

Multicentre study of acute alcohol use and non-fatal injuries: data from the WHO collaborative study on alcohol and injuries

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Objectives To study the risk of non-fatal injury at low levels and moderate levels of alcohol consumption as well as the differences in risk across modes of injury and differences among alcoholics.

Methods Data are from patients aged 18 years and older collected in 2001–02 by the WHO collaborative study on alcohol and injuries from 10 emergency departments around the world ($n = 4320$). We used a case–crossover method to compare the use of alcohol during the 6 hours prior to the injury with the use of alcohol during same day of the week in the previous week.

Findings The risk of injury increased with consumption of a single drink (odds ratio (OR) = 3.3; 95% confidence interval = 1.9–5.7), and there was a 10-fold increase for participants who had consumed six or more drinks during the previous 6 hours. Participants who had sustained intentional injuries were at a higher risk than participants who had sustained unintentional injuries. Patients who had no symptoms of alcohol dependence had a higher OR.

Conclusion Since low levels of drinking were associated with an increased risk of sustaining a non-fatal injury, and patients who are not dependent on alcohol may be at higher risk of becoming injured, comprehensive strategies for reducing harm should be implemented for all drinkers seen in emergency departments.

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Introduction

Reports of alcohol use that used the case–crossover design have shown that alcohol use is a strong risk factor for all causes of non-fatal injuries among patients attending emergency departments.^{1–4} These reports, along with others that have sampled patients in the general population, have concluded that alcohol use is associated with driving accidents,⁵ violence,^{6,7} suicide,⁸ and injuries such as falls, trips and burns — that is, non-traffic injuries in general.^{9–14} The unique feature of the case–crossover study is that this method allows the effect of acute alcohol use to be separated from chronic effects of consumption (such as those that occur in people who abuse alcohol or are dependent on it).¹⁵ Both are matters of great interest to public health policy-makers, such as when trying to establish “safe limits” for drinking across various situations,¹⁶ and

in injury epidemiology.¹⁷ The case–crossover method seems especially appropriate when studying the risk of non-fatal injury among people who consume only low levels or moderate levels of alcohol,¹⁸ when assessing differences in risk across modes of injury¹ and when determining whether alcoholics may have a different risk of non-fatal injury compared with non-dependent drinkers.¹⁹

Although these issues have been partially addressed in prior case–crossover reports,^{1,4,20} which have found mixed results, an important factor in a detailed analysis of these issues is the small sample size used in most studies, which affects the power of the analysis of the effects on those who consume only small amounts of alcohol and the comparisons that are made across key modifiers of the effects. The WHO collaborative study on alcohol and injuries²¹ is a large multicentre survey of injured patients presenting in hospitals worldwide; its data can be used

to help circumvent these limitations. The goals of this paper are to report on the risk of non-fatal injury according to levels of acute use of alcohol; thus, looking at a dose–response relationship. We also seek to compare risk estimates for patients who are heavy drinkers and those who are chronic alcoholics across modes of injury.

Methods

Data from the WHO collaborative study on alcohol and injuries were collected in 2001–02 from emergency departments in Argentina, Belarus, Brazil, Canada, China, the Czech Republic, India, Mexico, Mozambique, New Zealand, South Africa and Sweden. The methods used were similar to those used previously in emergency department studies in a number of countries.²² Probability samples were drawn from patients admitted within 6 hours of an injury at each site;

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each shift during each day of the week was represented equally in the sampling. The target sample size was 500 patients from each site. Patients were approached as soon as possible to obtain informed consent for participation in the study. The total sample size of participants aged 18 years or older was 5243 patients, representing a 91% response rate. In their interviews, researchers at two sites (Mozambique and South Africa) did not include the questions required for case–crossover analysis and their data were excluded, leaving a final sample size of 4320 participants. Interviewers were trained and supervised by study collaborators. Interviewers administered a standard 25-minute questionnaire. Further details on the sample have been presented elsewhere.²¹

