

Effectiveness of Medical Counseling for Alcoholic Patients and Patients with Excessive Alcohol Consumption Seen in Primary Care

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Aim. To determine the effectiveness of medical counseling for alcohol abuse, when it is provided in primary care centers.

Design. Quasi-experimental, open, multicenter before-after study.

Setting. 14 primary care physician's practices (7 rural, 7 urban) in the province of Córdoba (Spain).

Participants. 306 patients of both sexes, recruited with a case-finding strategy, who consumed ≥ 35 (men) or ≥ 21 (women) IU per week, or who had alcohol dependence syndrome (ADS) (MALTS score ≥ 11).

Interventions. All patients were offered brief counseling to reduce drinking, and all were followed to evaluate their status 3 months, 1 year and 2 years later.

Main measures. The response variable was self-reported alcohol consumption together with normal GGT values or confirmation of alcohol consumption by a relative. The results were subjected to intention-to-treat analysis.

Results. Of the 306 patients included in the study, 95.1% were men and 78.4% had ADS. After 2 years 38.89% (95% CI, 32.2%-44.3%) had attained their treatment goal: 23.85% were in complete abstinence, and 15.0% consumed moderate amounts of alcohol below the limit considered to indicate risk. Starting excessive consumption at less than 16 years of age (odds ratio [OR], 3.0885), living in a slum (OR, 3.2103), smoking (OR, 1.7187), and a positive CAGE test (OR, 1.9949) were associated with failure of the intervention ($P < .05$).

Conclusions. Counseling provided by the family doctor was highly effective under the usual conditions of general practice, both for patients with excessive alcohol consumption and for patients with con ADS.

Key words: Alcoholism. Medical counseling. Effectiveness. Primary care.

EFFECTIVIDAD DEL CONSEJO MÉDICO A PACIENTES ALCOHÓLICOS Y BEBEDORES EXCESIVOS ATENDIDOS EN CONSULTAS DE ATENCIÓN PRIMARIA

Objetivo. Comprobar la efectividad del consejo médico antialcohólico que se da en las consultas de atención primaria.

Diseño. Estudio cuasi-experimental de tipo «antes-después», abierto, multicéntrico.

Emplazamiento. Catorce consultas médicas de atención primaria (7 rurales y 7 urbanas) de la provincia de Córdoba (España).

Participantes. Un total de 306 pacientes de ambos sexos, captados mediante búsqueda de casos, que presentaban un consumo de alcohol ≥ 35 (varones) y 21 (mujeres) U a la semana, y/o síndrome de dependencia alcohólica (SDA) (MALTS-O ≥ 11).

Intervenciones. A todos se les ofreció consejo médico breve antialcohólico y se les hizo un seguimiento para valoración de su estado a los 3 meses, 1 y 2 años.

Mediciones principales. La variable de respuesta fue la suma del consumo autorreferido, más valores normales de GGT, y la confirmación del familiar. El análisis del estudio fue por «intención de tratar».

Resultados. De los 306 pacientes incluidos, en un 95,1% de los casos se trataba de varones y un 78,4% presentaba SDA. Al cabo de 2 años, el 38,89% (IC del 95%, 32,2-44,3%) había alcanzado el objetivo terapéutico: un 23,85% se encontraba en abstinencia total y el 15,0% presentaba un consumo moderado de alcohol, por debajo del límite de riesgo. El comienzo del consumo excesivo antes de los 16 años (*odds ratio* [OR], 3,0885), vivir en un barrio marginal (OR, 3,2103), consumir tabaco (OR, 1,7187) y un test de CAGE positivo (OR, 1,9949) se asociaron al fracaso de la intervención ($p < 0,05$).

Conclusiones. Se demuestra la alta efectividad del consejo antialcohólico impartido por el médico de familia en condiciones habituales de consulta, tanto en bebedores excesivos como en aquellos con SDA.

Palabras clave: Alcoholismo. Consejo médico. Efectividad. Atención primaria.

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A commentary follow
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Introduction

In Spain, approximately four million persons consume excessive amounts of alcohol, and almost two million meet the criteria for alcohol dependence.¹ Excessive alcohol consumption is accompanied by a number of serious health and social problems,^{2,3} and by an increase in the use of health services, especially at the primary care level.^{1,4,5} It is estimated that 15%-20% of all visits to family physicians are attributable to alcohol and other drugs.⁶

