Alcohol and the young

Alcohol is, for many of us, one of the pleasures of life. Sadly, excessive alcohol consumption by parents, children, and young people is a major cause of morbidity. A recently published report, prepared by a joint working party of the Royal College of Physicians in London (RCP) and the British Paediatric Association (BPA), has considered the evidence concerning alcohol related morbidity in the young, and made 35 recommendations to improve the situation. This annotation provides a summary of the report with the addition of an update on more recent evidence and developments.

The impact of drinking by parents on children

1. THE FETAL ALCOHOL SYNDROME
Most pregnant women drink alcohol, some heavily, at some time during the pregnancy. The most serious impact of heavy drinking in the first trimester is the fetal alcohol syndrome (FAS). This diagnosis requires effects to be identified in three different domains: morphological, especially facial anomalies; growth retardation; and deficits in the central nervous system. However, the disorder is difficult to diagnose, and may be present in incomplete form with only some of the characteristic features present. A recent report suggests that consumption of 1.5 oz of absolute alcohol (approximately four units) or more per day during pregnancy is significantly related to a decrease of seven points or more on the general cognitive index of the McCarthy scales after various relevant factors have been controlled for. This study suggests that alcohol consumption well below that associated with FAS can have an effect on children's psychomotor development. If mental retardation is the only manifestation, as it may be, partial FAS is most unlikely to be diagnosed as women who are heavy drinkers are often heavily socially disadvantaged in many ways, and an organic cause may be easily overlooked. In the USA, the prevalence is estimated to be in the region of 2 per 1000 live births, but in European countries estimates are much lower, around 0.01 per 1000 live births.

2. VIOLENCE TOWARDS CHILDREN
A case-control study carried out in the USA revealed alcohol and substance abuse rates to be much higher in physically abusing and neglectful mothers than in controls. Information from the UK is more limited. In England and Wales, heavy drinking has been found to be a stress factor in one in eight child abuse cases identified by the National Society for Prevention of Cruelty to Children. In families with two or more abused children, one in three have been found to be heavy drinkers ($ Creighton, personal communication).

3. CHILDREN AS OBSERVERS OF DOMESTIC VIOLENCE
The 1992 British Crime Survey estimated that there were over 500 000 cases of domestic violence in the UK in 1991. In 39% of incidents, the victim said the offender was drunk at the time of the assault. Children who observe domestic violence, usually of fathers towards mothers, will be affected adversely in a variety of ways. They will suffer anxiety for the safety of their parents and sometimes clinical anxiety states. Not surprisingly, violence in the home is also a major risk factor for conduct disorder in boys.

4. EFFECTS ON CHILD DEVELOPMENT AND BEHAVIOUR
Although poorly documented in the UK, evidence from the USA suggests that children of problem drinking parents are understimulated and poorly disciplined with resulting developmental delay and an excess of psychiatric disorders, including conduct disorders, the hyperkinetic syndrome, and depression. Problem drinking parents are unlikely to ensure the safety of their young children adequately, but systematic evidence of the numbers of children suffering injuries for this reason is not available.

Alcohol consumption by children and adolescents

1. PREVALENCE
The recent RCP/BPA report on alcohol and the young revealed surprising information about the extent of alcohol related problems in children and young people in the UK. More than one in five 13 year old boys and more than one in eight 13 year old girls reported having been very drunk once or more in the previous year. Around one in three 15 year old boys and one in five 15 year old girls reported having got into arguments or fights after drinking. Although per capita alcohol consumption in the UK generally is in the average range for economically developed countries,
alcohol consumption by children and young people in the UK is higher than in nearly all other such countries from which data have been collected. A recent government report revealed that alcohol consumption by schoolchildren has increased during the 1990s. The accident and emergency department of Alder Hey Hospital in Liverpool reports an increase in the number of children under the age of 16 years admitted with acute intoxication over the last five years, with the numbers now running at around 100 per year (KJ Robson, personal communication).