Interview

The questionnaire was translated and then back-translated into each language; it included questions on whether the participant reported drinking during the 6 hours before the injury, an estimate of the amount of alcohol consumed during the same 6-hour period in the previous week, an estimate of the number of drinks consumed during each period, and the usual quantity of alcohol consumed and the frequency of alcohol use during the

past year. Questions on quantity and frequency were based on questionnaires used in a number of emergency room studies.^{11,23} A measure of heavy drinking was developed; participants were classified as heavy drinkers if they reported having had five or more drinks on one occasion at least yearly. Except in New Zealand, participants were also asked the four questions that comprise the Rapid Alcohol Problems Screen (RAPS4), which measures alcohol dependence.²⁴ This instrument was developed in an emergency department population. It is based on an optimal set of screening items from several instruments.²⁵ It has been found to perform as well or better than other screening instruments for alcohol dependence when compared with the *International statistical classification of diseases and related health problems*, 10th edition, and the *Diagnostic and statistical manual of mental disorders*, 4th revision,²⁶ when used in emergency department populations^{27–29} and in the general population.³⁰

Using RAPS4, participants are asked the following questions. Patients responding positively to one or more items are considered to be dependent on alcohol.

- During the past 12 months have you had a feeling of guilt or remorse after drinking?

- During the past 12 months has a friend or a family member ever told you about things you said or did while you were drinking that you could not remember?
- During the past 12 months have you failed to do what was normally expected of you because of drinking?
- During the past 12 months do you sometimes take a drink in the morning when you first get up?

The mode of injury was assessed using a single question. In this paper, this variable was categorized as unintentional injury, intentional self-inflicted injury or intentional injury inflicted by someone else. Patients who reported unintentional injuries were classified using the following categories: traffic accident; injuries sustained from blunt force or being struck against or caught between; injuries sustained from being stabbed, cut, bitten or accidentally shot; injuries from falls or trips; and a mixed group of other injuries that included being choked, hung, drowned, poisoned, burned with fire or hot liquid, other and don't know.

Data analysis

Following the method used in a prior report⁴ we matched responses from two

Table 1. Selected characteristics of participants with non-fatal injuries seen in emergency departments in 10 countries by how much alcohol participant consumed 6 hours prior to being injured ($n = 4320$). Values are percentages unless otherwise indicated

Country	Reported consuming alcohol 6 hours prior to injury	Male sex	Age < 30 years	Level of education (university or higher)	Violence related injury	Reported did not consume alcohol 6 hours prior to injury	Male sex	Age < 30 years	Level of education (university or higher)	Violence related injury
Argentina ^a	94 (21.3) ^b	83.5	48.5	19.2	25.3	348 (78.7) ^b	66.5	48.0	15.6	6.2
Belarus	137 (30.0)	76.6	52.6	40.9	25.6	320 (70.0)	51.6	32.5	49.4	3.1
Brazil	63 (12.8)	88.9	58.7	15.0	25.4	428 (87.2)	63.4	48.0	16.6	6.8
Canada ^a	14 (6.3)	86.7	26.7	60.0	6.7	207 (93.7)	60.3	27.6	50.7	1.3
China	100 (18.8)	95.0	27.0	18.0	29.6	433 (81.2)	64.0	46.4	13.4	20.6
Czech Republic	40 (7.8)	80.0	45.0	39.5	12.5	470 (92.2)	53.4	40.2	43.7	2.8
India	118 (21.7)	96.6	41.6	5.9	54.2	426 (78.3)	69.6	53.0	5.7	29.4
Mexico	78 (17.2)	88.5	78.2	11.8	46.8	376 (82.8)	53.7	46.8	20.0	9.6
New Zealand ^{a,c}	59 (38.5)	72.6	46.3	65.8	–	94 (61.5)	59.8	36.2	64.9	–
Sweden	73 (15.1)	72.6	38.4	27.5	26.0	411 (84.9)	50.6	25.6	26.6	3.9
Total^{a,d}	776 (18.1)	84.7	47.6	25.9	32.1	3514 (81.9)	59.1	41.7	26.3	10.0

^a Data have been weighted for some sites that used a weighted sampling scheme to guarantee representativeness of sampling for hospital shifts and days of the week.

^b Values in this column are number (percentage).

^c In New Zealand participants were not asked for information on mode of injury.

^d In some cases data do not add up to 4320 either because data were missing for whether alcohol was consumed 6 hours before the injury or due to weighting and rounding.

different points in time for each participant in order to compare participants' reported use of alcohol during the 6 hours before being injured with their use of alcohol during the same time on the same day of the previous week. The volume of alcohol consumed during each 6-hour period was analysed by converting the number and volume of drinks to pure ethanol; 16 ml was used as the conversion factor for a standard drink. The volume of alcohol consumed was analysed as both a categorical variable and a continuous variable to determine possible modifiers of effects.