The role of the family physician in caring for this type of patient is considered crucial because of the high prevalence of this problem, its high rate of recurrence within families, the close contact of family doctors with their patients. Moreover, the fact that many patients are more willing to accept primary care interventions than treatment at higher levels of care.⁷⁻⁹ The practitioner's role is mainly in early diagnosis (active searching for cases) and interventions by educational counseling aimed at modifying drinking patterns.⁶ The effectiveness of such intervention has been evaluated in several studies in Spain and other countries, which have shown, in general, that persons with excessive alcohol consumption can reduce their drinking by 35% after receiving brief counseling from their physician.¹⁰⁻²⁶ However, most of these studies were markedly experimental in nature, with restrictive inclusion criteria and failure to reproduce the usual conditions of general practice. To determine the true effectiveness of this type of intervention, it is necessary to determine which factors influence the prognosis, their impact on significant clinical variables such as mortality and morbidity, and their effects on health service utilization. Although some of these influences have been studied, the evidence has not been robustly demonstrated to be strong, and additional studies designed specifically to investigate these factors are needed.^{13,14,22} An important first step toward evaluating the impact of intervention by the family physician is to determine whether such intervention is effective not only in itself, but when results obtained under the usual working conditions of primary care are evaluated. The clinical trial model, with its traditionally explanatory focus, does not appear to be a suitable approach, and a more pragmatic design is needed (as in naturalistic studies).²⁷⁻²⁹ Finding such an approach was the first aim of the present study. A second aim was to identify characteristics or conditioning factors in patients for whom medical counseling less likely to succeed, in order to deal with these factors to the extent this was possible.

Material and methods

Study population

This quasi-experimental, open, multicenter before-after study was designed to evaluate the effectiveness of a specific intervention (family physician's advice for problem drinking).

The study population consisted of patients with alcohol dependence syndrome (ADS) or excessive drinking, who were identified by their family physician in 14 practices (7 rural, 7 urban) at 7 health centers located in the province of Córdoba (Southern Spain).

Consecutive sampling was used to include in the study all patients of either sex, aged 10 years or more, who drank more than 35 IU/week (boys and men) or more than 21 IU/week (girls and women) (1 IU=8 g alcohol), or who met the criteria for ADS as diagnosed from a score of 11 or higher on the MALT questionnaire.^{30,31} We excluded patients who were being treated by specialists or who had serious organic processes (AIDS, advanced liver disease, heroin or cocaine addiction, cancer, psychotic disorder or any disorder with severe cognitive impairment).

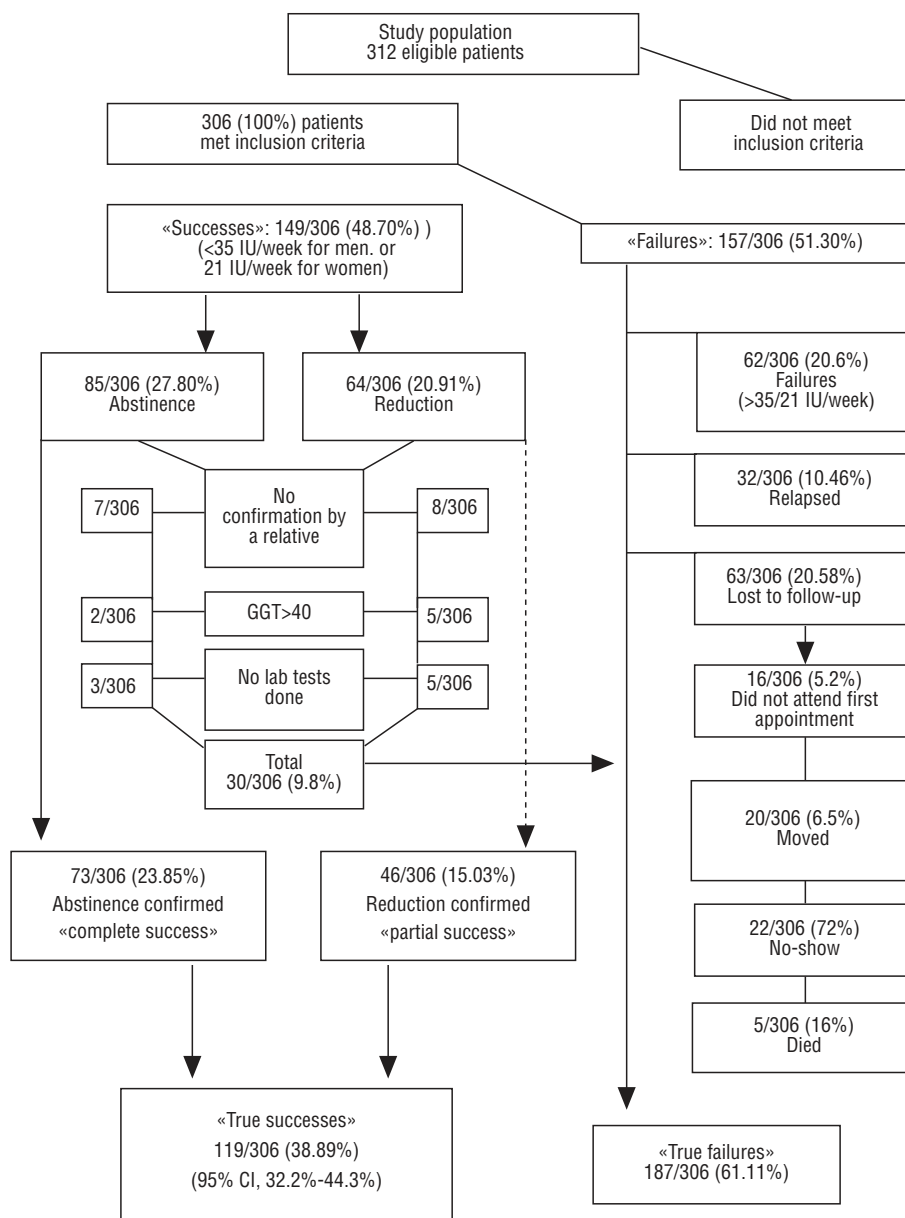
Sample size was calculated with self-reported alcohol consumption as the main evaluation criterion. We aimed to detect a minimum clinically relevant difference of 10% between the percentage of patients who were drinkers before ($p_{\text{before}}=100\%$) and after ($p_{\text{after}}=90\%$) the intervention. For an alpha error of 5%, a statistical power of 90% (beta error=0.10), and a bilateral hypothesis, the minimum sample size necessary was estimated as 98 subjects. We assumed a drop-out rate of 65% by the end of the study, so that with the formula $N_a=N \times 1/(1-R)$,³² where R is the percentage of expected drop-outs (=35%), the minimum number of subjects needed at the start of the study was estimated as 150. For practical reasons, and to increase precision, we decided to recruit a total of 306 patients.

