



Alcoholis

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FROM THE EDITOR



Dr Guy Ratcliffe

Minimum pricing and alcoholic drink labelling

Distinct progress on both of these subjects seems to be taking place, with very positive plans announced by the health secretary to introduce a minimum price per unit of 50p, as well as mandatory labels on bottles and cans identifying the number of units contained, alongside a general health warning. The continuing rise in alcohol-related A&E attendances and hospital admissions demand these actions, which have long been called for.

MCA AGM and Seminar 2009

Last year's AGM closed with a masterly Max Glatt Memorial Lecture delivered by our President, Professor Sir Michael Marmot on 'Alcohol and the Social Determinants of Health'. The lecture will be published in this year's Annual Report.

The seminar on 'Alcohol and Cancer' included three succinct presentations, summaries of which are published in this issue.

NOFAS-UK Conference 2010

The MCA continues to support charities associated with the affects of alcohol on the fetus, not least because of their efforts in supporting families with children so afflicted. The recent NOFAS-UK Conference included key presentations on a variety of subjects. It is the intention to dedicate one issue of this newsletter to some of the clinical aspects of these

subjects later this year. The afternoon session at this conference included short videos of cases of fetal alcohol syndrome (FAS), following which adoptive parents discussed their day-to-day experiences and frustrations caring for these children. Very powerful and emotive issues were discussed. One note of concern was the judgemental attitude of some health professionals when first exposed to these adoptive mothers, who were assumed to be the birth mothers of these children. This is not to say that the same professionals were not sympathetic to these families once it was made clear that the mothers were adoptive. Nevertheless, birth mothers deserve empathy and not blatant criticism for any child born with alcohol-related problems.

Of note, the thalidomide tragedy occurred fifty odd years ago. Once the problems with this drug were recognised, it did not take long to ban its prescription during pregnancy. Alcohol-associated abnormalities are equally preventable, although admittedly not as straightforward, in that thalidomide was prescribed for a specific symptom of pregnancy. Nevertheless, awareness of the possible teratogenic effects of alcohol needs to be heightened in women in their reproductive years, and not least amongst teenagers.

MRC research

A recent overview of Medical Research Council-led addiction research included a presentation by Professor Colin Drummond on research into alcohol withdrawal, with studies in progress using pregabalin and gabapentin. Research is also planned into the prevention of relapse in alcohol dependence.

This issue

A paper produced by Foundation 66 as to how alcohol services are managed within the London borough of Kensington & Chelsea illustrates several of the local issues.

The summaries of the November seminar presentations identify the key issues in breast, oral and primary liver cancer involving alcohol. The three authors receive our thanks for their cooperation in producing these abridged articles of their presentations.

Your attention is drawn to the conference on 'Alcohol and the Brain', to be held at the Royal College of Physicians on Tuesday 8 June.

MCA-sponsored symposium Alcohol and the Brain

8 June 2010
Royal College of Physicians

Registration and coffee from 9.30 am

Symposium to be introduced by
Professor Colin Drummond

Morning session – 10 am Epidemiology of alcohol-related brain damage.

To be chaired by Professor Anne
Lingford-Hughes. Speakers will
include Dr Jane Marshall, Dr Matt
Field, Dr Irene Guerrini and
Professor Ken Wilson

Buffet lunch will be served at 12.50 pm

Afternoon session – 1.40 pm Clinical aspects of alcohol-related brain damage.

To be chaired by Professor Colin
Drummond. Speakers will include
Dr Allan Thomson, Professor Derek
Bell, Dr Iain Smith, Professor
Theodora Duka and Professor
Michael Kopelman

Professor John Strang will give a
highlights review.

CPD points will be available
Enquiries to MCA office

Increased alcohol consumption among the retired

Sally Scriminger, Chief Executive, Foundation66

It is often underreported, unnoticed or ignored. However, excessive and problem drinking affects older people in a unique way and is on the rise. Sally Scriminger, Chief Executive of the alcohol and drug charity Foundation66, highlights the issue.

