence, a sharp division remained in the population studied which may be the source of significant bias.

CONCLUSION

Our observational study tended to show that in hospitalised alcohol-dependent patients and aged between 40 and 50 years old with an evolving problematic alcohol consumption from 5 to 10 years, the symptoms of alcohol withdrawal were more pronounced among active smokers versus non-smokers. The measurement criteria were cardiac frequency, blood pressure, doses of Diazepam on the first day of hospitalisation and CIWA-Ar scores on the second day of hospitalisation.

This observation tended to emphasise that physical suffering is more marked in alcohol-dependent patients and active smokers compared to patients who were only alcohol-dependent during alcohol detoxification.

When drafting the recommendations concerning alcohol-tobacco dual dependencies, more studies are needed, in particular to compare the intensity of the withdrawal symptoms between alcohol-dependent patients and smokers who are giving up both substances versus just giving up smoking or alcohol alone. Adding nicotine replacement products or not during the detoxification period also needs to be investigated.

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