(2) BACKGROUND FACTORS IN EXCESSIVE ALCOHOL CONSUMPTION

Anecdotal evidence suggests that children who drink excessively in their early teens are likely to be poorly supervised and to come from socially deprived families. However a population study of young people in mid-adolescence in the west of Scotland found middle class children had higher alcohol consumption than those in working class families. Boys drink more than girls, but sex differences are now small. Other factors of significance are parents and a group of friends who drink excessively. Alcohol consumption is associated with smoking and illicit drug use. Indeed, many young people in mid and late adolescence now see drinking alcohol and using cannabis or ecstasy as alternative recreational activities—just different ways of spending an evening. Excessive drinkers are somewhat more likely to be 'risk takers' in other ways, and to have been so for some time. For example, a study of a New Zealand cohort found that conduct problems at 8 years were associated with alcohol related problems at 15 years.

(3) IMPACT OF EXCESSIVE CONSUMPTION ON CHILDREN

It is fortunately extremely uncommon for individuals to become alcohol dependent before the mid-20s, but it does occur. Health consequences for teenagers include acute and very occasionally dangerous intoxication and repeated hangovers sometimes resulting in poor school attendance. This is more likely to occur with binge drinking, a common phenomenon in the young. There are interactional effects with learning difficulties as well as with behaviour and emotional disorders. School failure leads to frustration and low self esteem resulting in a drinking lifestyle with friends in a similar situation. Heavy drinking then replaces homework as an evening activity with headache and tiredness the next morning resulting in further school failure. Boys with extravert, risk taking personalities who drink heavily have lowered inhibitions to aggressive behaviour and gain involved in fights and other forms of delinquency. Older teenagers may put themselves and others at risk by driving when drunk, though it should be stressed that, in general, the present generation of young drivers is much more responsible in its attitude to drink-driving than previous generations. There is a strong link between alcohol consumption, depressive feelings, and attempted suicide. Depressive feelings may lead young people to drink, but excessive regular alcohol consumption may also cause depression. A third of young male suicides in the USA are found to have high blood alcohol levels postmortem. Older teenagers are more likely to get involved in unsafe sex after heavy drinking.

Prevention and treatment services

The joint RCP/BPA report makes 35 recommendations to improve the situation. Probably the single most important effective preventive measure that could be taken by government is fiscal—the regular annual raising of taxation on alcohol products to a rate at or preferably above that of inflation. There is good evidence that the single most important influence on total consumption as well as on the rate of alcohol related problems is affordability, and the young are particularly price sensitive. An exactly contrary approach was taken in the 1995 autumn budget in which the Chancellor reduced the tax on most alcoholic drinks, thus reversing the policy of the previous year. Shortly afterwards, just before Christmas 1995, the Secretary of State for Health announced a raising of the safe limits for alcohol consumption, thus ignoring a recommendation made only a few months earlier by a RCP working party. There was no discussion at that time of the effect of raising the limits on the welfare of children and young people. A more responsible attitude by the drinks' companies in marketing activities directed towards young people would also be helpful. The drinks' industry did not show up well in the recent controversy over alcoholic lemonades, and a new code of practice has been produced by the Portman Group, a drinks' industry supported agency, as a result.

There is now a need to improve the public health education in schools to promote sensible drinking. There is currently not widely undertaken and, it must be admitted, there is only limited evidence for its effectiveness, though there is some. The most promising approaches include role play, teaching, for example, the social skill of refusing a drink gracefully. Adolescents are impressed when helped to realise how sexually unattractive they are when drunk. Services specifically directed towards young, heavy drinkers face the major drawback that most potential clients do not generally believe they have a problem. Those who do deserve a better service than is at present available, as do parents who want advice when their children are drinking excessively. A recent Health Advisory Service report recommended that a young people's drug and alcohol service should be available in each locality, but hardly any such services do exist at the present time. There is a need for general practitioners and child and adolescent psychiatrists to provide opportunistic identification and counselling for young people with drink problems who attend their services for other reasons.