It is generally accepted that alcohol consumption in the UK has increased significantly over the last 10 years. Simultaneously, improvements in general quality of life and advances in modern medicine mean we are living longer. For many years the media's eye has been primarily focused on the dramatic increase in under-age drinking, the rise of alcohol consumption in public areas, and the link with incidents of public disorder. We now appear to be prepared to admit to our problems with alcohol, but only in the most visible sections of our community. One area that has received far less focus over the last decade has been problematic alcohol consumption amongst older members of our society, many of whom turn to drink after retirement.

Given that this is arguably the most vulnerable part of our society, which is likely to grow over the coming decades, it is unwise to do nothing about the problem now. The combined effects of alcohol and aging makes the search for the best way to address this growing problem literally a matter of life and death for many of those affected.

A growing problem

The impact of the rising numbers of older problematic drinkers is being felt at the sharp end of NHS services. Pensioners accounted for 357,300 alcohol-related hospital admissions in England in 2007–8, a 75% increase in five years. Treating many standard

health conditions is also much more expensive in those experiencing problematic drinking.

To add to this picture, a recent Foundation66-commissioned poll carried out by YouGov found that over one in eight (13%) over-60s drink more after retiring. Of these, one in five (19%) use alcohol because of depression, and one in eight (13%) drink to deal with bereavement. The results also show that one in eight (12%) most often drink alone, at home.

Over the past year Foundation66 – one of the largest alcohol-focused substance misuse services in Britain – piloted a project in the London Boroughs of Kensington and Chelsea and Hammersmith and Fulham, to assess the need for alcohol treatment services among the over-60s. The project was inundated with referrals and has helped 125 people in the last 12 months – the majority of them women. These specialist services appear to be scratching the surface of a significant and growing problem among the older members of our society.

The older people who accessed the pilot project came from all walks of life. Many were retired professionals, who had never had problems with alcohol in the past. The pilot found that they did not even have to leave home to buy alcohol: over 90% of alcohol was delivered to people's homes by supermarkets, off-licences, carers and home-helps, often increasing the risk of isolation and reducing opportunities for positive human contact even further.

Recognising older drinkers

Despite being from all walks of life, older drinkers are often categorised into three groups:

- early onset or 'survivors'
- late onset or 'reactors'
- binge drinkers.

'Survivors' are people who have been drinking dependently and problematically throughout their life. They make up a relatively a small group but due to their drinking habits their life expectancy is 15 years shorter than average.

'Reactors' are the largest group. These are mostly people who have lived functional and fulfilled lives, whose problematic drinking is usually triggered by loss of purpose at the time of retirement, bereavement or the loss of significant social contact – children leaving home or a partner dying, for example. Their housing and financial situation often appears to be more stable than other problem drinkers.

Finally, binge drinkers may not use alcohol consistently but consume large quantities when they do drink.

How much is too much?

The question 'how much is too much?' is often asked, but the answer is not at all simple. Guidance on this issue tends to equate the harm caused by alcohol with the number of units consumed, rather than on the specific effects it has on an individual's life.

The impact of alcohol varies with a range of factors including body size, body fat ratio and gender.

As well as these, age also seems to be a significant factor. Generally speaking, the older the body, the slower the metabolism, so alcohol gets broken down more slowly, spends longer in the body and causes more harm.

Alcohol and medication

Alcohol also presents increased risks when mixed with medication. Four or more different types of medication are taken each day by 36% of people aged over 75. Alcohol activates enzymes that break down toxic substances including some common prescription medications. For medication to work effectively it is recommended that alcohol consumption is stopped altogether.

As well as compounding physical health issues, alcohol consumption

may also increase the likelihood of mental health problems in the elderly. Alcohol is a depressant and older people are twice as likely as other adults to suffer from depression. Even small amounts of alcohol can have adverse effects on depression sufferers.

