NHS Grampian Mental Health Service Staff Guidance For The Prescribing Of Vitamin Supplementation During In-Patient Admission (Mental Health) For Alcohol Withdrawal

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<th>Lead Author/Coordinator:</th>
<th>Review Group:</th>
<th>Approver:</th>
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<tr>
<td>Principal Pharmacist Mental Health</td>
<td>Mental Health Operational Medicines Management Group</td>
<td>Medicine Guidelines and Policies Group</td>
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Version 4

Executive Sign-Off

This document has been endorsed by the Director of Pharmacy and Medicines Management

Signature: ________________________________
Title: NHS Grampian Mental Health Service Staff Guidance For The Prescribing Of Vitamin Supplementation During In-Patient Admission (Mental Health) For Alcohol Withdrawal

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Across NHS Boards | Organisation Wide | Directorate | Clinical Service | Sub Department Area
---|---|---|---|---
Yes | | Mental health |

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Author: Principal Pharmacist, Mental Health, Substance Misuse Consultant

Subject: Prescribing Policy

Key word(s): Alcohol detoxification, detox, withdrawal, vitamin supplementation, parenteral vitamins, mental health, Pabrinex, Wernicke’s encephalopathy, Wernicke-Korsakoff syndrome, Korsakoff’s psychosis, alcoholic encephalopathy, Wernicke’s disease.

Policy application: NHS Grampian – Mental Health

Purpose: This guidance provides information on the use of parenteral vitamin supplementation during in-patient admission for alcohol detoxification. The guidance includes recommended dosing schedules for the administration of Pabrinex (thiamine, ascorbic acid, nicotinamide, pyridoxine, riboflavin) in the treatment of Wernicke-Korsakoff Syndrome and also for prophylaxis in “at risk” patients

Responsibilities for implementation:

Organisational: Mental Health Services Clinical Management Board and Sector General Manager

Corporate: Senior Managers

Operational Management Unit (Directorates): Directorate Service Level Managers

Departmental: Clinical Leads

Area: Line Managers

Policy statement: It is the responsibility of individual healthcare professionals and their line managers to ensure that they work with the terms laid down in this guidance and to ensure that staff are working to the most up to date guidance. By doing so, the quality of the services offered will be maintained, and the chances of staff making erroneous decisions which may affect patient, staff or visitor safety and comfort will be reduced. Supervisory staff at all levels must ensure that healthcare professionals using this guidance act within their own level of competence.

Review: This guidance will be reviewed every two years or sooner if current treatment recommendations change.
<table>
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<tr>
<th>Revision Date</th>
<th>Approval date of guidance that is being superseded</th>
<th>Summary of Changes (Descriptive summary of the changes made)</th>
<th>Section heading</th>
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| December 2014    | October 2012                                      | Section 1: Treatment of acute Wernicke-Korsakoff syndrome  
Prescribing information updated to reflect doses in current BNF.  
Additional information added: NB: Before transferring a patient to Pabrinex Intramuscular High Potency injection check that liver function, platelet count, and INR blood results are satisfactory (i.e. no risk of bleeding). | Page 2           |
|                  |                                                   | Section 4: Information relating to vitamin and mineral supplementation in patients with decompensated liver disease removed and replaced with “seek specialist advice“.                                                                                                                                                  | Page 3           |
|                  |                                                   | Algorithm for Prophylaxis and Treatment of Wernicke-Korsakoff syndrome: Prescribing information updated to reflect doses in current BNF.                                                                                                                                                                               | Page 4           |
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Introduction

This guidance provides information on the use of parenteral vitamin supplementation during in-patient admission for alcohol detoxification. The guidance includes recommended dosing schedules for the administration of Pabrinex® (thiamine, ascorbic acid, nicotinamide, pyridoxine, riboflavin) in the treatment of Wernicke-Korsakoff syndrome and also for prophylaxis in “at risk” patients.

Wernicke-Korsakoff Syndrome

- Wernicke-Korsakoff syndrome is a manifestation of thiamine deficiency which is seen particularly in patients with alcohol dependence or a history of excessive alcohol intake. Early recognition and treatment is important due to the risk of collapse and sudden death and to prevent irreversible damage to the Central Nervous System (CNS).