Conditional logistic regression was used to calculate the odds ratios (OR) for matched pairs and 95% confidence intervals (CIs).^{15,31} Variation in the magnitude of the OR across levels of fixed characteristics, such as age, was examined using the χ^2 test of homogeneity.³¹ Generalized additive models were developed using Stata statistical software³² and were used as an additional tool to inspect the shapes of the curves for potential effect modifiers on a continuous scale.

Findings

Table 1 presents the distribution of the sample according to participants' exposure to alcohol (for example, drank alcohol 6 hours prior to the injury or did not drink alcohol before the injury) as well as presenting key demographic data. (Some values have been rounded and weighted because some sites used a weighted sampling scheme to guarantee the representativeness of sampling for hospital shifts and days of the week.) In the total sample, 18.1% (776/4290) drank alcohol prior to being injured.

Table 2. Matched pair analyses of injury and drinking comparing alcohol consumption 6 hours before injury with alcohol consumption one week before injury among participants with non-fatal injuries seen at emergency departments in 10 countries. (All data have been weighted)

Injury	% of all injuries	Odds ratio ^a
Mode of injury		
Intentionally inflicted by someone else	14.0	20.7 (9.4–45.6)
Intentionally self-inflicted	3.8	23.1 (3.1–171.0)
Traffic accident	16.2	3.9 (2.2–7.1)
Blunt force or struck against or caught between	10.7	8.2 (3.1–21.4)
Stabbed, cut, bitten or shot	15.4	3.7 (2.3–6.1)
Fell or tripped	32.4	3.3 (2.2–4.9)
Other, choking, hanging, drowning, poisoning, burned with fire or hot liquid, or don't know	7.4	7.4 (2.0–28.0)
All injuries	100.0	5.7 (4.5–7.3)

^a Values in parentheses are 95% confidence intervals.

The prevalence of exposure to alcohol varied from a low of 6.3% (14/221) in Canada to a high of 38.5% (59/153) in New Zealand. Participants exposed to alcohol were more likely to be male, younger (aged <30 years) and admitted with intentional injuries.

A total of 487 patients drank alcohol 6 hours prior to being injured but did not drink during the control period (classified as discordant pairs) — that is, they did not have a drink at the same time on the same day of the week during the week prior to the injury; 85 patients drank during the control period but not during the 6 hours prior to injury (also classified as discordant pairs). The OR for sustaining an injury if participants had consumed alcohol in the 6 hours prior to being injured was 5.7 (95% CI = 4.5–7.3). Table 2 shows that falling or tripping were the most common causes of injury, accounting for

32.4% (1322/4079) of all injuries; the largest OR for consuming alcohol and being injured was found for intentional self-inflicted injuries (OR = 23.1; 95% CI = 3.1–171.0).

Table 3 presents the cross-tabulation of the number of drinks consumed 6 hours prior to the injury with the number of drinks consumed during the control period. The OR for each level of consumption is presented; the number of drinks consumed is presented as a continuous variable. The risk of injury increased with the consumption of just a single drink, and this risk increased 10-fold when six or more drinks were consumed. This suggests there is a dose-response relationship. Using the number of drinks as a continuous variable, each additional drink increased the risk of injury by 25%.

Table 4 presents the odds ratios associated with the number of drinks consumed (on a continuous scale) according to possible modifiers of effects. Demographic variables did not modify effects, but the mode of injury and chronic alcohol use did affect the ORs. Although alcohol use increased the risk of all types of injury, those patients with an intentional injury (either self-inflicted or inflicted by someone else) were at higher risk than patients who had unintentional injuries. Participants who were not classified as being dependent on alcohol by the RAPS4 and participants who reported no heavy drinking were more likely to be injured after drinking than those who were classified as heavy drinkers or as being dependent on alcohol by the RAPS4.