Implications for paediatricians

There is a limited but important role for paediatricians in the identification and management of alcohol related problems in parents and in children and young people themselves. Paediatricians should be able to take a drinking history establishing the level of alcohol consumption and the occurrence of binge drinking from parents whose children may have been physically abused or neglected. It is not easy to obtain such information without upsetting parents. It will be necessary to explain to parents that, as a doctor trying to find out how injuries have occurred, it is part of the job to get a picture of possibly important factors. Doctors and nurses working in accident and emergency departments should refer disturbed children and adolescents admitted with acute intoxication or suicidal attempts associated with heavy drinking to social services or, where appropriate, child and family psychiatric services. Though it is not known whether rates of excessive consumption are unusual in this group, paediatricians will be in touch with a significant number of teenagers with chronic physical disorders who are drinking excessively. As part of general health care, it would be reasonable for paediatricians in their routine regular reviews to inquire about smoking and alcohol consumption. Given the information about current prevalence of such problems, they will sometimes uncover alarming behaviour and should then provide counselling or, if this is acceptable to the young person, refer to the most appropriate local service. Finally, paediatricians should encourage parents to ensure, by their own behaviour, that children learn in the
Hepatitis C infection after blood product transfusion

The cloning of the hepatitis C virus (HCV) and the subsequent development of sophisticated serological assays has led to the identification of HCV as the major cause of hepatitis after transfusion in adults and children. Many questions remain with regard to methods of transmission, natural history, and outcome of infected children, and the indications and efficacy of potential treatment.

Transmission of infection

The risk of infection is mainly confined to children who received blood products or transplanted organs before 1990 when universal screening for HCV was established. HCV transmission has been reported with all blood products including factor VIII, immunoglobulin D, and immunoglobulin infusions. Although passive transfer of HCV antibodies from blood products has been reported and may lead to confusion, the risk of active infection is highest in children who received multiple transfusions or pooled blood products for their underlying disease. The current Blood Transfusion Service 'Look Back' study (in which all blood donors before 1991 are screened for HCV and both donors and any previous recipients traced) has confirmed reports from many centres worldwide that the children most at risk include those with haemolytic anaemia, previous leukaemia, solid organ tumours, haemophilias, renal dialysis patients, and bone marrow, kidney, and liver transplant recipients.

Currently, the prevalence of HCV infection in British blood donors is low (<1%) compared with other parts of the world such as Egypt, Italy, and Japan. The high prevalence in these countries may be related to sporadic infection as well as to intrafamilial and sexual transmission, which may be as high as 15% in Italy and 24% in Japan, although uncommon in other populations.

It is clear that while sexual transmission does occur over time and may be the main route of intrafamilial spread, the risk is less with HCV than with hepatitis B or HIV. In contrast to hepatitis B, vertical transmission is less likely (1-10%). Although passive transfer of maternal HCV antibodies to their babies has been recorded, active infection is unlikely unless associated with high levels of maternal HCV RNA or co-infection with HIV. Breast feeding does not transmit HCV.

Diagnostic tests

The initial diagnosis of HCV depended on first generation assays which demonstrated antibody to a recombinant HCV structural protein c-100. Subsequent assays which incorporated other structural and non-structural antigens have increased sensitivity, particularly the third generation recombinant immunoblot assay (RIBA-II). Nevertheless these assays do not differentiate prior exposure from ongoing infection or passive antibody transfer.

The development of methodology to detect and quantify HCV RNA by reverse transcription polymerase chain reaction (RT-PCR) is more specific and may be a sensitive marker of both infection and of underlying liver disease. Diagnostic confusion arose with the early ELISA assays in which there was false positivity in patients with autoimmune hepatitis or syphilis. Such patients with non-specific positivity are likely to be both RIBA negative and HCV-RNA negative. Identification of HCV genotype (I to VI) does not improve diagnostic yield but may predict natural history or response to treatment as patients with genotype I appear to be less responsive to interferon.

Natural history of HCV infection

There is little current information about the natural history of HCV infection in childhood. The available information is based on small studies over the last five years or extrapolated from adult studies in patients with post-transfusion hepatitis. It is likely that the natural history and risk of progression to liver disease will vary depending on the underlying disease for which the blood products were required. Anti-HCV antibodies may persist in patients with resolved infection or may disappear at some time after a self-limiting hepatitis. A study in kidney transplant recipients...