Introduction. We want to know the influence of gender factor in the consumption characteristics, social support and evolution in treatment with naltrexone in an opiate addict group.

Material and methods. 1,432 patients (83.1% males and 16.9% females) recruited over a 12 year period who successively initiated treatment period years with naltrexone. Retrospective observation study, with design of treatment group without control group. We evaluated the role of gender in retention with the Mantel-Cox test. The differences were analyzed according to the gender with contingency tables.

Results. One year retention for all of them was 29.75%, this being 30.92% for men and 23.97% for women. This difference is significant at one year according to the Mantel-Cox test (statistics: 8.38%; gl: 1; signification: 0.0038). Women show less frequency of cocaine use (p=0.011) and less use of intravenous cocaine (p=0.048), lower frequency of consumption of alcohol (p=0.000) and cannabis (p=0.002), a shorter period of heroine abuse (p=0.016) and a higher proportion of them only use heroine (p=0.015). They have less economic independence (p=0.001), their partner is more frequently an addict (p=0.000), they have less help for the treatment from a non-consuming partner (p=0.000).

Conclusions. There are outstanding differences with regard to consume characteristics, social support and evolution of the treatment according to the gender (either male or female). Men have better prognosis than women in the population studied. These differences seem to be due to the sociocultural contents of the gender concept.

Key words:

Diferencias de género en el tratamiento de la dependencia de opiáceos con naltrexona

Introducción. Se quiere conocer la influencia del factor género en las características de consumo, apoyo social y evolución en el tratamiento con naltrexona de un grupo de dependientes de opiáceos.

Material y métodos. Mil cuatrocientos treinta y dos pacientes (83.1% hombres y 16.9% mujeres) que sucesivamente iniciaron tratamiento con naltrexona en la unidad de toxicomanías. Estudio observacional retrospectivo con diseño de grupo de tratamiento sin grupo control. Evaluamos el papel del género en la retención con la prueba de Mantel-Cox. Con tablas de contingencia se analizan las diferencias en función del género.

Resultados. La retención al año para ellos fue del 29.75%, siendo de 30.92% para hombres y de 23.97% para mujeres. Esta diferencia es significativa según la prueba de Mantel-Cox (estadístico: 8.38%; gl: 1; significación: 0.0038). Las mujeres presentan menor frecuencia de consumo de alcohol (p=0.011) y de cannabis (p=0.048), menor tiempo de consumo de heroína (p=0.016) y mayor proporción consumen sólo heroína (p=0.015). Tienen menor independencia económica (p=0.001), su pareja es más frecuentemente un consumidor (p=0.000), tienen menos ayuda para el tratamiento de una pareja no consumidora (p=0.000).

Conclusiones. Existen diferencias relevantes respecto a las características del consumo, apoyo social y evolución del tratamiento según el género (sea hombre o mujer). Los hombres tienen mejor pronóstico que las mujeres en la población estudiada. Dichas diferencias parecen deberse al contenido sociocultural del concepto género.

Palabras claves:
INTRODUCTION

The study of the analysis of gender in the field of opiate dependence is relatively recent although being a man or woman conditions and shapes the expression of the consumption and problems accompanying them. Although the differences between men and women are well documented, research on the addictions rarely considers gender. In general it contemplates them from a masculine point of view. Up to a few years ago, opiate consumption was predominately masculine and given the predominance of dependent males that requested help, women were seen as atypical cases and no consideration of gender was applied in their evaluation and treatment.

