

Acute alcohol poisoning in teens

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Rezumat

Scopul studiului nostru a fost investigarea incidenței și motivației consumului excesiv de alcool la adolescenți care au fost spitalizați.

Material și metodă: Datele clinice au fost adunate din 1111 fișe medicale înregistrate la Spitalul de Urgență de Copii „Louis Țurcanu” Timișoara (Romania), în perioada ianuarie 2004 - iunie 2006. Au fost selectați 53 pacienți (36 băieți și 17 fete) spitalizați pentru consecințele abuzului de alcool.

Rezultate: Incidența abuzului de alcool a fost 4,72 % la tineri cu media de vârstă $13,85 \pm 2,21$ ani pentru băieți și $14,01 \pm 1,89$ ani pentru fete. Problemele asociate alcoolului au fost: intoxicație acută în 52,83 % cazuri (20 băieți, 8 fete), comă alcoolică în 39,63 % cazuri (13 băieți, 8 fete) și intoxicație alcoolică asociată cu consum abuziv de Aspirină sau Extraveral în 7,54% cazuri (3 băieți, 1 fată). Majoritatea tinerilor erau din mediul urban (62,26 %), au preferat băuturi cu conținut crescut de alcool și bere mai mult decât vin. Motivația abuzului de alcool: o modalitate de a fi acceptat și admirat în cadrul grupului, influența negativă a anturajului, oferta mare de băuturi alcoolice în locurile frecventate de tineri și accesul ușor la alcool. Pentru tineri plăcerea consumului de alcool depinde de influența părinților, anturaj, vârsta timpurie la care încep să-l consume.

Educația tinerilor pe diverse căi poate fi benefică pentru reducerea consumului și abuzului de alcool.

Cuvinte cheie: adolescenți, rezultatul abuzului de alcool, motivație

Abstract

The aim of our study was to investigate the incidence and the motivation of over alcohol consumption in teens which are admitted to hospital.

Material and methods: Clinical data are collected from the 1111 medical records to Children Emergency Hospital „Louis Țurcanu” Timișoara (Romania), between January 2004 to June 2006. There were selected 53 patients (36 boys and 17 girls) admitted to hospital with alcohol abuse-related consequences.

Results: The incidence of alcohol abuse was 4.72 % in teens with mean age 13.85 ± 2.21 years for boys and 14.01 ± 1.89 years for girls. Alcohol-related problems were: acute poisoning in 52.83 % cases (20 boys, 8 girls), alcoholic coma in 39.63 % cases (13 boys, 8 girls), and alcohol poisoning associated with Aspirine or Extraveral abuse in 7.54% cases (3 boys, 1

girl). The majority of teens were from urban surroundings (62.26 %), they preferred beverages with high alcohol content and beer, rather than wine. The motivation of alcohol abuse: a way to be accepted and admired in a group, the negative peers influence, many alcoholic beverages in the places frequented by teens, and easy access to alcohol. For teens, the likelihood of alcohol addiction depends on the influence of parents, peers, how early in life they begin to use alcohol. Teens education by different ways can be beneficial to reduce the alcohol use and abuse.

Keywords: teens, alcohol abuse result, motivation

INTRODUCTION

Alcohol consumption is a major contributor to risky behaviors and adverse health outcomes in adolescents and young adults. Motor vehicle crashes, homicides, suicides, and unintentional injuries are 4 leading causes of death in individuals aged 15-20 years, and alcohol plays a substantial role in many of these events. In addition, alcohol consumption is associated with risky sexual behavior, sexually transmitted diseases, and school and social problems (Cook et al., 2005).

Alcoholism usually involves physical dependence on the drug alcohol, but genetic, psychological and social factors contribute to this addiction (Culverhouse et al., 2005, Zang et al., 2006).

Alcohol depresses the central nervous system by acting as a sedative. In some people, the initial reaction may be stimulation, but as drinking continues, sedating or calming effects occur. By depressing the control centers of the brain, alcohol relaxes and reduces the inhibitions (Burkstein et al., 2005, Lawyer et al., 2002, Ostafin et al., 2003, Palfai et al., 2002). Social complications of alcoholism and alcohol abuse may include: domestic

abuse and divorce, poor performance at work or school, increased likelihood of motor vehicle fatalities and arrest for driving under alcohol influence, greater susceptibility to accidental injuries from other causes, higher incidence of suicide and murder (Cook et al., 2005, Monti et al., 2001).

In the last years the alcohol use is a reality among teenagers and students. Most teenagers are focused on feeling better immediately and they give little concern to the impact of the alcohol use on their health. Alcohol misuse constitutes a major problem in modern society and both physical and mental alcohol-related harm result in a large number of attendances at emergency rooms, imposing a significant burden on the work-load and financial resources of the medical departments (Baune et al., 2005).

