ALCOHOL-RELATED BRAIN DISORDERS / DEMENTIA (Wernicke-Korsakoff syndrome)

Dementia (also known as Neurocognitive Disorder) causes gradual deterioration in attention, decision-making, memory and learning, language, perception and /or social behaviour. Alcohol-related brain disorders (ARBD) are different in that they are potentially reversible if the person stops drinking. The deterioration stops and some (though usually not all) cognitive function can be regained with abstinence.

There are two factors that cause brain damage if someone abuses alcohol. The first is the direct toxic effect of alcohol on cells. This causes nerve cell death with brain shrinkage and can affect other organs such as the heart, hence reducing blood supply to the brain.

The second factor is a deficiency of vitamin B1 (thiamine) which is important for brain function. Many people who drink heavily neglect their diet and thus become B1 deficient. As well, alcohol irritates the stomach lining making it harder to absorb vitamins. However, with replacement of thiamine, brain function may be preserved.

The term *"Wernicke's Encephalopathy"* (WE) is used for the acute symptoms of thiamine depletion. Classically these are abnormalities of eye movement (including paralysis) poor balance, staggering walk, numbness or tingling in the legs, disorientation to time and place and memory impairment. If WE is recognised and treatment with vitamins begun early, the symptoms will be reversed. However, WE can be confused with drunkenness and if not treated can be fatal.

Those who survive WE often go on to develop *Korsakoff's psychosis* (KP) which is the chronic form of thiamine deficiency. The symptoms of KP are:

- Poor short-term memory, particularly of events occurring after the onset of KP.
- Difficulty recalling information from months or years prior
- Loss of ability to take on new skills and retain new information
- Lack of insight into memory loss. They believe they are behaving normally.
- Apathy or repetitive behaviour
- "Confabulation" – filling in the gaps in memory with made-up stories

Who gets alcohol-related dementia?

Men aged between 45 and 65 tend to be the ones who develop KP, although it can affect women and people in younger or older age groups. While younger people tend to consume more alcohol, older people in New Zealand are drinking more than previously as the baby-boomer cohort comes through.

Prevention

The Ministry of Health recommends that women should drink no more than two standard drinks a day (maximum 10 per week) and men up to three standard drinks daily (maximum 15 per week) and have two alcohol-free days each week.

Diagnosis:

The diagnosis cannot be made accurately unless the person has refrained from alcohol for at least 4 weeks when any alcohol withdrawal symptoms will have subsided. The usual process is to get a history of the condition from the person and other informants (including a substance use history) do a physical examination, cognitive testing, blood tests and scans as necessary. It is important to treat health problems associated with a lifestyle of heavy drinking (e.g. head injury, malnutrition, liver damage, infections, depression) and to wait some time of see whether treatment with thiamine improves the condition. It is possible to have both KP and another underlying dementia that will not improve with vitamins.

Treatment:

If the person stops drinking, has a healthy diet and thiamine supplementation it is possible that their condition will improve. Of course, the challenge of making this happening is enormous. People who have been very heavy drinkers are often socially-isolated and may have very few material or social resources to draw on. To stay living at home they may need a good deal of physical and social support if there are significant memory problems. They will also need psychological support to remain abstinent; it will be important to put them in touch with the local Alcohol and Drug Services.

Sometimes if people are unable to manage at home, they are placed in residential aged care which is not entirely satisfactory as they are usually younger than the other residents. They may require secure care to prevent them obtaining alcohol. To have their movement restricted in this way they would need to be placed under the *Protection of Personal and Property Rights Act.*

In 2017 *The Substance Addiction (Compulsory Assessment and treatment) Bill* became law (updating the 1966 Alcohol and Drug Addiction Act). The new legislation provides for the compulsory assessment and treatment of individuals with severe substance addiction who lack the capacity to make decisions about their treatment. Further information on treatment of alcohol abuse can be found through www.alcoholdrughelp.org.nz or 0800 787 797.

Talk to your GP or Dementia NZ support person.

Reference
Alcohol and the Adult Brain. (2015) Svanberg, J., Withall, A., Draper, B. and Bowden, S. Eds. East Sussex, Psycholoy Press.

This publication provides a general summary only of the subject matter covered. People should seek professional advice about their specific case.

Dementia New Zealand offers support, information and education.
Ring 0800 4 DEMENTIA or 0800 433 636.
Or visit our website at www.dementia.nz

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