Falls and fractures

On average, one in three adults over the age of 65 suffers a fall. This number increases in older drinkers, who are also more likely to suffer a fracture, and will take longer to recover from an accident and for wounds to heal.

The increased likelihood of falls amongst the elderly is also explained by the shrinkage of the cerebellum – the area of the brain regulating posture, balance and coordination – which coincides with aging. Even small amounts of alcohol appear to have an effect on this area of the brain, while chronic alcohol consumption causes significant shrinkage, so the risk of falls increases dramatically. The message should be very clear: patients at risk of experiencing falls or suffering acute orthopaedic problems should reduce their alcohol consumption to an absolute minimum.

Nutrition

Another concern relating to older people's alcohol consumption is the impact it has on their diet and the knock-on effect a poor diet has on their health. Alcohol is calorie-rich and nutritionally poor. It often leads to loss of appetite as well as some gastric problems.

The most damaging effect of poor nutrition in drinkers appears to be a deficiency of thiamine and vitamin B. Although required only in very small amounts, the absence of vitamin B in the body causes disabling conditions known as alcoholic dementia, Wernicke encephalopathy and Korsakov syndrome. These conditions are exhibited as severe short-term memory loss, with symptoms similar to senile dementia and Alzheimer's disease. While similar in appearance,

the presence of alcohol may make it difficult for medical practitioners to be precise or to correctly diagnose these at all.

All of these conditions are more likely to be reversed if treated early. If not, the individual's ability to live independently can be severely reduced. Alcohol also interferes with the body's ability to absorb vitamin B, so even if it is present in the diet or consumed through supplements, there is no guarantee that it would be adequately absorbed and metabolised. To make the problem worse, the location of the storage for the body's reserves of vitamin B is in the liver, which is likely to be damaged and in poor function as a result of excessive alcohol consumption.

Screening

So how do we start to address the issue of problematic drinking in this group? Effective screening is the first step and for problematic drinking this is usually done in the primary care setting, using tools that focus on the number of units consumed. However, these tools appear to be unreliable and not sensitive enough for screening the older population. Although age-specific screening tools have been developed and internationally validated, they do not yet appear to be widely used.

Thorough screening is crucial, as identification of the problem is the first step to treatment. Failure to screen may leave many older drinkers out of the treatment system. A wide screening programme should be conducted by health and social care professionals already working with older people, rather than by specialist alcohol workers. However, alcohol specialists could be used as a training resource, passing screening skills to health professionals, as well as picking up the most complex cases.

Approaches to treatment

The Substance Misuse Treatment System is designed to cater for the needs of adults and is often inadequately resourced for, or

inaccessible to, older people. Treatment is usually a combination of medical and psychosocial interventions. For example, going to a 'rehab' usually means leaving one's home for a period of three to six months. It can also mean attending daily therapy sessions with others going through similar experiences.

Although this model may be appropriate for some, there are several common triggers for problematic drinking among those aged 60 and over. Isolation, loss of purpose, deteriorating health and bereavement are some of the most common underlying causes. So, designing specific programmes which address these issues is more appropriate.

In these cases too, it would be beneficial to look at the way in which people over 60 are accessing alcohol, and talking to carers and home-help staff may be one of the best ways to start addressing the issue. Appropriate policy guidance and suitable training programmes are therefore essential.

The good news ...

Foundation66's pilot highlighted the fact that older people are much more responsive to treatment than either

younger adults or young people. The required intensity of intervention also seems to be lower. Clients largely respond well to approaches like 'motivational interviewing', advice and information and brief interventions. Although abstinence does not feature as a frequent treatment goal, dramatic and sustained reduction in alcohol consumption does. This makes a very strong case that low cost interventions would deliver a dramatic cost saving to the NHS. It is one investment we must make.

Further research and development into alcohol use among older people is urgently needed, especially in the areas of nutrition, dementia, falls and osteoporosis, depression, sleep and

effective occupational activities.