Table 3. Matched pair analyses of alcohol consumption 6 hours prior to injury and one week prior to injury by number of drinks consumed among participants with non-fatal injuries seen at emergency departments in 10 countries. (Data have been weighted)

No. of drinks consumed 6 hours prior to injury	No. of drinks consumed 1 week prior to injury					Odds ratio
	0	1	2–3	4–5	≥6	
No. of drinks (categorical)						
0	3345	13	35	15	22	1.0
1	48	6	0	0	2	3.3 (1.9–5.7)
2–3	135	2	21	6	8	3.9 (2.8–5.3)
4–5	107	1	15	16	9	6.5 (4.4–9.8)
≥6	197	4	21	21	52	10.1 (7.0–14.6)
No. of drinks (continuous)						1.25 (1.20–1.30)

Generalized additive model curves for participants are shown in Fig. 1. Those classified as not dependent had a higher intercept (and thus were at a higher risk of injury) than those classified as dependent, but both curves were parallel across the spectrum of alcohol volume, suggesting similar dose–response relationships for those who were dependent and those who were not dependent.

Discussion

Main findings

In this large sample of patients with non-fatal injuries attending 10 emergency departments worldwide we found that the risk of injury increased when patients had a single drink (OR = 3.3; 95% CI = 1.9–5.7), and there was a 10-fold increase when six or more drinks were consumed. Taken together, the data from categorical and continuous variables suggest that at first the risk increases more steeply and then it becomes more attenuated — that is, the prevalence of injury could be reduced if, for example, drivers abstained from drinking. Demographic variables (age, sex and education) did modify the effect, but the mode of injury and chronic alcohol use affected the odds ratios. Patients with intentional injuries (either self-inflicted or inflicted by others) had higher ORs than patients with unintentional injuries. Patients without symptoms of alcohol dependence and those who were not heavy drinkers had higher ORs than patients who were classified as dependent on alcohol or as heavy drinkers.

This is the first case–crossover study to show that having only a single drink is associated with a non-fatal injury. This finding has important implications for prevention although few injured patients reported drinking only one drink during the 6 hours prior to the event. Vinson et al.¹ showed that consuming 1–3 drinks 6 hours before an injury increased the risk of being injured by 1.7 times (95% CI = 0.8–4.0) when compared with drinking the day before the injury. In a larger study, Vinson et al.² identified a dose–response relationship between consuming as few as 1–2 alcoholic drinks and risk of injury (OR = 1.8; 95% CI = 1.3–2.6) when the drinking patterns of participants who had had a drink within the 6 hours before the injury were compared with their drinking the day before. Other, more traditional, case–control

Table 4. Matched pair analyses of alcohol consumption 6 hours prior to injury and one week prior to injury by possible modifiers of key effects for participants with non-fatal injuries seen at emergency departments in 10 countries

Possible modifier	Odds ratio ^a	P-value
Sex		0.135
Female	1.4 (1.20–1.56)	
Male	1.2 (1.18–1.28)	
Age		0.212
< 30 years	1.2 (1.16–1.28)	
≥ 30 years	1.3 (1.21–1.37)	
Level of education (university or higher)		0.308
No	1.2 (1.17–1.28)	
Yes	1.3 (1.19–1.39)	
Mode of injury		<0.001
Intentionally inflicted by someone else	1.4 (1.28–1.55)	
Intentionally self-inflicted	2.0 (1.08–3.84)	
Traffic accident	1.2 (1.09–1.38)	
Blunt force or struck against or caught between	1.7 (1.23–2.26)	
Stabbed, cut, bitten, shot	1.3 (1.18–1.54)	
Fell or tripped	1.1 (1.03–1.15)	
Other, choking, hanging, drowning, poisoning, burned with fire or hot liquid, or don't know	1.3 (1.05–1.56)	
RAPS4 category ^b		0.008
Not dependent on alcohol	1.4 (1.26–1.46)	
Dependent on alcohol	1.2 (1.15–1.26)	
Consume 5 or more drinks at least once per year		0.007
No	1.5 (1.29–1.70)	
Yes	1.2 (1.17–1.27)	

^a Values in parentheses are 95% confidence intervals.