The differences in addiction according to gender are related to socio-political phenomena and with the specific structure of the subject, family and social networks in which they are immersed. Our society has been experiencing important changes over the last 100 years regarding the female role, and the woman has been acquiring more educational and professional opportunities than previously. Their incorporation into society also supposes their incorporation into its more negative aspects such as addictions. However, social evaluation of consumption in the woman continues to be different from that of the male. When a woman breaks the law such as with the consumption of drugs in general, and opiates specifically, she performs a dual infringement, that of the fact in itself and that assigned to the violation of the role and its expectations. Although there has been greater social acceptance towards alcohol consumption (but not about its dependency), that of extentive periods of abstinence, is a factor of good prognosis in naltrexone programs, with the same importance as the previous existence of other areas of functioning of the individual, determine worse treatment prognosis due to lower motivation and limited seeking of help. Paradoxically, the same occurs with already deeply rooted consumptions, usually associated to numerous attempts of failed dishabituation in which the addiction has become a part of the «life style». Thus, a middle-long period of addictive background, that is still not chronic, is a factor of good prognosis in naltrexone programs, with the same importance as the previous existence of extensive periods of abstinence.

The epidemiological studies show greater prevalence of the use of heroin in men. Opiate consumption data in the woman is lower and the dependent woman may suffer worse evolution than men. Paradoxically, the same occurs with already deeply rooted consumptions, usually associated to numerous attempts of failed dishabituation in which the addiction has become a part of the «life style».

Attributing of expected behaviors to a group is determined by the socialization form. Woman has different demands, with the assuming of greater responsibility and control of the setting. This implies that the consequences of the consumption may be different since social tolerance of the dependency in the woman is lower and the dependent woman may suffer greater social rejection and more discrimination.

The study of the analysis of gender in the field of opiate dependence is relatively recent although being a man or woman conditions and shapes the expression of the consumption and problems accompanying them. Although the differences between men and women are well documented, research on the addictions rarely considers gender. In general it contemplates them from a masculine point of view. Up to a few years ago, opiate consumption was predominately masculine and given the predominance of dependent males that requested help, women were seen as atypical cases and no consideration of gender was applied in their evaluation and treatment.

The epidemiological studies show greater prevalence of the use of heroin in men. Opiate consumption data in the woman indicates that 0.3% of women over 14 years have consumed heroin at some time, while their regular consumption is less than 0.1%. Heroin dependence is estimated to be 1 to 3 per 1,000 in all. It is calculated that there is one female opiate addict per 4 or 5 males, although the proportion asking for treatment is 1 to 76-13. Women also are overrepresented among opiate dependents who demand treatment in our setting, of which only 15%-20% are women.

Factors associated to treatment evolution

Many variables from different settings have been associated to the evolution in dishabituation therapies in general and in opiate dependency specifically. Individual and socio-environmental factors have been studied as predictors of response and treatment retention.

Severity data of the addiction indicate poor prognosis, as well as that of alcohol consumption and other substances. The study of the usual amount of opiates consumed mark treatment prognosis. Consumptions of low amounts in the months prior to the onset of the therapy are considered to be a favorable factor of good outcome, while prolonged addictions and high heroin doses are a predictive factor of relapse. Worsening evolution is found among parenteral drug users versus those who consume by inhaled/smoked pathway. The majority of the opinions considers that backgrounds of relatively short consumption, normally associated to lower repercussions in other areas of functioning of the individual, determine worse treatment prognosis due to lower motivation and limited seeking of help. Paradoxically, the same occurs with already deeply rooted consumptions, usually associated to numerous attempts of failed dishabituation in which the addiction has become a part of the «life style».

Alcohol consumption predicts worse evolution in the treatment. Severe alcohol consumption increases mortality and worsens retention. Consumption of other substances, such as cocaine, among addicts to opiates is elevated. This consumption of cocaine is negatively related with such diverse areas as exposure to violence, increase of criminal activity, early drop out, relapse in opiate consumption, greater proportion of psychopathology and HIV markers. In our setting, cocaine addiction establishes worse prognosis regarding the dishabituation program with naltrexone.

Having work stability at the onset of the treatment, greater family stability and involvement and higher professional level are predictors of good response.

Whether the gender factor can establish different evolution in opiate dependency therapy is discussed. Some studies indicate that women are underrepresented among the patients who demand treatment, take longer to initiate treatment and when they do so, their results are worse.