The aim of our study was to investigate the incidence and the motivation of over alcohol consumption in teens which are admitted to hospital with alcohol abuse-related consequences.

MATERIAL AND METHODS

Clinical data are collected from the 1111 medical records to Children

Emergency Hospital „Louis Țurcanu” Timișoara (Romania), between January 2004 to June 2006. There were selected 53 patients (36 boys and 17 girls), aged 9 – 16 years), admitted in hospital with alcohol abuse-related consequences.

Were noted the type of alcohol consumed, the preferences, the motivation of alcohol abuse, urban or rural surroundings, the total number of children consulted in emergency, and the cases with the results of alcohol abuse. Strong drinks consumed were vodka, whisky, cogniac, and gin, the beverages with high alcohol content, over 30%.

Statistical analysis: the results were evaluated using SPSS programme. There was calculated the frequency of the alcohol abuse-related consequences by gender, area of provenience, period of investigation.

RESULTS AND DISCUSSIONS

The incidence of alcohol abuse was 4.72 % in teens with main age 13.85 ± 2.21 years for boys and 14.01 ± 1.89 years for girls. There were no significant differences between the age of teens (Table 1).

Table 1

Age and sex of pre-adolescents with alcohol abuse

Years/Gender	Cases	Age (M \pm DS)	Sex N (%)
2004			
Boys	16	13.625 ± 2.62	16 (72.72%)
Girls	6	13.83 ± 2.22	6 (27.28%)
		(p = 0.867)	
2005			
Boys	16	14.68 ± 2.24	16 (72.72%)
Girls	6	15 ± 1.673	6 (27.28%)
		(p = 0.755)	
2006			
Boys	4	13.25 ± 1.707	4 (44.44%)

Girls	5	13.2 ± 1.788 (p = 0.967)	5 (53.56%)
TOTAL	53		53
Boys	36 (67.92%)	13.854 ± 2.21	36 (67.92%)
Girls	17 (32.08%)	14.01 ± 1.89 (p = 0.803)	17 (32.08%)

N- number of cases;

According with Te Wildt et al., study (2006), in our cases there was a significant gender difference within the group of alcohol related consequences with 67.92% male and 32.08% females patients.

During early adolescence – from age 11 to 13 – young teenagers begin to experience rapid changes in body size, shape and physiology. Many spend more time with friends than family. Adolescents may face issues regarding peer pressure, sexual intercourse and experimentation with alcohol and drugs. For some adolescents, these common trials can be aggravated by ongoing factors, such as a dysfunctional family, inadequate education, living in poverty and/or high-crime neighborhoods. Feelings of stress, confusion and depression from circumstances related to family, academic and social life can overwhelm many young people. This can put adolescents at risk for

dropping out of school, running away from home, joining gangs, developing substance abuse or dependence, having unprotected sex, committing suicide and other types of self-destructive behaviors. Many studies suggest that positive family relationships are a strong protective factor against these health risks and others (Goodman et al., 2002).

In our study the incidence of alcohol abuse-related consequences was 5.61% in 2004, 4.41% in 2005, and 4.14% in the half of 2006 year. Alcohol-related problems were: acute poisoning in 52.83 % cases (20 boys, 8 girls), alcoholic coma in 39.63 % cases (13 boys, 8 girls), and alcohol poisoning associated with Aspirine or Extraveral abuse in 7.54% cases (3 boys, 1 girl) (Table 2). Some of investigated cases with acute alcohol poisoning were „street boys” without any family support and control.

Table 2

Distribution of cases by diagnoses, gender, and years of investigation

Years/ Gender	Cases	Acute alcohol poisoning: N (%)	Acute alcohol poisoning + pills: N (%)	Alcoholic coma: N (%)
2004				
Boys	16	6 (37.5%)	3 (18.75%)	7 (43.75%)
Girls	6	3 (50%)	1 (16.66%)	2 (33.34%)

2005				
Boys	16	12 (75%)	0	4 (25%)
Girls	6	2 (33.33%)	0	4 (66.67%)
2006				
Boys	4	2 (50%)	0	2 (50%)
Girls	5	3 (60%)	0	2 (40%)
TOTAL	53	28 (52.83%)	4 (7.54%)	21 (39.63%)
Boys	36	20 (55.55%)	3 (8.4%)	13 (36.11%)
Girls	17	8 (47.05%)	1 (5.88%)	8 (47.06%)

N- number of cases;

In a study of O'Farrell et al., (2004) about acute alcohol intoxication and admissions in hospital showed that over 10% of the patients were under 18 year of age and 3% were aged 10-14 years.

Severe toxicity from ethanol, manifested as coma, occurs at lower blood alcohol concentrations in young teenagers than in adults. Coma, vomiting and hypothermia are the commonest symptoms in young teenagers intoxicated by alcohol (Lamminpaa, 1994).