^b RAPS4 = Rapid Alcohol Problems Screen.

studies in emergency departments have also shown a dose–response relationship for the risk of injury.^{17,33} The dose–response finding in our study is consistent with those found in a studies of fatal recreational boat injuries,³⁴ non-fatal injuries incurred while bicycling³⁵ and traffic accidents.⁵ A previous analysis by our group, using data only from Mexico, did not find an increase in the risk of injury when consuming only one drink 6 hours before an injury was compared with alcohol use during the same time period the day prior to or the month prior to the injury.³⁶

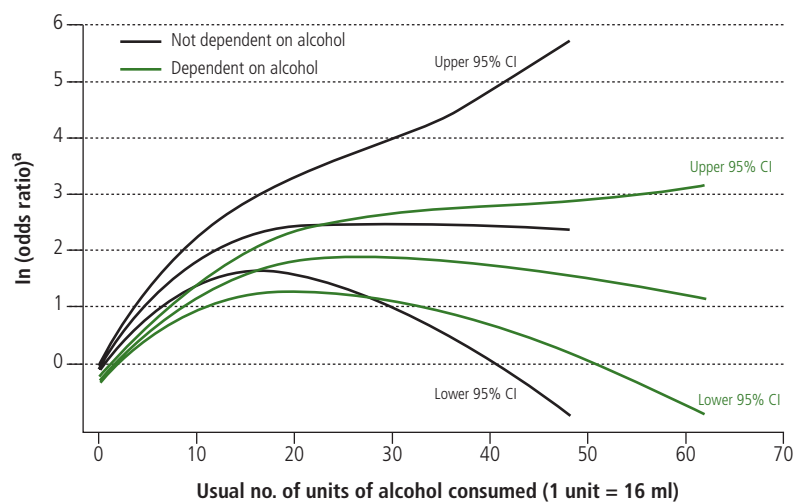
Some reports have tried to disentangle differences between acute alcohol use and risk of injury according to the participant's usual consumption pattern;¹⁷ this is a matter of great interest to public health professionals.³⁷ Studies of drivers involved in fatal crashes¹⁹ and cross-sectional data from a study of drinking and driving,³⁸ as well as data from population surveys of drinking and injury,³⁹ have suggested that episodes of

intoxication may have a different impact among people who do not usually drink heavily. It has also been suggested that “more frequent drinkers have less risk at all blood alcohol concentration levels, including zero, than less frequent drinkers.”¹⁹ An inherent difficulty with most research in this area is the fact that for individuals, there is a correlation between chronic and acute drinking. The case–crossover study design is especially useful in disentangling the effect of both types of exposure,^{40,41} and Vinson et al.² and Borges et al.³ have addressed this issue in studies in emergency departments, but their studies had conflicting results. In a case–control analysis, Vinson et al.² showed that participants who did not have “alcohol use disorders” were at greater risk of being injured when compared with participants who had alcohol use disorders, but the reverse relationship was observed in case–crossover analyses. Borges et al.³ showed that patients who did not have an alcohol use disorder were at higher risk of sustaining an injury

than patients who had an alcohol use disorder. In our report, patients who were not classified as dependent on alcohol (using RAPS4) and light drinkers (those who reported drinking <5 drinks on all occasions during the past year) were at a higher risk of being injured than patients classified as dependent on alcohol or heavy drinkers. This seems counterintuitive because it is known that alcoholics have an increased risk of injury.^{20,42,43} Since patients with alcohol use disorders have a greater baseline risk for injury when compared with patients who do not have alcohol use disorders and because they drink more often, they will be at greater overall risk for injuries associated with drinking. While the chronic use of alcohol may lead to a higher risk of accident and injury, the acute effects of consuming alcohol among those who do not drink regularly, such as adolescents, may put an individual at greater short-term risk. Future research should try to discover mechanisms related to this finding and the influence of using different control periods (prior day, prior week, etc.) on estimates of relative risk.

Alcohol use was associated with all modes of injury, but higher risks were evident for self-inflicted injuries. Vinson et al.²⁰ showed in case-control and case-crossover analyses that odds ratios for violence-related injuries are especially high when the injury is associated with alcohol use during the 6 hours prior to injury (OR = 34; 95% CI = 4.7–250); this finding has been reported by others^{6,36,44,45} and confirmed by this research. The risk of suicide attempts was especially high in our study, confirming a more limited finding from a frequency analysis of a case-crossover study in a sample of patients from Australia, Canada, Mexico and the United States⁴⁶ as well as a study in Texas⁴⁷ and a hospital-based case-control study in Mexico City.⁴⁸ Previous case-crossover reports¹ have reported higher, but not statistically significant, ORs for motor vehicle accidents, falls and “other injuries”. Vinson et al.² have reported higher risks for motor vehicle accidents, falls and injuries caused by being struck by or against objects;² their ORs were similar to the results reported here. Recent case-control,⁴⁹ ecological⁵⁰ and longitudinal⁵¹ studies have also documented these associations. Nonetheless, this paper is the first to present estimates of odds ratios across several injury types

Fig. 1. Generalized additive model of alcohol consumption and risk of injury by Rapid Alcohol Problems Screen (RAPS4) classification



^a The logarithm is in base a of the odds ratio.

