Alcohol-Related Problems

Epidemiology

Alcohol use is prevalent in the UK and it is estimated that 90% of adults consume alcohol. The amount of alcohol consumed has increased over the years and the increase is greater in women. There is also a rise in binge drinking - usually in the younger adult, and the risk for alcohol dependence increases with binge drinking.[1,2]

1 in 16 hospital admissions are due to alcohol related illnesses. Alcohol misuse accounts for more than 20,000 premature deaths per year and 70% of all admissions to A + E departments per year during busy episodes.[3]

Many deaths are associated with alcohol; this includes cancer, liver disease and accidental injury. The more that is drunk, the greater the risk of illnesses such as oesophageal cancer. The risk especially increases once alcohol intake exceeds more than three drinks per day.[1,2]

The recommended maximum intake a week is 21 units for men and 14 units for women.

Identifying patients who drink harmfully

Use non-confrontational questions to begin a discussion about alcohol for example:

- Do you use alcohol?
- In what circumstances do you drink, e.g. only when socialising?
- What is the most you have ever drunk? How recent was this?

There are also screening tools available such as **CAGE questionnaire:**

- Do you feel you need to **C**ut Down?
- Do you get **A**ngry if someone criticises your drinking?
- Do you feel **G**uilty about your drinking?
- Do you ever need an **E**ye opener?

The presence of two or more of these is significant.

Health problems related to alcohol

These result from continued use of excessive amounts of alcohol. Binge drinking and chronic drinking of alcohol are more likely to cause harm.[4]

Medical problems

1. Liver: alcoholic hepatitis, cirrhosis, liver cancer.
2. Gastrointestinal tract: oral cavity cancer, oesophageal neoplasm, oesophageal varices, pancreatitis.
3. Cardiovascular system: atrial fibrillation, hypertension, strokes and cardiomyopathy with heart failure.

4. Neurological system: acute intoxication with loss of consciousness, withdrawal, seizures, subdural haemorrhage, peripheral neuropathy, Wernicke-Korsakoff syndrome and cerebellar degeneration.

Psychiatric problems

1. Alcohol dependence syndrome
2. Suicidal ideation
3. Depression
4. Anxiety.

Miscellaneous

1. Loss of libido
2. Fetal alcohol syndrome.

Social problems related to alcohol

1. Impaired performance at work
2. Relationship problems
3. Violent crimes, e.g. domestic violence and drink driving offences[4]
4. Anti-social behaviour.

Some medical problems related to alcohol

Affects of alcohol on the liver

Alcoholic liver disease includes fatty liver, alcoholic hepatitis and cirrhosis. These three conditions probably represent a spectrum of liver damage resulting from continued abuse of alcohol.[5]

In fatty liver there is accumulation of fat within the hepatocytes. This is reversible with abstention from alcohol.

Alcoholic hepatitis presents as acute RUQ pain with jaundice, fever and marked derangement of liver function tests. At a microscopic level there is inflammation of the liver.

In liver cirrhosis the hepatocytes are damaged so much that they are replaced by scar tissue which is permanent. Alcoholic hepatitis and cirrhosis may co-exist.[6]

Alcoholic hepatitis and cirrhosis may lead to encephalopathy, portal vein hypertension and hepato-renal syndrome. This group of patients is also at increased risk of infections and they are usually also malnourished.

Treatment involves abstinence from alcohol and good nutrition. There is no specific therapy for alcohol related hepatitis and cirrhosis. It is important to look for and promptly treat the complications which include ascites, spontaneous bacterial peritonitis, hepatic encephalopathy and oesophageal varices.[6]

Patients with ascites may need to be maintained on high doses of diuretics. Again, abstinence from alcohol is crucial.