Alcohol poisoning most often occurs as a result of drinking too many alcoholic beverages over a short period of time. Binge drinking is a common cause of alcohol poisoning (Johnson et al., 2004). Alcohol poisoning can also occur by drinking household products that contain ethyl alcohol (ethanol), or by ingesting isopropyl alcohol (isopropanol) or methyl alcohol (methanol). Alcohol poisoning

may result from accidental ingestion, particularly among children. Ethanol, for example, is found in alcoholic beverages as well as common household items such as after-shaves, colognes, perfumes, mouthwashes and medications. Isopropyl alcohol is commonly found in rubbing alcohol, lotions, some cleaning products and antifreeze. Methanol is found in items such as solvents, paints, varnishes, antifreeze and windshield washer fluid.

Signs and symptoms of alcohol poisoning include: confusion, stupor, vomiting, seizures, slow or irregular breathing, blue-tinged skin or pale skin, low body temperature (hypothermia), unconsciousness ("passing out").

The majority of teens with acute alcohol abuse admitted to hospital were from urban surroundings (62.26 %), in our study (Table 3).

Table 3

Distribution of cases by the area of provenience and gender

Gender	Cases	Urban: N (%)	Rural: N (%)
Boys	36	22 (61.11%)	14 (28,89%)
Girls	(67,92%)	11 (64.7%)	6 (35,3%)
TOTAL	17 (32,08%) 53	33 (62.26%)	20 (37.74%)

Teens preferred beverages with high alcohol content and beer, rather than wine. Boys preferred: strong drinks in 14 cases (38.88%), beer in 13 cases (36.12%), and wine in 9 cases (25%). Girls preferred beer in 6 cases (35.29%), strong drinks in 3 cases (17.65%), and wine in 2 cases (11.76%). The motivation of alcohol abuse was: a way to be accepted and admired in a group, the negative peers influence, many alcoholic beverages in the places frequented by teens, and easy access to alcohol.

Alcohol raises the levels of dopamine in the brain and it is associated with the pleasurable aspects of alcohol drinking (Zack et al., 2006). For young people, the likelihood of alcohol addiction depends: (i) on the influence of parents, peers, and other role models; (ii) susceptibility to advertising; (iii) how early in life they begin to use alcohol; (iv) their psychological need for alcohol, and genetic factors that may predispose them to addiction (Goodman et al., 2002, Ostafin et al., 2003). Alcohol use among teens increases dramatically during the high-school years, and leads to serious consequences for many teens. In recent years, rates of alcohol use among young female adolescents have been increased (Hipwell et al., 2005).

The signs which may indicate that your teenager has a problem with alcohol: less or no interest in activities and hobbies; bloodshot eyes, slurred speech and memory lapses; difficulties or changes in relationships with friends; joining a new crowd; declining grades and problems in school; frequent mood changes and defensive behavior (Martin et al., 1995).

Some tips to avoid alcohol poisoning: be moderate (to prevent alcohol poisoning, consume alcoholic beverages in moderation, if at all), communicate with your teens about the dangers of alcohol.

Binge drinking increases during adolescence and usually peaks between the ages of 18 and 22, decreasing thereafter. Store alcohol-containing products safely, including cosmetics and medications, out of the reach of your children (Ennett et al., 2001). For teenagers, the most common means of obtaining alcohol is from friends or relatives.

Socioeconomic status is associated with substance use among teenagers. Depressive symptoms are a mechanism through which socioeconomic status affects cigarette and cocaine use behaviors among teenagers (Goodman et al., 2002, Shrier et al., 2003).

Teens education by different ways can be beneficial to reduce the alcohol use and abuse. Children and teens need to know and understand the basic facts about alcohol:

- Alcohol is a drug. Specifically, alcohol is a depressant.
- Alcohol slows body functions, coordination, and the ability to think and react.
- Alcohol affects everyone differently, and body weight and the amount of alcohol consumed over time are the two determining factors.
- Alcohol affects judgment and lowers inhibitions.
- Drinking very large amounts of alcohol over a short period of time (binge drinking) could cause sudden death from alcohol poisoning, which stops oxygen to the brain (Johnson et al., 2004).

CONCLUSIONS

Incidence of alcohol abuse was 4.72%, higher in boys than in girls, in the investigated period, January 2004 to June 2006. Alcohol-related problems were:

acute poisoning in 52.83 % cases, alcoholic coma in 39.63 % cases, and alcohol poisoning associated with Aspirine or Extraverbal abuse in 7.54% cases. The motivation of alcohol abuse was to get free from their shyness, to escape from their inhibitions, a way to be accepted in a group, anxiety, depression or stress.

Special programs with educational, social and psychological evaluation of the

young people which use alcohol can be useful. Informing teenagers about the consequences of alcohol abuse and educate them for a moderate consume of alcohol are very important, because they have to know when to say NO to alcohol use.

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