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and to formally test for differences across the modes of injury.

Study limitations

This study is limited to an analysis of data from patients with non-fatal injuries who attended specific emergency departments. Although the study design provides a representative sample of patients from each facility, patients may not be representative of other facilities in the city or the country. In this paper, common estimates for the risk of injury have been emphasized, and further work will examine the heterogeneity in estimates of odds ratios across sites.²¹ Additionally, as is common with other studies conducted in emergency departments, cases cannot be assumed to be representative of other people who were injured but did not seek medical attention.

All analyses reported here are based on the participant's reported alcohol consumption at different times, and it is possible that participants were more likely to recall their consumption more accurately immediately before an injury than during a previous period. Differential recall may lead to an overestimate of the association between alcohol and injury if patients are more likely to remember and report alcohol use in the short term. Prior case-crossover research on alcohol consumption and injury has used other control periods,^{1–4} ranging from a day to a year, suggesting that the findings reported here are robust. Legal or other issues, however, may encourage patients to minimize their reports

of drinking prior to an injury, for example, if they were involved in a traffic accident. On the other hand, it is also possible that patients may overestimate their drinking; for example, those with violence-related injuries may over-report alcohol consumption to excuse behaviour that would otherwise be seen as socially unacceptable.⁵² Clearly, more research on the validity of methods for eliciting alcohol use in case-crossover analyses is needed.

Despite the fact that case-crossover studies are well suited to control for between-person confounders, they do not remove the possibility that within-person confounders exist. For example, in our study it is possible that a patient may have been suffering from a transient depressive episode that gave rise to an increase in alcohol consumption. This co-occurrence of depression and alcohol use, or any other psychiatric disorder or substance use, could confound estimates of odds ratios. Because we lack measures of other acute variables that vary over time and that could be considered possible confounders of the relationship between acute alcohol use and injury, we cannot quantify this bias or adjust our results accordingly. Also, when looking at specific injuries, we did not take into account the fact that in a job related-accident, for example, the control period should ideally be one during which the person was working. Nevertheless, it is unlikely that these two limitations fully explain estimates of odds ratios that ranged from 3.3 to 23.1.

Conclusions

Within the scope of these limitations, this report on a large and representative sample of patients attending emergency departments shows that consuming even one drink may increase the risk of injury. Risks for both heavy and light drinkers as well as for all modes of injury may be increased. The data suggest that emergency departments should make efforts to counsel all who drink alcohol on their increased risk of injury. ■

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(http://www.who.int/substance_abuse/activities/injuries/en/).

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Résumé

Étude multicentrique de la relation entre abus d'alcool et traumatismes non mortels : données fournies par une étude collective menée par l'OMS sur le thème alcools et traumatismes

Objectifs Étudier le risque de traumatisme non mortel associé à une consommation faible ou modérée d'alcool, ainsi que les variations de ce risque en fonction du type de traumatismes et de la consommation alcoolique.

Méthodes Les données concernent des individus de plus de 18 ans et ont été recueillies sur la période 2001-2002 dans le cadre d'une étude collective organisée par l'OMS sur la relation entre alcool et traumatismes dans 10 service d'urgence répartis dans le monde ($n = 4320$). Ces données ont été soumises à une analyse de type case crossover pour comparer la consommation d'alcool pendant les 6 jours précédant le traumatisme à celle des mêmes jours de la semaine précédente.

Résultats Le risque de traumatisme augmente dès la première consommation (odds ratio = 3,3; intervalle de confiance à

95 % = 1,9-5,7) et s'accroît d'un facteur 10 pour les sujets ayant pris six consommations et plus pendant les 6 jours précédents. Pour les sujets, le risque de traumatisme intentionnel est plus grand que celui de traumatisme involontaire. L'odds ratio (OR) est plus élevé pour les sujets ne présentant aucun symptôme de dépendance alcoolique.

