Vitamin Supplementation in Alcohol Dependence
Guidance

Aim

To provide a standardised model of care for addictions services and primary care in the community with regard to oral vitamin supplementation for patients with current or recent alcohol dependence.

Background

The potential for nutritional deficiency with dependent alcohol use is well recognised. This may be caused by poor diet or damage to the stomach lining which then inhibits the body's ability to absorb nutrients, or a high demand for thiamine as it is used in the metabolism of alcohol.[1]

Thiamine deficiency is common in patients dependent on alcohol: the deficiency can be due to liver damage, by alcohol, where thiamine is stored. Thiamine deficiency can lead to Wernicke's Encephalopathy, a neurological disorder[2,3] and Wernicke- Korsakoff Syndrome[4] : a form of brain damage associated with alcohol misuse. The syndrome is made up of two related disorders: Wernicke's encephalopathy and Korsakoff's dementia[4]. Wernicke-Korsakoff syndrome can also present in people without exposure to alcohol.

Thiamine is recommended in people who are dependent on alcohol to prevent the consequences of severe malnutrition, particularly Wernicke–Korsakoff syndrome. Where mild deficiency is suspected, 25-100mg per day is recommended. Where severe deficiency is suspected, 200-300mg daily in divided doses is recommended. [5]

Treatment Recommendations

The identification of problem alcohol use alone should not trigger oral vitamin supplementation prescribing. Only patients at risk of thiamine deficiency due to their alcohol dependence should be offered vitamin supplementation.

The criteria to consider oral vitamin supplementation are:

- Pattern and frequency of alcohol use (e.g. unit consumption, severity of dependence)
- Weight, BMI, nutrition state (e.g. weight loss, low BMI, poor diet, missing meals, signs and symptoms of other nutritional syndromes)
- Signs and symptoms of gastrointestinal problems (e.g. vomiting, loose stools, loss of appetite)
- Risks and signs of neurotoxicity (e.g. blackouts, neuropathy, confusional symptoms, poor short term memory, ataxia, poor coordination)

Thiamine 50mg tablets: one tablet four times a day should be prescribed as long as the patient is malnourished, at risk of malnutrition or has decompensated liver disease[6]. The bioavailability of orally administered thiamine is limited and may plateau at 5mg from any single dose[4]; therefore more frequent administration of smaller doses may result in a higher absorbed dose over a 24 hour period.

While 50mg four times a day is the recommended dosing schedule; it is recognised that this is a guideline and the best decision for any individual patient could be made by discussion and agreement between clinician and patient.

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Treatment should not be continued beyond requirement i.e. if abstinence and lifestyle change is attained. A review of treatment should be undertaken at 12 months if treatment has continued.

There is no evidence to support the prescribing of vitamin B compound strong tablets as vitamin supplementation in alcohol dependency.

References

1. National Institute on Alcohol Abuse and Alcoholism (NIAAA): Alcohol Alert No22 PH346 October 1993 https://pubs.niaaa.nih.gov/publications/aa22.htm (accessed 22/06/18).
2. NICE Clinical Guideline 100. https://www.nice.org.uk/guidance/cg100 (accessed 22/06/18).
3. Medscape article http://emedicine.medscape.com/article/794583-overview#a5 (accessed 22/06/18).
4. Sweetman et al. Martindale: The Complete Drug Reference. https://www.medicinescomplete.com/#/content/martindale/7830-a6-3-r (accessed 22/06/18)
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6. NICE: Clinical Knowledge Summaries https://cks.nice.org.uk/alcohol-problem-drinking#!scenario (accessed 22/06/18).