Method

The main study factor was medical counseling, and the main outcome variable was alcohol consumption. The results of treatment were classified as «complete success» (abstinence) or «partial success» (effective reduction in intake). For a case to be considered a complete success the patient had to remain in complete abstinence (self-reported) for a period longer than 3 months, and abstinence had to be confirmed by a first-degree relative or by a GGT value below the 95th percentile of normality according to accepted limits (45 U/L). A case was considered a partial success when alcohol consumption decreased to below the limits considered to indicate risk (<35 IU/week in men, 21 IU/week in women) and the decrease was maintained for a period longer than 3 months. Other variables considered in this study were age, place of residence (rural, urban, or slum), social class (based on the classification proposed by Alonso et al³³), age when drinking first started, type of drinker (according to the classification of Alonso-Fernández³⁴), score on the CAGE test for the detection of alcohol abuse (this questionnaire is recommended as a complement to the interview aimed at quantifying consumption⁶), alcohol consumption at the start of the study, familial antecedents of alcoholism, family or work-related problems related with alcohol, values of GGT, AST, ALT and MCV, and smoking habit.

Interventions and follow-up

Participating physicians were trained in six 2-hour workshops that included discussion of cases and consensus on procedures and teaching materials. A common intervention program, involving adaptation of the usual practices of family physicians at all participating health centers, was developed by consensus. The intervention began by identifying and recruiting patients who visited the health center with a case finding strategy.⁶ Informed consent was requested from each patient, and then brief (3-5 min) counseling was provided. During the first month, in the course of a visit lasting approximately 20 min, the MALT questionnaire was completed, and information was recorded on a data collection sheet from a complete clinical work-up that included information on the degree of impairment and psycho-



General scheme of the study

Quasi-experimental, open, multicenter before-after study to investigate the effectiveness of medical counseling for problem drinking provided in primary care.

logical, social and family support. During this interview the physician offered the patient continuing care, and if the patient declined, the physician noted his or her willingness to see the patient again whenever the patient wished. This was followed by from one to three short follow-up visits (no longer than 15 min) depending on the

patient, and three further follow-up visits were scheduled at 3, 12 and 24 months to evaluate the patient's status and serve as a back-up to the initial intervention. Each of these three interventions lasted 65 to 75 min. All patients were followed for 2 years from recruitment in December 1997.

Statistical analysis

Intention-to-treat analysis was used, and all patients included in the study were evaluated regardless of whether they completed the follow-up period or dropped out early, and regardless of whether they attended the first scheduled visit. Drop-outs on the first visit and on subsequent visits, and patients who were withdrawn from the study, were considered cases in which the intervention failed.

Data collection notebooks were checked and purged of errors before they were examined by a researcher who was unaware of the recruitment and intervention processes. Descriptive statistics were used, and bivariate analysis was done with the chi-squared test, McNemar's test, Student's *t* test and analysis of variance (ANOVA) for repeated measures ($P < .05$). To try to identify the factors that predicted failure of the intervention, we used a backward stepwise unconditional multiple logistic regression strategy and a mixed model that included the following independent variables: age at the start of excessive alcohol consumption, GAGE and MALT scores, smoking habit, place of residence, familial antecedents of alcoholism, family or work problems related with alcohol consumption, and GGT value at the start of the study. The most parsimonious model was chosen on the basis of the likelihood ratio test, and the statistical criterion for excluding a given variable from the model was set at $P < .01$. All data were analyzed with the SPSS program (version 6.0.1) for Windows (SPSS Inc., Chicago 1994).

Results

A total of 306 persons were included. The sociodemographic characteristics and levels of alcohol consumption are shown in table 1. Males predominated the sample (95.1%), and mean age was 47.7 years.

