

Impact of medical counseling to quit smoking during the process of dehabituación in patients with mental illness

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El papel del consejo antitabaco en el proceso de deshabituación en enfermos mentales

Summary

Background. Cigarettes consumption is the most preventable cause of morbidity and mortality in developed countries. Several intervention trials have shown that medical counseling to quit smoking promotes 5-10 % of abstinence per year, which constitutes the most efficient preventable activity. This study aims to evaluate the presence and type of medical counseling to quit smoking in patients admitted to a long-stay unit of a psychiatric hospital.

Methods. This descriptive and cross-sectional study included 80 schizophrenic smoking in-patients. The presence of medical counseling to quit smoking was evaluated by a standardized questionnaire designed for this purpose. The Fagerström Test was used to measure nicotine dependence, the Richmond Questionnaire to measure motivation for smoking cessation and the Stages of Change Questionnaire to know the stage of change to give up smoking.

Results. A total of 60.3 % of the patients had previously received medical counseling to quit smoking, 50 % of which had been performed by the psychiatrist. The motivation for patients with medical counseling was moderate (mean score \pm SD of Richmond Questionnaire 4.4 ± 3.5). A total of 77.1 % of these patients had tried to quit smoking on several occasions.

Conclusions. Medical counseling on giving up smoking can modify the motivation to quit smoking in psychiatric patients. Systematic structured counseling, especially from psychiatry, can prevent the development of nicotine addiction or modify intensity.

Key words: Nicotine. Schizophrenia. Medical counseling. Give up smoking. Tobacco. Motivation.

Resumen

Introducción. El tabaco constituye la principal causa de morbimortalidad susceptible de prevención en los países desarrollados. Diversos estudios de intervención han demostrado que un consejo mínimo estructurado promueve un 5-10 % de abstinencias al año, constituyendo la actividad preventiva que mejor coste/beneficio presenta. El objetivo fue evaluar en los pacientes fumadores de una unidad de larga estancia de un hospital psiquiátrico la existencia y características del consejo antitabaco.

Métodos. Estudio descriptivo transversal de 80 pacientes fumadores diagnosticados de esquizofrenia en los que se evaluó la presencia de consejo antitabaco mediante una entrevista diseñada a tal efecto. Se utilizó el Cuestionario de Fagerström para valorar la dependencia física de nicotina, el Cuestionario de Richmond para evaluar el grado de motivación para el abandono del consumo de tabaco y el Cuestionario de Estadios de Cambio para establecer el estadio de cambio en el que se encontraban respecto al proceso de abandono.

Resultados. El 60,3 % de los pacientes había recibido anteriormente consejo antitabaco, de los cuales un 50 % había sido realizado por el psiquiatra. Aquellos pacientes que habían recibido consejo antitabaco tenían una puntuación media en el Cuestionario de Richmond de $4,4 \pm 3,5$, correspondiente a una motivación media-alta. De éstos, el 77,1 % había realizado algún intento de abandono.

Conclusiones. El consejo antitabaco puede modificar la motivación del paciente psiquiátrico para el cese del consumo de tabaco. Su empleo sistemático en enfermos mentales, especialmente por parte del médico psiquiatra, puede prevenir el desarrollo de la adicción al tabaco o modificar la intensidad de la misma.

Palabras clave: Nicotina. Esquizofrenia. Recomendación. Consejo. Motivación. Tabaco.

INTRODUCTION

Smoking makes up one of the main causes of preventable morbidity-mortality in developed countries^{1,2}. In Spain, almost 56,000 deaths per year can be attributed to smoking³ and approximately half of the smokers will die due to tobacco consumption related diseases⁴.

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According to data from the 1997 National Survey of Health, 35.7% of the population in Spain over 16 years of age were smokers. This percentage doubles and even triples when we speak of patients affected by psychiatric diseases, even reaching 90% in those diagnosed of schizophrenia^{1,5,9}. The high prevalence of tobacco consumption is related with the development of cardiovascular diseases, neoplastic diseases or chronic obstructive lung disease, which means a very significant health care cost for the National Health Care System^{5,10}. In the general population, although 70% of the smokers want to stop smoking and 30% try it every year, only 15% exceed one year of abstinence¹¹⁻¹³.