It is also obvious that the needs of this group of people can only be met by developing and delivering age-specific interventions and through partnership work between alcohol specialist services, older people's services, primary care, geriatric specialists, home care and domiciliary care services, the Department of Work and Pensions, and others. Foundation66 as a charity has been able to explore the issue with the support of substance misuse commissioners for Kensington and Chelsea and Hammersmith and Fulham. For this work to continue further support from the public and primary care commissioning structures is urgently required.

Further reading

Health Surveys for England. General Household Survey 1994, 2002.

European Monitoring Centre for Drugs and Drug Addiction. *Substance use among older adults: a neglected problem*. Lisbon: EMCDDA, 2008.

National Survey on Drug Use and Health. *Older adults in substance abuse treatment: update*. Rockville, MD: NSDUH, 2005.

Institute for Alcohol Studies. *Alcohol and elderly fact sheet*. London: IAS, 2006.

Lang I, Wallace RB, Huppert FA, Melzer D. Moderate alcohol consumption in older adults is associated with better cognition and well-being than abstinence. *Age Ageing* 2007;36:256-61.

Foundation66. Treatment improvement protocol: alcohol screening amongst older adults, 2009. www.foundation66.org.uk

Foundation66. Alcohol and older people – Annual report on the pilot project in Kensington and Chelsea, 2009.

Abstracts from the MCA AGM and Seminar

Alcohol and breast cancer

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Results from epidemiological studies over the last few decades have consistently shown that alcohol consumption is associated with an increased risk of breast cancer. Furthermore, a recent review by the International Agency for Research on Cancer, of the potential hazards to humans from consumption of alcoholic beverages, concluded that there is sufficient evidence that alcohol causes breast cancer.¹ In 2002, a worldwide

collaborative re-analysis of data from 53 studies on more than 58,000 women with breast cancer² found that risk increased smoothly with average alcohol consumption, with an estimated increase in risk of 7.1% for each extra alcoholic drink (equivalent to around 10 g of alcohol) regularly consumed on a daily basis. Since then, several large cohort studies have reported slightly greater increases in risk with increasing alcohol intake,³⁻⁵ with estimated increases in risk ranging from 9% to 12% for each additional drink consumed on a daily basis. In the Million Women Study,⁵ the largest cohort study to examine this question, average alcohol intake

was based on repeated measures of alcohol intake, resulting in an estimated increase in breast cancer risk of 12% (95% CI 9-14%) per additional daily drink consumed on a regular basis. Taken together, these results imply that even relatively moderate intakes, of less than three units per day, are associated with a significant increase in breast cancer risk. The effect of alcohol intake on a woman's risk of breast cancer risk appears to be similar regardless of the type of alcohol drunk,^{5,6} her age, or indeed any of her other personal characteristics.^{2,5}

On the basis of the results from the Million Women Study,⁵ together with

current estimates of average alcohol consumption among women in the UK,⁷ the estimated cumulative incidence of breast cancer up to age 75 is 8.2 per 100 non-drinkers, and 9.1, 10.2 and 11.5, respectively, per 100 women consuming an average of one, two, and three drinks per day. It is also estimated that around 11% (5,000 annually) of all breast cancers diagnosed among UK women are due to alcohol consumption.