The rate of true successes varied between participating physicians, ranging from 33.3% to 49.4%. Among patients with ADS (72%), the proportion in complete abstinence at the end of the study was 25%, and the proportion who had effectively reduced alcohol consumption was 17%. Of all confirmed successes, 4.9% (15 patients) were referred to specialists because of the seriousness of their condition (7 in the group of abstainers and 8 in the group of patients who achieved an effective reduction in intake). Of the total, 2.6% were judged by the physician researcher to need specialized care, but the patients declined this option and preferred to be seen by their primary care doctor. After 3 months, 16.9% of the patients failed to attend the first scheduled follow-up visit; after 12 months this figure decreased to 7.9%, and after 24 months, to 5.2%.

To track changes in status during follow-up of patients who were abstinent or who had reduced their intake, we compared the results after 3 months with those obtained after 12 and 24 months. Significant differences were found when we compared the status at 3 months with that at 12 or 24 months ($P < .05$), but the differences between 12 and 24 months were not significant ($P = .519$). Therefore patients who were abstinent or who had reduced their drinking after 1 year of follow-up had no change in status at the end of the study period.

Table 2 shows the variables that were independently associated with failure of the intervention. This model explained

TABLE 1 Sociodemographic characteristics and alcohol consumption by patients at the start of the study

Quantitative variables	Mean±SD	95% CI	Range
Age, years	47.7 ± 13.8	46.1-49.2	12-88
Parámetros analíticos			
GGT	93 ± 102	81.2-104.9	11-999
AST	39.58 ± 30.66	36.0-43.1	10-188
ALT	47.22 ± 52.81	41.1-53.3	6-573
MCV	95.63 ± 7.08	94.8-96.4	78-128
Qualitative variables	No.	%	
Sex			
Men	294	95.1	
Women	12	3.9	
Level of education			
Illiterate	32	10.5	
Can read and write	121	39.5	
Primary school	131	42.4	
Secondary school	18	5.8	
Higher education	4	1.3	
Social class			
I-Professional	5	1.3	
II-Managerial, Technical	25	8.7	
III-Skilled non-manual	10	1.3	
IVa-Skilled manual	93	30.4	
IVb-Partly skilled	120	39.2	
V-Unskilled	34	11.1	
VI-Other	24	7.8	
Type of drinker			
1. Excessive, regular			
Daily	270	88.2	
Weekends	25	8.2	
2. Alcoholic	6	2.0	
3. Mentally ill	5	1.6	
MALT			
≥11 points	238	78.4	
<11 points	46	15.0	
Not done	22	6.6	
CAGE test			
≥2 points	138	45.0	
<2 points	142	46.2	
Not done	26	8.8	
Method of recruitment			
Physician's suspicion	183	59.5	
Family	58	19.0	
Blood test	43	14.1	
Other level of care	13	4.2	
Self-motivated	9	2.9	

Continue

Variables cualitativas (Continuation)	No.	%
Associated diseases		
HT	61	20.1
COPD	59	19.5
Gastroduodenal ulcer	46	14.8
Hyperlipemia	33	10.8
Diabetes mellitus	30	9.65
Work-related problems		
Low occupational levels	20	32.8
Dismissed-Unemployed	27	44.3
Accident at work	14	23.0
Number of cigarettes		
0	88	28.8
1-10	24	7.8
11-20	97	31.7
21-40	80	26.1
40 or more	17	5.6
Family problems		
Divorce	9	6.7
Mistreatment	19	14.2
Poor relationship	85	63.5
Attempted suicide	10	7.9
Left home	11	8.0

SD indicates standard deviation; CI: confidence interval.

70% of the change in the outcome variable (χ^2 , 23.8; $P < .012$).

Discussion

Several previous, well-designed clinical trials documented the efficacy of family physician intervention for reducing alcohol intake in patients with excessive consumption.¹⁰⁻²⁶ A meta-analysis of the results for 3946 patients who participated in

12 clinical trials noted that the intervention was twice as effective as the placebo,¹² and subsequent studies provided similar results.^{11,22} In the most relevant trials, which used criteria for effective reduction of intake and abstinence similar to those in the present study,^{16-18,20,21,23,25} success rates ranged from 15% to 43%.

The present study shows that counseling for alcohol consumption, provided by the primary care physician under the usual conditions of practice, is effective for 4 out of every 10 patients after a 2-year follow-up period. This makes our results similar to the best success rates in trials carried out under ideal conditions. However, certain characteristics of these earlier studies affect their external validity. For example, not all studies were done in a purely primary care setting.¹³⁻¹⁷ Some studies excluded persons who consumed more than 131 IU/week (men) or 87 IU/week (women) (Oxford Study),²¹ more than 105/70 IU (WHO study),¹⁶ or more than 50 IU (Wisconsin study).²² Other patients were excluded because of elevated GGT^{14,15} or AIDS.^{11,13-21,23-26} In the present study, mean weekly intake in patients eligible for the intervention was 101 IU, or 808 g/week, i.e., almost double that used for patients included in other experimental studies of efficacy.^{11,16-18,20-22,25,26} With regard to treatment for alcoholism, not considering these patients would lead to the exclusion of many (78.4% in our study) who seek primary care and who also have the most serious problems. It is estimated that 50% of the 4 million persons who are excessive drinkers are also alcoholic.¹ Our study shows that effective intervention provided by the family physician can help these patients too, just as it can help excessive drinkers.

