Progress in Neuro-Psychopharmacology & Biological Psychiatry 32 (2008) 1867–1872

Contents lists available at ScienceDirect

Progress in Neuro-Psychopharmacology & Biological Psychiatry

journal homepage: www.elsevier.com/locate/pnpbp

Opioid maintenance therapy suppresses alcohol intake in heroin addicts with alcohol dependence: Preliminary results of an open randomized study

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ARTICLE INFO

Article history:
Received 31 March 2008
Received in revised form 20 August 2008
Accepted 26 August 2008
Available online 4 September 2008

Keywords:
Alcohol
Buprenorphine
Heroin
Methadone

ABSTRACT

An open randomized study lasting 12 months was performed to evaluate the efficacy of methadone or buprenorphine to suppress alcohol use in two hundred and eighteen heroin addicts with alcohol dependence. Daily maintenance doses of methadone were 80, 120, 160, and 200 mg/day, while doses of buprenorphine were 8, 16, 24, and 32 mg/day.

As expected, both treatments were able to reduce both heroin use and addiction severity (measured with ASI interview). However, although both medications were able to suppress alcohol use, the highest dose of buprenorphine was better than the highest dose of methadone, in reducing alcohol craving, ethanol intake (measured as daily number of drinks), and the ASI subscale of alcohol use.

The mechanism underlying the effects of the opioid maintenance therapy on the reduction of alcohol intake is still unclear.

The results of the present study may represent the first clinical evidence of the potential effective use of the highest doses of buprenorphine for the suppression of ethanol intake in heroin addicts with alcohol dependence.

1. Introduction

Heroin users often drink alcohol excessively (Almog et al., 1993; Backmund et al., 2003) and while this often has serious health consequences (Gossop et al., 2002) there is limited epidemiological data on prevalence.

Excessive alcohol use is also frequent in methadone-treated patients. Depending on how alcoholism is defined, it occurs in 5% to 50% in methadone-treated patients (Backmund et al., 2003; Rittmannsberger et al., 2000).

Alcohol dependence can worsen the outcome of methadone treatment (Gossop et al., 2006; Ottomanelli, 1999) and is associated with increased psychiatric symptoms (Westreich, 2005) and reduced quality of life (Senbanjo et al., 2006). Moreover, alcohol use appears to be associated with more illicit drug use, higher rates of drop-out and higher mortality (Joseph and Appel, 1985; Zador and Sunjic, 2000).

Since the effect of the opioid maintenance therapy on alcohol consumption in heroin addicts is not yet defined, we decided to evaluate it to those treated with methadone and buprenorphine.

2. Methods

2.1. Subjects

We screened heroin addicts with co-existing alcohol dependence who provided informed consent to participate in the study. Individuals who met the criteria for the inclusion in the study were randomized to study conditions (see Fig. 1). The characteristics of the subjects selected for the study are reported in Table 1.

The patients received a weekly, free individual standardized counseling session for drug use, family and vocational issues. All subjects were admitted directly to treatment without a waiting list. The rationale of the study was blinded to the participants.

Study inclusion required: (1) DSM-IV TR diagnosis for heroin and alcohol dependence; (2) age 18 years or older; (3) no pregnancy; (4) no axis I or other drug-dependence disorders: (5) no HIV antibodies; (6) no serious physical illness (e.g. active tuberculosis, acute hepatitis or cirrhosis, renal and cardiovascular illness, unstable diabetes); (6) willingness to accept a substitute pharmacological treatment for heroin dependence; (7) to refuse a specific pharmacological treatment for

Abbreviations: DSM-IV TR, Diagnostic and Statistical Manual of Mental Disorder, IV Edition, Tex revised; HIV, Human immunodeficiency virus; HCV, Hepatitis C virus; EKG, Electrocardiogram; ASI, Addiction Severity Index; SPSS, Statistical Package for Social Science; ANOVA, Analysis of variance.