References

- 1 Baan R, Straif K, Grosse Y et al. Carcinogenicity of alcoholic beverages. *Lancet Oncol* 2007;8(4):292–3.
- 2 Collaborative Group on Hormonal Factors in Breast Cancer. Alcohol, tobacco and breast cancer – collaborative reanalysis of individual data from 53 epidemiological studies, including 58,515 women with breast cancer and 95,067 women without the disease. *Br J Cancer*. 2002;87(11):1234–5.
- 3 Horn-Ross PL, Canchola AJ, West DW et al. Patterns of alcohol consumption and breast cancer risk in the California Teachers Study cohort. *Cancer Epidemiol Biomarkers Prev* 2004;13(3):405–11.
- 4 Zhang SM, Lee I-M, Manson JE et al. Alcohol consumption and breast cancer risk in the Women's Health Study. *Am J Epidemiol* 2007;165:667–76.
- 5 Allen NE, Beral V, Casabonne D et al. Moderate alcohol intake and cancer incidence in women. *JNCI* 2009;101:296–305.
- 6 Smith-Warner SA, Spiegelman D, Yaun SS et al. Alcohol and breast cancer in women: a pooled analysis of cohort studies. *JAMA* 1998;279(7):535–40.
- 7 Office for National Statistics. *The national diet and nutrition survey: adults aged 19 to 64 years*, vol 2. London: HMSO, 2003

Alcohol, tobacco and oral cancer

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Introduction

At least 5,000 new cases of oral cancer are diagnosed annually in the UK, with incidence having doubled in the last 20 years. Mortality rates have not

improved for over 30 years, with 50% dying of the disease. In Scotland, oral cancer in men is as frequent as cervical cancer in women.

Most cases occur over the age of 50, with a male preponderance of 2:1, having reduced from 10:1 50 years ago. Those presenting with an oral lesion should be suspected of early cancer in which risk factors such as alcohol and smoking should be identified.

Aetiology

Approximately 80% of patients consume alcohol and tobacco. Other associated factors include pre-malignant conditions like leukoplakia, a previous history of oral cancer, and human papillomavirus (HPV) infections. Alcohol and tobacco act synergistically. Oral cancer is, however, curable if diagnosed early.

The risk of oral epithelial dysplasia (a malignant precursor) increases significantly with smoking alone, but not with alcohol alone. Common sense advice is, therefore, 'stop smoking and drink in moderation'. Oral cancer is more common in men in deprived areas, but not in women. HPV infection is higher within oral cancerous lesions in non-smoking, teetotal patients and tends to occur in younger patients than in the smoking/alcohol cohort. This raises the question as to whether the introduction of HPV vaccine for teenage girls will lead to a decrease in oral cancer incidence. If it does, might it prompt calls to vaccinate young men?

Role of alcohol

Why is alcohol associated with malignant change? The answer may lie in the metabolism of ethanol by alcohol dehydrogenase (ADH) to acetaldehyde. The latter is carcinogenic, and with ADH being found in the lining of the mouth and in salivary glands, as well as some oral bacteria being able to metabolise alcohol, there are several opportunities for acetaldehyde levels to rise within the mouth.

Acetaldehyde is further metabolised to harmless acetate, but in genetically susceptible patients there may be enough to cause initial genetic damage, together with the carcinogens in tobacco. Tobacco smoke contains high levels of acetaldehyde, which exerts a widespread influence on the oral lining. Work by Salaspuro in Finland has shown that the oral bacterial flora have ADH activity, and that mutagenic levels of acetaldehyde can be achieved within the mouth after drinking the equivalent of 0.5 g of alcohol per kilogram of body weight.¹ In addition, mouth cancer patients often have poor dentition. What role might these bacteria possibly have in the aetiology or progress of an initial lesion within the mouth and subsequent mouth cancer development? It has been hypothesised that fast metabolising alleles of ADH quickly give rise to increased levels of acetaldehyde. If this is associated with slow metabolising alleles for acetaldehyde dehydrogenase, then this could lead to a greatly increased exposure time to the carcinogen within the mouth.² Could this increase the risk of mouth cancer in susceptible patients? More work needs to be done to understand the role of polymorphisms in these important enzymes and their gene interaction.