When the actual impact of a health program or intervention is evaluated, the analysis should include all subjects initially recruited, whether they benefited or not from the intervention, i.e., drop-outs and withdrawals during follow-up. In other words, researchers should place themselves in «the worst possible position in the face of an alternative hypothesis», and use one of the strategies involved in intention-to-treat analysis.³² This conservative approach was used to analyze the present results. Studies done to date with intention-to-treat

TABLE 2 Factors associated with failure of the intervention

Independents variables	Coefficients	OR	95% CI	P value
Constant	-4.6973	—	—	—
Age when first started drinking				
≥22 years	—	1.0	—	0.0290
17-21 years	0.6177	1.8546	0.71-4.80	0.2036
≤16 years	1.1277	3.0885	1.29-7.36	0.0110
Living in a slum, yes/no	1.1664	3.2103	1.00-10.22	0.0484
Smoking ≥10 cigarettes	0.5416	1.7187	0.92-3.20	0.0892
CAGE score ≥2	0.6906	1.9949	1.08-3.66	0.0261

Dependent variable: «failure» of the intervention. OR indicates odds ratio; CI: confidence interval (χ^2 , 23.8; $P < .012$).

Results
Key points

What is known about the subject

- Several clinical trials and meta-analyses show that medical counseling provided by the family physician for problem drinking is effective for up to 35% of all patients with excessive drinking.
- However, intervention by the family physician should not only be effective, but should also work when provided under the usual conditions of practice, both for patients with excessive alcohol consumption and those with alcohol dependence syndrome.

What this study contributes

- Medical counseling for problem drinking provided by family physicians was shown to be effective under the usual conditions of practice, both for patients with excessive alcohol consumption and for those with alcohol dependence syndrome.

analysis have included only those patients who attended the first scheduled appointment, i.e., 47% to 61% of all cases.^{18,20,21,25} This implies patient selection bias and camouflages the actual clinical situation. For example, in one of the best-designed studies published to date, Wallace et al.¹⁸ noted that because more older persons, women and men who drank less attended the appointments, the effect of the intervention was probably overestimated.

We therefore believe that the main contribution of the present study is the fact that it was designed as a naturalistic, pragmatic «effectiveness trial» in a prospective cohort that was followed and evaluated for a relatively long period (2 years). This approach goes further than previously published studies of the effectiveness of a given intervention.^{25,30}

Some strengths and weaknesses of the present study are worth noting. The method can be considered appropriate for several reasons:

1. Available evidence on the effectiveness of counseling for alcohol consumption suggests that it would be unethical to undertake a study with a control group for which no intervention was used.
2. Confirmation by a relative of the patient's self-reported consumption has been recommended by others.^{12,22} In addition, we recorded GGT, the most sensitive and specific biological marker for alcohol abuse in primary care.⁶
3. A minimum of 3 months of abstinence as a condition for considering the intervention to be effective is felt to be a more accurate criterion than shorter periods. When drinking during the week prior to the appointment is recorded,^{11,15-26}

the patients may intentionally reduce their consumption because they know they will be asked how much they drank during this period.¹²

4. Although one of the features of primary care is its continuity, most studies we reviewed (except for one¹⁹) used follow-up periods of 1 year or less. Although a 2-year follow-up period seems more realistic, our results show that most patients who had quit drinking or who reduced their intake after 1 year remained abstemious or drank less after 2 years.

Although we have no data on how patients who quit drinking after a primary care intervention fared after longer periods of follow-up, it should be recalled that the relapse rate, especially among patients with ADS, is usually high. Studies with longer follow-up periods are therefore advisable.

It may be useful for family physicians to know which factors condition or predict failure of interventions to reduce drinking, so that these factors can be taken into account when individual care strategies are developed. The limited success of interventions aimed at problem drinking when other social addictions such as smoking are present has been reported by others.^{10,22} This should be taken into account when the best approach and the best moment are being chosen to suggest to the patient that he or she should also consider quitting smoking. In addition, unfavorable socioeconomic conditions diminish the effectiveness of medical counseling; this has generally been related to the presence of other social and health problems that are seen as more real, more threatening and of greater priority for the population.³⁵ These factors are a reminder of the limitations to the physician's role, and of the need to give priority to multidisciplinary community-level interventions aimed at general social and health problems. Current findings emphasize the importance of interventions aimed at the very young, especially in Spain, where the figures regarding excess consumption by this age group are alarming.³⁶⁻³⁸ Early initiation in drinking is also a factor that needs to be considered, as it can be expected to reduce the effectiveness of medical interventions, and it is associated with more alcohol-related problems in these persons than in persons who begin to drink or smoke at an older age.³⁹