Affects of alcohol on the gastrointestinal tract

Alcohol increases the risk of oral cancers. This is especially associated with spirits and the risk is increased with concomitant use of tobacco. Adenocarcinoma of the stomach and oesophagus is thought to be related to alcohol use - although some studies have failed to show a positive association.[7]

Portal hypertension is a complication of cirrhosis and leads to a raised venous pressure in veins in the oesophagus and stomach. These swollen veins are superficial and bleed easily. Bleeding from oesophageal varices is serious and is associated with a high level of morbidity and mortality.[8]

Management of bleeding varices is a medical emergency and requires adequate resuscitation (patients may need to be intubated to protect their airway). Blood transfusions are necessary and correction of abnormal clotting with vitamin K and FFP may also be required.

More specific therapy includes the use of terlipressin and endoscopy with possible banding or sclerotherapy of the varices. Uses of the sengstaken tube are simply holding measures whilst the patient is made stable enough for more definitive therapy. TIPS is also used to stop variceal bleeding.[8] Secondary prevention of a variceal bleed includes the use of non-selective beta blockers, e.g. propranolol and banding.

Both acute and chronic pancreatitis are associated with excessive alcohol consumption.[9] The pathophysiology of alcohol related pancreatitis is not clearly understood. Patients usually present with epigastric pain with vomiting. The amylase is high in acute pancreatitis but may be normal in patients with chronic pancreatitis. Pancreatitis can be associated with a number of complications such as shock, sepsis and abscess formation. Long-term complications include diabetes mellitus and weight loss from steatorrhoea.

Affects of alcohol on the cardiovascular system

Excessive alcohol use is associated with hypertension and subsequent target organ damage such as strokes, myocardial events and renal failure.[10]

Excessive alcohol use is also associated with a dilated cardiomyopathy with heart failure[10] and atrial fibrillation which may revert to sinus rhythm.

Again, abstinence from alcohol is paramount.

Affects of alcohol on the nervous system

Acute alcohol intoxication can present with blackouts, head injuries and subdural haemorrhages. Alcohol withdrawal is associated with fits which may be unresponsive to anti-epileptics.

The Wernicke-Korsakoff syndrome results from lack of thiamine (commonly seen in alcoholics due to malnutrition). Wernicke's syndrome occurs acutely and patients present with confusion, visual impairment (diplopia) and ataxia. Korsakoff's syndrome occurs more chronically and is characterised by memory deficits and confabulation may occur.

Fetal Alcohol Syndrome

Continued alcohol consumption during pregnancy can lead to the fetal alcohol syndrome. This is rare and babies who are affected may have mental impairment, low birth weight, cardiac defects and joint abnormalities.[11] It is completely preventable by abstaining from alcohol whilst pregnant.

Alcohol withdrawal

Alcohol withdrawal occurs within a few hours of not having a drink and can last beyond 48 hours. Patients experience hallucinations, anxiety and a coarse peripheral tremor. On examination patients may be pyrexial, tachycardic and hypertensive. They may also develop seizures and auditory and visual hallucinations.[10]
Delirium tremens is the severe end of the spectrum of alcohol withdrawal and consists of a severe form of the above symptoms and may be associated with circulatory collapse and ketoacidosis.[12]

Alcohol dependence

This is characterised by the following:

- A strong desire to drink
- Difficulty controlling alcohol intake
- Physiological withdrawal when intake reduced
- Tolerance, such that increasing amounts are required to produce the same effect
- Harm resulting from continued alcohol use, e.g. work or relationship problems.

Treatment of alcohol dependence includes education, support and counselling. Patients may need to be admitted to hospital for detoxification.

How to manage a patient with an alcohol related problem

- Is alcohol usage a problem?
- Is the patient dependent on alcohol?
- Educate the patient regarding importance of abstinence. This is absolute if there is existence of alcohol related problems.[4]
- If the patient's intake is too high, but they have no related problems, then they need to be advised to cut down and control their drinking.
- Does the patient want detoxification? If so decide on whether this needs to be as an in-patient, e.g. presence of hallucinations, fits or vomiting or as an out-patient. They may require pharmacological management of their detoxification, e.g. chlordiazepoxide.
- Tackle the alcohol related problem, e.g. referral to a liver specialist if liver derangement or referral to a psychiatrist if depressed or suicidal ideation is present.