The purpose of this study is to evaluate the predictive importance of the gender factor in the evolution of treatment in a large sample of heroin addict patients under treatment with naltrexone. Equally, and assuming the extensive involvement of sociocultural variables in the gender var-
able, the second objective established is to differentiate, in case of being able to assume the gender as prognostic predictor, that specific characteristics are differentiating both genders. To do so, the influence of said factor in the characteristics of substance consumption and in the support and social setting presented by the dependent subject is studied.

MATERIAL AND METHODS

A sample of 1,432 patients diagnosed of opiate dependency disorder (F11.2, ICD-10)68, (1,190 men and 242 women) and recruited over a 12 year period who successively initiated treatment with naltrexone, that was prescribed in and monitored by the Drug Addiction Unit of the University Hospital Ramón y Cajal (Madrid), was studied.

This is an observational, retrospective study with design of a treatment group without control group (type-case series, anterograde directionality and mixed temporality. Data collection was performed using a structured protocol of clinical data collection69,70. As parameter for evaluation of collection was performed using a structured protocol of clinical data collection, with the possibility of several causes for this discharge (medical discharge, death, dropout, etc.). Difficulty for data collection (due to the characteristics of the population) the constant process of adaptation of the protocol to the new investigations conditioned the data collection. These circumstances have been taken into account for the statistical analysis. The data were stored in an Access database and developed with the SPSS_8 statistical program. Parameters that were adequate for the descriptive analysis (arithmetic mean and standard deviation in quantitative variables and frequencies in qualitative variables) were used. In the inferential study, survival techniques were adopted that made it possible to establish the likelihood that a subject would survive or remain in therapy. Using contingency tables, the differences found based on gender in other variables of the protocol as defined in the structured protocol of clinical data collection that we used were analyzed69,70.

RESULTS

Out of the total of 1,432 patients, 83.1% were men and 16.9% women. The user profile as a whole had a mean age of 27.3 years (SD: 5.1), were mostly Caucasian (99%), single (71%), and lived with their family of origin (74.1%). Half of the population stated they were inactive and had no right to unemployment benefits or pension (49.3%); 24% having basic school level.

The subjects consumed heroin 0.66 g/d (SD: 0.6), either inhaled or smoked (55.8%), from the age of 19.87 years (SD: 4.2). About 63% of the subjects admitted consuming concomitant cocaine during the last 6 months, most of them (53.3%) intravenously accompanied by heroin. Among those who consumed it, the mean daily cocaine administered was 0.63 (SD: 0.57), and they initiated this consumption at 19.83 years as a mean (SD: 4.1). In relationship with other substances, 44.2% consumed cannabis regularly, 59.2% benzodiazepines and 50.6% alcohol.

Retention for all the patients at one year of initiating therapy was 29.75%. Likelihood of survival in treatment with naltrexone for men was 30.92%, the value for the same parameter for women being 23.97% (table 1 and fig. 1). This difference in the likelihood of survival (retention) at one year is significant according to the Mantel-Cox test (statistics: 8.38; gl: 1; sign: 0.0038).

As seen in table 2 there are relevant differences regarding the characteristics of consumption according to the consumer’s gender (whether man or woman). Thus, regarding the toxicological variables, women have less frequency of cocaine consumption (55.1% vs 64.5%; p = 0.011), less use of the intravenous route for cocaine consumption (50.9% smoked vs 38.9% inhaled; p = 0.048), lower frequency of alcohol consumption (49.4% vs 66.5%; p = 0.000), lower frequency of cannabis consumption (34% vs 46%; p = 0.002), less time of heroin consumption (58% less than 7 years 49% of men less than 7 years; p = 0.016), greater proportion of women who only consumed heroin (10.5% vs 5.6%; p = 0.015), with tendency to less use of intravenous route of heroin during the addictive period (20% vs 54%; p = 0.065) and to present a younger age of onset of treatment (26.9% vs 28.4%; p = 0.049). Regarding the relevant differences for the setting and social support according to gender of the addict, we found that women were less frequently single (59.4% vs 72.8%; p = 0.000), had lower proportion of non-qualified work (19.4% vs 46.8%; p = 0.000), and, to a greater degree, we unemployed without unemployment benefits (60.3% vs 47.2%; p = 0.001), had a