The fact that the CAGE results predicted failures better than did the MALT may have been due to the latter's greater sensitivity in detecting excessive drinkers.³¹ False negative rates of up to 50% have been reported for the detection of excessive drinkers with the CAGE,⁴⁰ which detects only intake levels greater than 70 IU/week.^{40,41}

The definition of ADS is broad, and our results suggest: a) that there is a gradient in the degree of dependence, and b) that the success or failure of primary care intervention depends on how severe the degree of dependence is. If we exclude patients with severe withdrawal syndrome, earlier attempts at abstinence that failed, and severe psychiatric or social problems, referral of these patients to specialized care should be considered only after an overall evaluation that takes into account the presence of factors such as early age at

first drink, smoking, low or very low socioeconomic level, and severe ADS as shown by a positive CAGE score.

References

- Portella E, Ridao M, Carrillo E, Ribas E, Ribó C, Salvat M. El alcohol y su abuso: impacto socioeconómico. Madrid: Editorial Médica Panamericana, 1998.
- O'Connor PG. Patient with alcohol problems. *N Engl J Med* 1998;26:592-602.
- Prada C, Del Río MC, Yáñez JL, Álvarez F. Mortalidad relacionada con el consumo de alcohol en España: 1981-1990. *Gac Sanit* 1996;10:161-8.
- Roche A, Guray C, Saunders J. General practitioners' experiences of patients with drug and alcohol problems. *Br J Addict* 1991;86:263-75.
- Magruder-Habib K, Durand AM, Frey KA. Alcohol abuse and alcoholism in primary health care settings. *J Fam Practice* 1991;32:406-13.
- Actualización del PAPPS 2001. *Aten Primaria* 2001;28(Supl 2): 27-30.
- Van Meter RA. Physician advice for problem alcohol drinkers. *J Fam Practice* 1997;45:17-8.
- Stockwell T, Bolt S, Hooper J. Detoxication from alcohol at home managed by the general practitioner. *Br Med J* 1986;292:733-5.
- Anderson P. Effectiveness of general practice for patients with harmful alcohol consumption. *Br J Gen Pract* 1993;43:386-9.
- Altisent R, Córdoba R, Delgado MT, Picó MV, Aranguren F, Alvira U, et al. Estudio multicéntrico sobre la eficacia del consejo para la prevención del alcoholismo en atención primaria (EMPA). *Med Clin (Barc)* 1997;109:121-4.
- Córdoba R, Delgado MT, Pico V, Altisent R, Fores D, Monreal A, et al. Effectiveness of brief intervention on non-dependent alcohol drinkers (EBIAL): a Spanish multi-centre study. *Fam Pract* 1999.
- Wilk AI, Jensen NM, Havighurst TS. Meta-analysis of randomized Control trials addressing brief interventions in heavy alcohol drinkers. *J Gen Intern Med* 1997;12:274-83.
- Kristenson H, Ohlin H, Hultén-Nosslin MB, Trelle E, Hood B. Identification and intervention of heavy drinking in middle-aged men: results and follow-up of 24-60 months of long-term study with randomized controls. *Alcohol Clin Exp Res* 1983; 7:203-9.
- Nilsen O. The Tromsø study: identification of and a controlled intervention on a population of early-stage risk drinkers. *Prev Med* 1991;20:518-28.
- Pearson J, Magnusson PH. Early intervention in patients with excessive consumption of alcohol: a controlled study. *Alcohol* 1989; 6:403-8.
- Babor TF, Acuda W, Campillo C, Del Boca FK, Grant M, Hodgson R, et al. A cross-national trial of brief interventions with heavy drinkers. *Am J Public Health* 1996;86:948-55.
- Saunders JB, Reznick RB, Hanratty S. Early intervention for harmful alcohol consumption. Canberra: Department of Community Services and Health, 1991.
- Wallace PG, Cutler S, Haines A. Randomised controlled trial of general practitioner intervention in patients with excessive alcohol consumption. *Br Med J* 1988;297:663-8.
- Burge SK, Amodio N, Elkin B, Catala S, Rodriguez Andrew S, Lane PA, et al. An evaluation of two primary care interventions for alcohol abuse among Mexican-American patients. *Addiction* 1997;92:1705-16.
- Scott E, Anderson P. Randomized controlled trial of general practitioner in women with excessive alcohol consumption. *Australian Drug and Alcohol Review* 1990;10:313-21.
- Andersson P, Scott E. The effect of general practitioners' advice to heavy drinking men. *Br J Addict* 1992;87:891-900.
- Fleming MF, Barry KL, Manwell LB, Johnson K, London R. Brief physician advice for problem alcohol drinkers. A randomized controlled trial in community-based primary care practices. *JAMA* 1997;277:1039-45.
- Heather N, Campión PD, Neville RG, Maccabe D. Evaluation of a controlled drinking minimal intervention for problem drinkers in general practice (the DRAMS scheme). *J R Coll Gen Pract* 1987;37:358-63.
- Romelsjö A, Andersson L, Barner H, Borg S, Granström C, Hulman O, et al. A randomized study of secondary prevention of early stage problem drinkers in primary health care. *Br J Addict* 1989;84:1319-27.
- Richmond RD, Heather N, Wodak A, Kehoe L, Webster I. Controlled evaluation of a general practice based brief intervention for excessive drinking. *Addiction* 1995;90:119-22.
- Fernández MI, Bermejo CJ, Alonso M, Herreros B, Nieto M, Novoa A, et al. Efectividad del consejo médico breve para reducir el consumo de alcohol en bebedores. *Aten Primaria* 1997;19:127-32.
- Green L, Arbor A. On studying effectiveness. *J Fam Practice* 1999;48:423-4.
- Badia X, Bigorra J. La investigación de resultados en salud: de la evidencia a la práctica clínica. En: Badia X, editor. La investigación de resultados en salud. De la evidencia a la práctica clínica. Barcelona: Edimac, 2000; p. 13-34.
- Chick J. Estudios naturalísticos versus estudios controlados en las recientes investigaciones sobre el tratamiento de la dependencia de alcohol. *Adicciones* 1999;11-3:257-60.
- Fuerlein W, Ringer CH. Diagnose des Alkoholismus: der Münchner Alkoholismus Test (MALT) Münchn. *Med Wochenschr* 1977; 119:1275-82.
- Rodríguez-Martos A, Suárez R. MALT (Münchener Alkoholismus Test): validación de la versión española de este test para el diagnóstico del alcoholismo. *Rev Psiquiatr Med* 1984;6:421-32.
- Argimón JM, Jiménez J. Métodos de investigación clínica y epidemiológica. 2.a ed. Madrid: Harcourt, 1999.
- Alonso J, Pérez P, Sáez M, Murillo M. Validez de la ocupación como indicador de la clase social, según la clasificación del British Registrar General. *Gac Sanit* 1997;11:205-13.
- Alonso-Fernández F. Alcohol dependencia. Personalidad del alcohólico. 3.a ed. Barcelona: Masson, 1992.
- Kemp J, Koremblat P, Scherger J, Minkwitz M. Zafirlucast in clinical practice. Result of the Accolate Clinical Experience and Pharmacoeconomics Trial (ACCEPT) in patients with asthma. *J Fam Practice* 1999;48:423-4.
- Pérola L, Ruiz R, Fernández JA, Herrera E, De Miguel MD, Bueno JM. Consumo de alcohol entre los escolares de una zona básica de salud de Córdoba. *Rev Esp Salud Pùb* 1998;78:331-42.
- Gascón FJ, Jurado A, Lora N, Navarro B, Gascón JA, Romanos A. Consumo de alcohol e influencia del entorno entre escolares de EGB. *An Esp Pediatr* 1997;47:42-5.
- Villalbí JR, Nebot M, Ballestín M. Los adolescentes ante las sustancias adictivas: tabaco, alcohol y drogas no institucionalizadas. *Med Clin (Barc)* 1995;104:784-8.
- Schuckit MA, Russell JW. Clinical importance of age at first drink in a group of young men. *Am J Psych* 1993;140:1221-3.
- Wallace PG, Brennan PJ, Haines AP. Drinking patterns in general practice patients. *J R Coll of Gen Pract* 1987;37: 354-7.
- Kitchens JM. Do this patient have an alcohol problem. *JAMA* 1994;272:1782-7.