The need for the health care professionals to make a minimum recommendation to stop smoking is determined by the scientific data on the harmful effect of tobacco and the benefits for health arising from giving up the smoking habit². In the framework of Primary Health Care, advice to the patient who smokes is included as part of health care prevention and promotion activities¹⁴. Since 1979, several intervention studies performed by giving advice to patients who smoke with mental disease show that minimum structured advice (in general it does not have to be more than three minutes) promotes 5%-10% of abstinences per year, constituting the preventive activity that has the best cost/benefit^{14,15}.

High consumption of tobacco in mental patients has been verified in many studies^{1,5,9}. Among the hypotheses on this high prevalence, the role of nicotine as a modulator of some side effects of antipsychotic treatment has been considered, its consumption being considered as a form of «self-medication», since it is involved in the stimulation of dopaminergic activity of the subcortical and prefrontal cortex zone (ventral tegmental area) related with reinforcement and reward mechanisms^{16,17}. In addition, nicotine consumption increases metabolism of the antipsychotic drugs due to its action on cytochrome p450, which means the need to perform upward adjustments in the patients' medication¹⁸. There are also studies that show the influence of the type of antipsychotic drug (typical versus atypical) on tobacco consumption and the possibilities of stopping it. Thus, patients treated with atypical AP (risperidone, olanzapine and clozapine) present greater rates of decrease or cessation of tobacco consumption if compared with those who receive treatment with typical antipsychotics¹⁹⁻²¹.

The institutionalized psychiatric patient who does not have the intervention of the family physician, who traditionally has the role of prevention and control of smoking (PAPPS), has many health care professionals in the setting who can carry out this task successfully. However, prevention strategies and anti-smoking advice have fewer results due to low motivation, high physical and/or psychological dependence, the disease itself or to the psychodrug treatment^{22,23}.

Quitting smoking is a dynamic process that is made up of the stages of change of precontemplation (the smoker does not think about stopping the habit in the next six months), contemplation (he seriously consi-

ders the possibility in the next six months), preparation (he plans to stop smoking in the next thirty days or has attempted it at least for 24 hours in the last year), action (he has not smoked for approximately six months) and maintenance (he has not smoked for more than six months)²⁴. Anti-smoking advice in not very motivated patients makes it possible to consider not only abstinence but also progression in these stages as success, facilitating later interventions.

The objective of this study was to assess the existence and characteristics of anti-smoking advice in patients who smoked in a long-stay unit of a psychiatric hospital.

METHODS

This is a descriptive cross-sectional study of 80 patients who smoked and were hospitalized in the long stay unit of the Hospital Complex in Mental Health Benito Menni. To define the concept of smoker, the WHO definition²⁵ was considered. According to it, smoker is considered to be all those who have smoked any amount of cigarettes daily for the last month. **Figure 1** shows the study diagram.

The 154 patients hospitalized in the long stay unit were administered a standardized questionnaire that gathered sociodemographic and psychiatric diagnostic data according to DSM-IV criteria²⁶. A total of 80 patients who presently smoked were selected and data were collected on their history of smoking. In this history, the performance of anti-smoking advice (considered as any intervention with the objective of reporting on the harmfulness of tobacco and motivating the decrease or stopping of its consumption) to the patients during their stay in the center by a professional or other close person was analyzed. In addition, the following questionnaires related with tobacco consumption were used:

- Fagerström Questionnaire (FQ) to measure physical dependence on nicotine, considering it to be high dependence if $FQ \geq 8$, moderate if $FQ = 4-7$ and low if $FQ < 4$ ²⁷.
- Richmond Questionnaire (RQ) to evaluate motivation to stop the smoking habit, considering it to be high motivation if $RQ \geq 8$, moderate if $RC = 4-7$ and low if $RQ < 4$ ²⁸.
- Stages of Change Questionnaire (SC) to typify the stage of change in regards to the process of stopping smoking²⁴.

The analysis and statistical treatment of the data obtained were performed with the SPSS program. Frequencies in the case of qualitative variables and the measurement of the central tendency in the case of quantitative variables were calculated. Hypothesis contrast tests used were the chi-squared statistics for qualitative variables and the Student's *t* test and ANOVA of a factor in the case of quantitative variables. The degree of statistical significance was established at $\alpha \leq 0.05$.