### Table 1

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<th>Survival at one year based on gender factor</th>
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<td>Survival at one year</td>
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The women in our sample have greater work instability and low personal qualification, together with important economical dependence on others as that described by variables and those related with their social situations coincide in the most important with the data reported by other publications of the setting6,9,14,15,36,40,75,76, so that the conclusions may be valid for at least the national setting.

In our study, it is confirmed that women have less likelihood of survival at one year in treatment than the men (24% vs 31%). The gender factor, therefore, establishes different evolution in the therapy of opiate dependency. Thus, men have better prognosis than women in the population studied.

When the differences are evaluated compared with the men, we found that women have differences in two fields: in the consumption characteristics and in the support and social situation.

Regarding the characteristics of the consumption, women from our sample have less consumption of cocaine with less use of the intravenous route, less consumption of alcohol and less multiple drug addictions together with less time of heroin consumption when initiating treatment for their addiction. All these characteristics are as indicated in the literature markers of good prognosis, given that prolonged addictions and high doses of heroin27, alcohol consumption41-44, and mainly cocaine consumption53-55,57 are related with worse therapeutic outcome.

From all the differences found between both genders, those regarding setting and social support are relevant. The literature indicates that work stability27,58, professional level63,64 and family stability and involvement59-62 are predictors of good outcome.

On the other hand, presence of a drug dependent mate is fundamental in the identify of gender and an essential component to explain the first contact with the substance. After, the addict woman is more frequently linked to a drug addict partner. The first consumptions of heroin occur together with the partner in most of the women, these being the inductors or modifying the perception towards consumption. The influence of the drug dependent partner on relapses in consumption in the woman is very important66,77,78.

Female heroin addicts are characterized by greater marginality than men. They frequently have an association with a man who helps them acquire the drug or they may end up dedicating themselves to marginal activities such as prostitution. These women have greater access to drugs and more problems linked to the addiction in general with great precariousness and degradation in their life. Furthermore, they delay initiation of treatment and when they do begin, it is more difficult to do it because they must first get rid of the negative attitude baggage they are carrying68,79.

The women in our sample have greater work instability and low personal qualification, together with important economical dependence on others as that described by
Women have less social independence and greater economic dependence in spite of their better education level and work qualification and initiate consumption through their partners. With greater frequency, they have abandoned the family home and do not have non-consuming partners. Furthermore, more frequently than in the case of men, the woman’s partner is a consumer, so that women count on less support for the treatment. Men have more support in their therapeutic attempts from non-consuming partners. The dependent person has important difficulties to abandon consumption if their partner continues to consume drugs. There are more women who live with or are married to a drug-dependent partner than men.

There are the factors, that of less support and worse social situation, that determine the worse prognosis that the women have in the treatments of the addictions.

**CONCLUSIONS**

Gender of the heroin dependent subjects significantly conditions the response to treatment of their dependence.
Thus, women have worse prognosis than men in the population studied.

The consumption pattern of women is different from that of the men, with less cocaine consumption and less use of the intravenous route, less alcohol consumption and fewer multiple drug addictions together with less time of heroin consumption on initiating treatment for their addiction. These variables should condition a better prognosis, but they do not do so.

The variables related with social independence (work situation, economic independence, etc.) condition the differences between the genders, making the woman depend economically more than the man on her partner or others. Women more frequently have a consuming partner, which significantly conditions her evolution.

Thus, being a women means less social independence (economic dependence on the social setting), less support from the family of origin and less likelihood of having a non-consuming partner as support in the treatment.

It is these factors that determine the worse prognosis that women have in the treatment of the addiction.

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Gender differences in the treatment of the opiate dependence with naltrexone

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