COMMENTARY

Primary Care Intervention for At-Risk Drinking

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Health problems related with the consumption of alcoholic beverages cause alarm because of their health, economic and social consequences. The advisability of preventive interventions at the primary care level has been widely accepted, and such measures have been shown to be effective. The first step is to identify subjects whose consumption is considered to pose a risk: ≥ 28 standard units of alcohol or SUA (1 SUA is 10 mL of pure alcohol) per week in men or ≥ 17 SUA/week in women, or consumption of 5 SUA or more in one drinking session at least once a month). This is followed by educational intervention aimed at helping to reduce intake in drinkers classified as at-risk drinkers, or at achieving abstinence in persons with alcohol dependence.¹

The study by Fernández García and colleagues², like other studies, confirms that interventions provided at the primary care center by family physicians with appropriate skills to perform brief interventions, achieve a 2-year reduction in drinking of 38.9% in patients at risk: 23.8% were abstinent at the end of the follow-up period, and 15% had reduced their alcohol intake. Most subjects were men, and factors with an unfavorable influence on the outcome were age less than 16 years when drinking first started, drinking associated with smoking, and a negative CAGE score.

In 1988 Wallace and colleagues published the first study of the usefulness of counseling provided by general practitioners.³ Since then additional studies have confirmed that the effectiveness of brief counseling to reduce alcohol consumption is about 25%;⁴ studies published in Spain have reported similar results.⁵ Most studies have also found that drinking decreased in persons in the control group, who only reported their alcohol intake but did not take part in any other interventions. This suggests that simply inquiring patients about their drinking influences alcohol consumption, which the patient may have previously considered «normal».