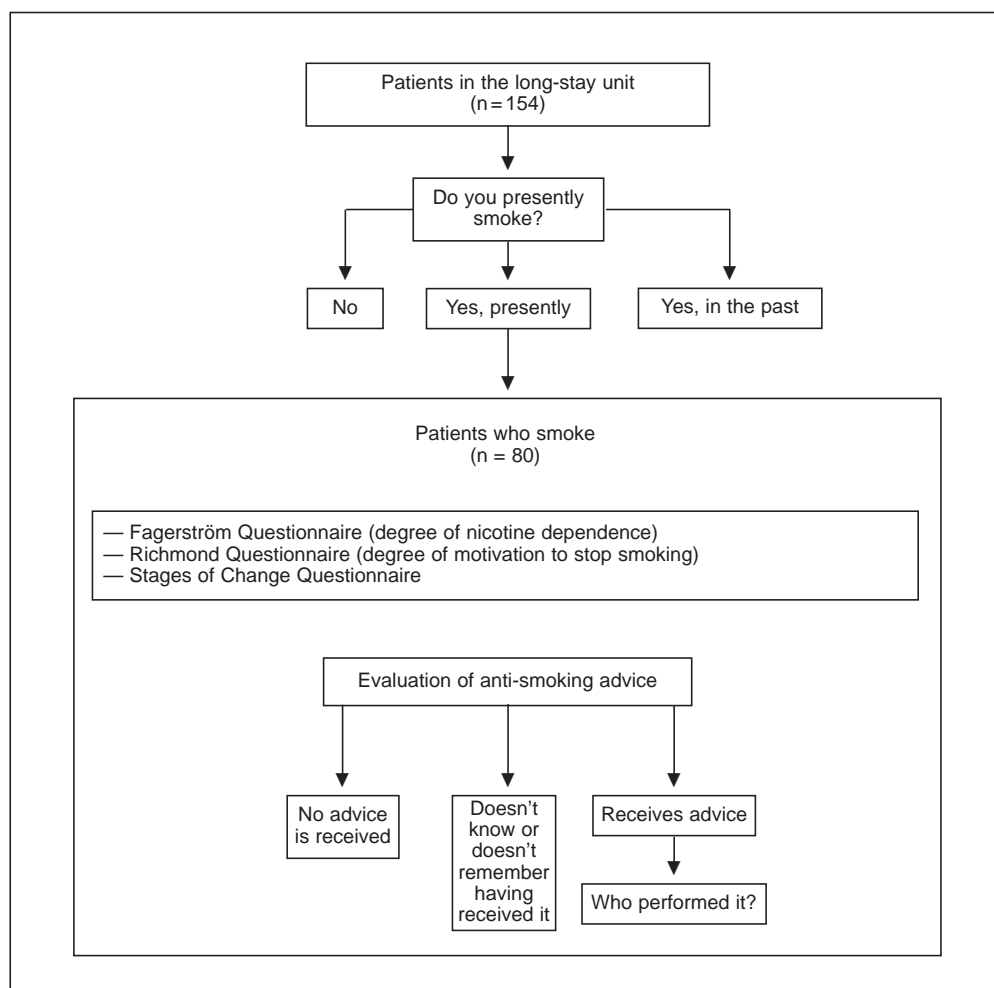


Figure 1. Scheme of the study.

RESULTS

Eighty (51.9 %) of the 154 patients admitted to the long stay unit were smokers. Forty six (57.5 %) of the patients who were smokers were men and 34 (42.5 %) women, the mean age of the sample being 44.9 ± 10.4 years. Significant differences were observed between genders ($t = -1.975$; $gl = 78$; $p < 0.05$), the men being younger (42.9 ± 10.7) than the women (47.5 ± 9.5). Sixty eight patients (85 %) of these were diagnosed of schizophrenia and 12 (15 %) had other diagnoses.

Of the total patients who smoked, 48 (60.3 %) had received some recommendation to stop smoking versus 28 patients (35.6 %) who had not received any and 4 (4.1 %) who did not know or who did not remember, without finding significant differences between gender or diagnosis. Of those who had received advice, 24 (50 %) had received it from the psychiatrists, 12 (25 %) from the family and others, 6 (12.5 %) from the nursing staff, 5 (11.1 %) from the family physician and 1 patient (2.2 %) had received it from psychologists, as can be observed in table 1. In regards to those who had received some recommendation on smoking cessation,

37 (70.1 %) had made some attempt to stop it versus 17 (31 %) who had tried it without receiving any type of recommendation, observing significant differences ($\chi^2 = 14.277$; $gl = 2$; $p < 0.001$).