Conclusion Une association étant constatée entre la consommation de faibles quantités d'alcool et l'augmentation du risque de traumatisme non mortel et les individus non dépendants à l'égard de l'alcool pouvant être exposés à un plus grand risque de traumatisme, des stratégies complètes de limitation des dommages doivent être mises en place à l'intention de tous les buveurs accueillis dans les services d'urgence.

Resumen

Estudio multicéntrico sobre consumo agudo de alcohol y traumatismos no mortales: datos de un estudio en colaboración de la OMS sobre el alcohol y los traumatismos

Objetivos Estudiar el riesgo de traumatismo no mortal a niveles moderados y bajos de consumo de alcohol, así como el distinto riesgo asociado a cada tipo de traumatismo y las diferencias según el grado de dependencia del alcohol.

Métodos En 2001 - 2002, como parte del estudio en colaboración de la OMS sobre el alcohol y los traumatismos, se reunieron datos sobre pacientes de 18 años o más atendidos en 10 departamentos de urgencias en todo el mundo ($n = 4320$). Utilizamos un método de casos cruzados para comparar el consumo de alcohol durante las 6 horas anteriores al traumatismo y el consumo de alcohol durante el mismo día de la semana anterior.

Resultados El riesgo de traumatismo aumentaba tras consumir una sola bebida (razón de posibilidades (OR) = 3,3; intervalo de confianza del 95% = 1,9-5,7), y se multiplicaba por 10 entre

quienes habían tomado seis o más bebidas durante las 6 horas precedentes. Los participantes que habían sufrido traumatismos intencionales presentaban un riesgo mayor que el de los participantes que habían sufrido traumatismos no intencionales. Los pacientes sin síntomas de dependencia del alcohol presentaban una OR más elevada.

Conclusión Considerando que los niveles bajos de consumo de alcohol se asociaban ya a un mayor riesgo de traumatismo no mortal, y que los pacientes sin dependencia del alcohol presentan quizá un mayor riesgo de sufrir traumatismos, convendría aplicar estrategias integrales de reducción de daños con todas las personas que sean atendidas en departamentos de urgencias y hayan bebido.

ملخص

دراسة متعددة المراكز للتعاوي الحاد للكحوليات وللإصابات غير المميّنة: معطيات من الدراسة التعاونية لمنظمة الصحة العالمية حول تعاوي الكحوليات والإصابات

سنة مشروبات أو أكثر خلال الساعات الست السابقة للإصابة. كما بينت الدراسة أن المشاركين الذين تعرّضوا لإصابات متعمّدة كانوا عرضة لمخاطر أشد بالمقارنة مع المشاركين الذين تعرّضوا لإصابات غير متعمّدة. وكانت نسبة الأرجحية أعلى لدى المرضى الذين لم تظهر عليهم علامات الاعتماد على الكحول.

الاستنتاج: نظراً لأن المستويات المنخفضة من تعاوي الكحول ترتبط بزيادة مخاطر التعرّض لإصابات غير مميّنة، ولأن المرضى الذين لا يعتمدون على الكحول أكثر عرضة لمخاطر الإصابة، فينبغي تنفيذ استراتيجيات شاملة للحد من الأضرار، على جميع تعاوي الكحوليات الموجودين في أقسام الطوارئ بالمستشفيات.

الغرض: دراسة مخاطر التعرّض لإصابات غير مميّنة من جراء تعاوي الكحوليات بمستويات منخفضة ومتوسطة، ودراسة الفروق بين مستويات المخاطر في الأنماط المختلفة للإصابات، وفي ما بين تعاوي الكحوليات.

الطريقة: تم في إطار الدراسة التعاونية لمنظمة الصحة العالمية جمع معطيات خلال عامي 2001 و2002 من المرضى البالغين 18 عاماً فأكثر، وذلك من عشر إدارات للطوارئ في بلدان العالم (عدد المرضى = 4320). واستخدمنا طريقة تقاطع الحالات للمقارنة بين تعاوي الكحول خلال الأيام الستة السابقة للإصابة وبين تعاوي الكحول في نفس اليوم من الأسبوع السابق.

الموجودات: ازدادت مخاطر الإصابة في حالة تعاوي مشروب واحد (نسبة الأرجحية = 3.3؛ عند فاصلة الثقة 90%، إذ تراوحت من 1.9 إلى 5.7)، ولوحظت زيادة في المخاطر قدرها عشرة أضعاف لدى المشاركين الذين تعاوا

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