Studies published to date have identified some issues, while others require further research. We know that early diagnosis by timely detection, followed by educational inter-

Key points

- Interventions in the primary care setting to reduce alcohol abuse in at-risk drinkers is efficacious, effective and efficient.
- Research on interventions aimed at problem drinking is within the domain of primary care.
- Services offered by primary care centers should include, in addition to interventions for persons with evident problems, the detection of excessive drinking and educational counseling for individuals considered at-risk drinkers.

vention, can modify drinking patterns in men. Brief intervention lasting a few minutes, accompanied by educational materials, offers results similar to those obtained with more intensive interventions, and interventions are effective regardless of whether they are provided by physicians or nurses. Some questions that have not received much attention thus far, and which deserve further study, are:

- What types of intervention are useful for women, older persons and adolescents?
- Are the results related with the number of intervention sessions?
- How long do the effects of educational counseling on alcohol consumption last?
- In the long term, are follow-up interventions needed to consolidate the lifestyle changes?
- What educational support materials provide the best results?
- Do educational interventions adapted to the individual's state of change yield better results?
- Should interventions be aimed only at persons who have problems related with drinking, or should interventions

be opportunistic, i.e., offered for persons who do not seek medical help for their drinking problem?

These and other questions can only be answered if research continues in this area, which is well within the scope of primary care. We cannot assume that specialists in other levels of care will take it upon themselves to answer questions that are within the domain of the primary care setting. Persons with alcohol-related problems who are seen in specialized care units have a different profile from that of patients seen in primary care, as occurs with other types of problem. Thus research on the effectiveness interventions provided by the family physician is the responsibility of primary care professionals.

Although the results obtained with interventions for at-risk drinking were better than those with other interventions used more widely in primary care, such interventions do not form part of the services regularly offered by primary care centers. The lack of such treatments has been documented in audits of the activities included in the objectives of primary care teams, and their absence raises a new set of questions:

- What factors are responsible for the scarcity of preventive activities in primary care facilities related to alcohol abuse?
- Which instruments that detect at-risk drinking perform best or are accepted best by patients?
- What factors make it easier for health care professionals to extend the range of services they provide?
- Is the intervention efficient in economic terms?⁶

In practice, health care professionals encounter obstacles to detecting problems and modifying unhealthy lifestyles. Some problems are related with the available infrastructure (time, specialized units, training), others are related with uncertainties surrounding the effectiveness of health interventions that can be offered in primary care.⁷ The patient load, inadequate training or insufficient coordination with specialized services are the most obvious barriers to a more active role for primary care practitioners, family physicians and nursing staff in this serious public health problem. Also lacking is open, public debate

on the benefits and risks of drinking (a debate not removed from the concerns of health professionals), and this may well be hindering the formulation of clear proposals. On one hand, legislative measures have been proposed to promote wine-drinking, but on the other hand are the death toll from traffic accidents caused by excess drinking on weekends, and the large number of potential years of life lost.

In closing, I offer some considerations of the consequences of including, within the services provided by the Spanish primary care system, interventions aimed problem drinking. In Spain the number of at-risk drinkers is estimated to be approximately four million, and of these, different studies have found that 25% could reduce their risk if primary care professionals were alert to alcohol abuse in their patients and offered brief interventions. In other words, one million persons stand to benefit annually.

References

1. Aubà J, Barranco JR, Córdoba R, Ledesma A, Mosquera J, Pico MV, Ribas A. Recomendaciones semFYC ALCOHOL. Barcelona: semFYC, 2000.
2. Fernández García JA, Ruiz Moral R, Pérula de Torres LA, Campos Sánchez L, Lora Cerezo N, Martínez de la Iglesia J, por el Grupo Cordobés de Investigación en Atención Primaria (GCIAP). Efectividad del consejo médico a pacientes alcohólicos y bebedores excesivos atendidos en consulta de atención primaria. *Aten Primaria* 2003; 31:¿¿¿¿¿¿¿¿¿¿.
3. Wallace PG, Cutler S, Haines A. Randomised controlled trial of general practitioner intervention in patients with excessive alcohol consumption. *Br Med J* 1988;297:663-8.
4. Poikolainen K. Effectiveness of brief interventions to reduce alcohol intake in primary health care populations: a meta-analysis. *Preventive Medicine* 1999;28:503-9.
5. Córdoba R, Delgado MT, Pico V, Altisent R, Fores D, Monreal A, et al. A. Effectiveness of brief intervention on non-dependent alcohol drinkers (EBIAL): a Spanish multi-centre study. *Fam Pract* 1999.
6. Fleming MF, Mundt MP, French MT, Manwell LB, Stauffacher EA, Barry KL. Benefit-cost analysis of brief physician advice with problem drinkers in primary care settings. *Med Care* 2000; 38:7-18.
7. Beich A, Gannik D, Malterud K. Screening and brief intervention for excessive alcohol use: qualitative interview study of the experiences of general practitioners. *BMJ* 2002;325:870-4.