The mean global score of the FQ to measure physical dependence on nicotine was 5.5 ± 2.5 corresponding to moderate-high dependence, without finding significant differences between this score and the existence or not of anti-smoking advice, as can be observed in table 2. Fifty six patients (70 %) had a moderate-high nicotine dependence and 24 (30 %) had a low dependence.

The mean global score of the RQ to assess the degree of motivation to give up consumption was 3.4 ± 3.5 corresponding to low motivation, significant differences being found between this score and the existence or not of anti-smoking advice ($F = 7.761$; $gl = 2$; $p < 0.001$) (table 2). Forty four patients (55 %) presented low motivation, 19 (23.7 %) moderate motivation and 17 (21.2 %) high motivation.

Regarding the stages of change (SC) to stop smoking, 42 patients (52.2 %) were in the precontemplation stage, 21 (26.2 %) in the contemplation one, 16 (20 %) in the preparation stage and 1 patient (1.2 %) in the action

TABLE 1. Who performs the recommendations according the stages of change

	<i>Precontemplation n (%)</i>	<i>Contemplation n (%)</i>	<i>Preparation n (%)</i>	<i>Action n (%)</i>
Who performs the recommendation?*				
Psychiatrist	6 (12.5)	9 (18.7)	8 (16.6)	1 (2)
Psychologist	1 (2)	0 (0)	0 (0)	0 (0)
Referral family physician	2 (4.1)	1 (2)	2 (4.1)	0 (0)
Nursing	3 (6.1)	1 (2)	2 (4.1)	0 (0)
Family	4 (8.2)	6 (12.4)	2 (4.1)	0 (0)

* Significant statistical differences ($p < 0.05$)

stage. A relationship was found between the different stages of change and the existence or not of anti-smoking advice ($\chi^2 = 22.172$; $gl = 4$; $p < 0.001$) (table 2). Significant differences were also observed between the SC and the different degrees of motivation (high, middle, low) for this stopping ($\chi^2 = 42.691$; $gl = 6$; $p < 0.0001$) or the mean score of the motivation to stop smoking (RQ) ($F = 29.877$; $gl = 3$; $p < 0.0001$). The patients in the precontemplation stage had a RQ score of 1.1 ± 1.7 (low motivation), those of contemplation, one of 5.1 ± 3 (middle motivation), those of the preparation stage 7.2 ± 2.5 (middle-high motivation) and those who were in the action one 9 ± 0 (high motivation). Significant differences were found ($\chi^2 = 35.56$; $gl = 24$; $p < 0.05$) between SC and those who had made this recommendation (table 1).

CONCLUSIONS

The data obtained verify the elevated prevalence of tobacco consumption in psychiatric patients observed in many studies^{6,8,9}.

As in the previous studies^{22,23}, the type of physical dependence observed in most of the patients was mode-

rate-high in 70 % and motivation to stop the consumption of tobacco was low in 55 %, this corresponding to the precontemplation and contemplation stages. However, in spite of the data, we observed that the degree of motivation, progression in the stages of change and different attempts to stop the consumption of tobacco of the patients could be influenced and modified by the anti-smoking recommendations made. It was observed that those who were most motivated and who were in the most advanced stages of change (contemplation, preparation and action) were those who had received anti-smoking advice most frequently. These data suggest that previous advice improves motivation to stop smoking and promotes progression in the stages of change in the patients who smoke in regards to possible future interventions^{12,29,30}. However, tobacco dehabitu-
tion would be determined by the stopping phase that the subject is in^{31,32} and by the degree of motivation to stop the consumption of tobacco^{22,23}.

In the present study, the recommendations performed by the health care staff in the psychiatric population are superior (60.3 %) to those performed in Primary Health Care (32.8%)^{14,33-35}, although we have to keep in mind the high prevalence of smoking in mental patients and that they, because they are hospitalized, have greater contact with health care professionals than the rest of the population, which facilitates the performance of anti-smoking advice. In spite of the superiority of the values, the quality of the advice is far from the minimum systematized intervention (table 3) done in the general population.