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doi:10.1016/j.pnpbp.2008.08.019

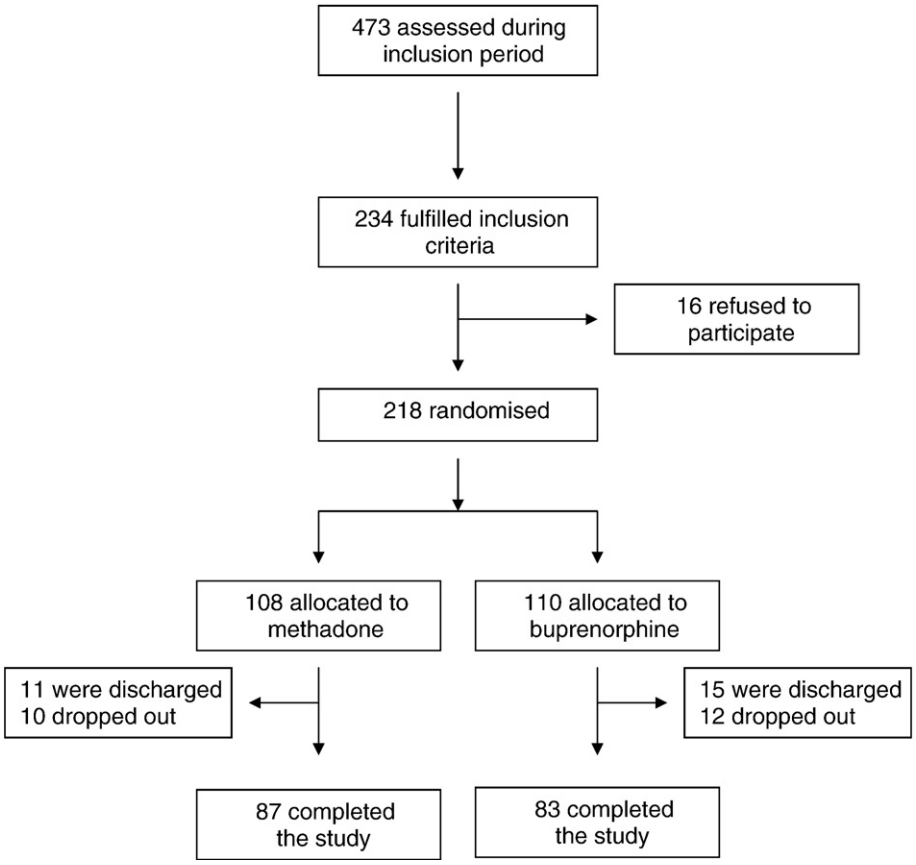

Fig. 1. Study profile.

alcohol dependence; and (8) no previous pharmacological treatment for drug abuse (including any psychopharmacological treatment or an opioid substitutive therapy). HCV positive patients were not excluded from the study. Subjects who had recent histories of violence or who were on parole/probation were excluded from the research.

Table 1
Demographic characteristics and drug use of participants on admission to treatment

	Treatment group	
	Methadone (n=108)	Buprenorphine (n=110)
Age, mean (S.D.), years	31.61±7.94	33.36±5.65
Men (%)	80	76
High School education (%)	23	20
Degree or PhD (%)	5	2
Stable employment (%)	49	46
Unstable employment (%)	23	27
Married (%)	54	45
Living situation		
With family or friends (%)	68	62
Alone (%)	32	38
No stable living arrangements (%)	0	0
Controlled environment (%)	0	0
Heroin use		
Years, mean (S.D.)	4.13±0.66	4.10±0.91
Grams/week (S.D.)	4.56±0.89	4.64±0.99
Alcohol abuse		
Years, mean (S.D.)	2.43±0.86	2.32±1.01
Alcohol intake/day, mean (S.D.)	10.27±1.63	9.63±2.11
Total ASI composite score, mean (S.D.)	1.92±0.36	1.89±0.35

Data are expressed as number (%) or mean±S.D. No statistical difference was noted between groups (Chi square or Student's t-test as appropriate).

Individuals who met the above criteria were evaluated by medical history and physical examination, chest X-ray, EKG and chemistry, hematology and urinalysis testing.

The patients that required, or requested, another treatment program such as detoxification or naltrexone were excluded from the study and received the most appropriate treatment in our clinics.

The study was approved by the local ethics committees and it was conducted according to the Principles of Helsinki Declaration, the Good Clinical Practice Consolidated Guidelines and the Italian Law on Privacy of Personal Data.

2.2. Study design

An open randomized prospective study evaluating the effects of methadone and buprenorphine in heroin addicts with alcohol dependence was performed. The study was conducted in Lombardia and Lazio regions (Italy) and it was publicized by notices, word-of mouth and written information. The evaluation period started in October 2005 and ended in October 2007. If the eligibility criteria were met, participants were invited to come to the outpatient clinic on the morning before the admission day to provide a urine specimen and they were invited to immediately stop their heroin use. Sixteen of the subjects who met the eligibility criteria refused to participate in the study and they received

Table 2
Number of drop-outs in group during the course of the study

	1st month	3rd month	6th month	12th month
Methadone	3	6	6	6
Buprenorphine	2	10	10	5