Public and professional awareness

Greater awareness of oral cancer is required. Awareness weeks are contributory, but there is evidence that patients are not necessarily appropriately informed of safe drinking limits. Similar shortfalls exist amongst health professionals. The majority of patients who drink moderately and who do not smoke will avoid oral cancer, and this message needs to be repeated frequently. Similarly, patients who develop oral lesions which persist for at least two weeks, or develop unexplained pain, or voice change should seek specialist opinion, particularly if they smoke or drink to excess. Continued overleaf

References

- 1 Salaspuro V, Salaspuro M. Synergistic effect of alcohol drinking and smoking on *in vivo* acetaldehyde concentration in saliva. *Int J Cancer* 2004;111(4):480–3.
- 2 Vakevainen S, Tillonen J, Agarwal DP *et al.* High salivary acetaldehyde after a moderate dose of alcohol in ALDH2 – deficient subjects: strong evidence for the local carcinogenic action of acetaldehyde. *Alcohol Clin Exp Res* 2000;24(6):878–930.

Alcohol, Hepatitis C and Hepatocellular Carcinoma

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Hepatocellular carcinoma (HCC) is a major world health problem, and there is strong evidence that it is increasing in frequency in the Western World. This appears to be due to the increase in the key aetiological factors responsible for this cancer's development, viral hepatitis and alcohol excess, plus the potential effect of obesity via fatty liver. In the UK, there are approximately 1,100 new diagnoses per year and there is a strong link with both deprivation and ethnicity,¹ the latter probably representing an increase in chronic hepatitis in migrant populations within the UK. HCC is uncommon in that the cause of the

cancer is known in almost all cases, yet the relative risks associated with these agents, and how they contribute to malignant transformation in the liver, is still uncertain.

More than 95% of HCCs occur on a background of hepatic cirrhosis, the exception being hepatitis B, where direct integration of hepatitis B virus (HBV) DNA into the host genome can occur with the potential to disrupt major cell function. Otherwise, the cancer appears to be the result of chronic inflammation and progressive cellular injury. Alcohol is the most common cause of cirrhosis and probably HCC in the UK. Alcohol is thought to be a co-carcinogen. There is a strong dose–response relationship between alcohol intake and the risk of HCC,² and the risk is enhanced in smokers.³ The overall risk of developing HCC in cirrhosis of any cause is around 2% per year. The data relating to the effect of abstinence from alcohol on this risk is poor, and compromised by the high risk of mortality in people with alcohol-related cirrhosis who continue to drink, but then the risk does not fall substantially. The overall survival rate for HCC remains poor, partly because of late cancer presentation but also because of the underlying liver disease.

There is an additive effect on the risk of developing HCC if multiple aetiological factors are present. In the Bresica HCC Study,³ the relative risk of HCC in patients who had hepatitis C

infection rose substantially if they drank alcohol, relative risk of hepatitis C virus (HCV) being 26, increasing stepwise with increasing consumption until very heavy drinkers (>80g/day) with HCV had a relative risk of 126. A similar synergistic relationship is likely but less clearly demonstrated with hepatitis B infection.

The mechanisms of HCC development related to alcohol remain unclear. A substantial number of potentially important mechanisms have been identified. Acetaldehyde, CYP 2E1, TNF alpha, retinoids and DNA methylation are all plausible pathways and agents which may contribute to this pathway, but their exact role in the process remains undefined.⁴ Recently, technologies such as genome-wide analysis have been employed and further targets for study identified.

References

- 1 www.ncin.org.uk
- 2 Tagger A, Donato F, Ribero ML *et al.* Case-control study on hepatitis C virus (HCV) as a risk factor for hepatocellular carcinoma: The role of HCV genotypes and the synergism with hepatitis B virus and alcohol. *Int J Cancer* 1999;81:695–9.
- 3 Kuper H, Tzonou A, Kaklamani E *et al.* Tobacco smoking, alcohol consumption and their interaction in the causation of hepatocellular carcinoma. *Int J Cancer* 2000;85:498–502.
- 4 Stickel F, Schuppan D, Hahn EG, Seitz HK. Cocarcinogenic effects of alcohol in hepatocarcinogenesis. *Gut* 2002;51:132–9.



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