TABLE 2. Dependence, motivation and stages of change according to the recommendation or advice

	<i>With anti-smoking advice X ± SD</i>	<i>Without anti-smoking advice X ± SD</i>	<i>They do not remember X ± SD</i>
Fagerström Questionnaire	5.7 ± 2.5	4.3 ± 4	5.2 ± 2.5
Richmond Questionnaire*	4.4 ± 3.5	1.4 ± 2.3	5.3 ± 4.7
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Changes of Stages Questionnaire*			
Precontemplation	16 (33.3)	24 (85.7)	2 (50)
Contemplation	17 (35.4)	2 (7.1)	2 (50)
Preparation	14 (29.1)	2 (7.1)	0 (0)
Action	1 (2.4)	0 (0)	0 (0)

* Statistically significant differences ($p < 0.0001$)**TABLE 3. Aspects that should be included in a minimum intervention on smoking**

Ask each patient if they smoke
Record the personal data on tobacco consumption
Offer follow-up, advising them that they will be asked about the subject in future visits
Have informative material visible in the medical office and waiting room
Inform the smoker on the resources, methods or specialized services
Give them written documentation on advice and practical guide to stop smoking

In our study, even though it was a heterogeneous group of professionals who made the anti-smoking intervention, at the time of the interview, it was observed that the patients identified the psychiatrist as the professional who most frequently and with greater systematization made this intervention. Considering the stages of change, it was observed that the patients who had received advice by their psychiatrist were in the preparation and action stages. As the psychiatrist is perceived by the patients as an influential professional, this could mean that advice given by the psychiatrist would be remembered more and would have a greater impact on the patient (considering that they are patients who are admitted to a long stay rehabilitation unit) when promoting progression in the stages of change and an increase in the motivation to stop smoking. It would be necessary to strengthen the role of promoters of healthy life habits in the psychiatrist and the rest of the health care personnel.

On the other hand, the elevated prevalence of tobacco consumption and elevated morbidity-mortality dependent on its consumption makes hospitalization a unique opportunity to approach tobacco consumption and to perform systematized advice and later follow-up. It is the intervention with the best cost/benefit³⁶ within the prevention activities, especially for those who do not plan to stop smoking in a short period of time (precontemplation and contemplation stages).

In our study, in spite of the difficulties that patients with schizophrenia have to stop smoking, the difficulties of interaction with some of them (due to their psychiatric disease), the limited systematization of the recommendations performed by the center professionals, that is far from the systematized advice mentioned, it was observed that the results were encouraging. Formal application of a minimum systematized intervention or medical advice (of less than one minute up to five minutes³⁷ by health care professionals and especially by the psychiatrist would guarantee a greater percentage of success, considering as such not only abstinence but progression in the stages of change, this meaning an improvement of motivation for later interventions (specific intervention or specialized medical intervention).

Thus, the minimum systematized intervention or medical advice would be directed to all the smokers. The information given should be brief, simple, continuous and personalized. It should provide the identification of the causes of relapse and the causal relationship between tobacco and disease, stimulating self-confidence and helping the patient to seek the specific moment of stopping. It should influence in decisive areas of the process of stopping (equivalent in both the general as well as psychiatric population of our study) such as fear of serious diseases, improvement in quality of life and self-esteem, economic saving, esthetic improvement, social approval and avoidance of social rejection. The greater and the more varied the amount of information given (biofeedback, reinforcement, specific attention) and the greater follow-up offered, the better the results³⁸⁻⁴⁰. This

type of recommendation would precede the future specific intervention or specialized medical intervention, that, in addition to the previous medical advice, would mean putting the cessation of consumption into practice and the its posterior follow-up. On the contrary to medical advice, it would only be directed to those who felt they were prepared to stop smoking immediately. Both types of interventions would be supported by pharmacological measures (substitutive treatments with nicotine and/or bupropion) if necessary.

Aspects to be considered in future investigations would be systematization and unification of anti-smoking advice among the different health care professionals, adapted to the limitations and needs of the different mental diseases, as in the case of schizophrenia. It would also be desirable to count on a larger sample size than that used in our study and to thus have more representative results.

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