- Parenteral vitamin supplementation (Pabrinex®) should be considered in ALL in-patients requiring alcohol detoxification. There is considerable doubt regarding the effectiveness of oral vitamin replacement because of limited absorption. It has also been shown that oral supplementation has little or no effect on CNS vitamin status, whereas parenteral replacement is rapidly effective.

N.B. There are TWO formulations of Pabrinex® injection, one for intravenous (IV) and one for intramuscular (IM) use. These formulations are NOT interchangeable.

- Alcohol detoxification may precipitate Wernicke’s encephalopathy, which must be treated urgently with parenteral thiamine. There is a very small risk of anaphylaxis with parenteral vitamin supplementation.

Anaphylaxis

- Anaphylaxis, a rare complication of Pabrinex® administration, is more likely to occur with the intravenous route.

- Intravenous administration should be by dilution in 50 - 100mL sodium chloride 0.9% or glucose 5% infused over 30 minutes. This allows immediate discontinuation should anaphylaxis occur. The patient should be observed for signs of anaphylaxis throughout infusion. A doctor must set up and be readily available during the administration of the intravenous infusion.

- Repeated injections of preparations containing high concentrations of thiamine may give rise to anaphylactic shock. Mild allergic reactions such as sneezing or mild asthma are warning signs that further injections may lead to anaphylactic shock.

- Parenteral vitamin supplements must only be administered where suitable resuscitation facilities and epinephrine (adrenaline) 1 in 1000 (1mg in 1mL) for intramuscular administration is readily available.
1. Treatment Of Acute Wernicke-Korsakoff Syndrome

Detoxification may precipitate Wernicke’s encephalopathy and will necessitate immediate treatment. A diagnosis of Wernicke’s encephalopathy should be considered if a patient undergoing detoxification has any of the following signs:

- Confusion
- Delirium
- Ataxia, especially truncal ataxia
- Ophthalmoplegia
- Nystagmus
- Memory disturbance
- Hypothermia and hypotension
- Coma/unconsciousness.

Immediate treatment with intravenous thiamine supplementation is required for people with a suspected diagnosis of Wernicke’s Encephalopathy:

a) The contents of TWO – THREE pairs of Pabrinex® Intravenous High Potency (IVHP) 5mL ampoules (No 1 ampoule and No 2 ampoule) every eight hours by intravenous infusion in 50 - 100mL sodium chloride 0.9% or glucose 5% over 30 minutes for two days.

b) If no response after two days discontinue treatment. If symptoms respond after 2 days continue to give the contents of ONE pair of Pabrinex® Intravenous High Potency (IVHP) 5mL ampoules (No 1 ampoule and No 2 ampoule) once daily by intravenous infusion in 50 - 100mL sodium chloride 0.9% or glucose 5% over 30 minutes OR ONE pair of Pabrinex® Intramuscular High Potency (IMHP) (5mL+2mL) ampoules (No 1 ampoule and No 2 ampoule) by intramuscular injection into the gluteal muscle once daily for five days or for as long as clinical improvement continues.

NB: Before transferring a patient to Pabrinex Intramuscular High Potency (IMHP) Injection check that liver function, platelet count, and INR blood results are satisfactory (i.e. no risk of bleeding).

c) Thereafter prescribe thiamine 100mg three times a day. Review prior to discharge. The Scottish Intercollegiate Guidance recommends that patients who have a chronic alcohol problem and whose diet may be deficient should be given oral thiamine indefinitely.

2. Prophylaxis In The “At Risk” Group

Patients at risk of Wernicke-Korsokoff syndrome are those who drink alcohol to excess especially those who consume greater than 20 units per day and may have symptoms/signs of:

- Diarrhoea
- Nausea/vomiting
- Poor diet
- Weight loss or malnutrition
- Concerns regarding gastrointestinal absorption.
Prophylactic treatment for patients at risk of developing Wernicke’s encephalopathy:

a) Take blood to check liver function, platelet count, and INR.

b) Draw the contents of ONE pair of Pabrinex® Intramuscular High Potency (IMHP) (5mL+2mL) ampoules (No 1 ampoule and No 2 ampoule) into a syringe to mix them just before use and inject intramuscularly once daily into gluteal muscle.

c) If blood results are satisfactory (i.e. no risk of bleeding), continue to give the contents of ONE pair of Pabrinex® Intramuscular High Potency (IMHP) ampoules intramuscularly once daily for a further two to four days.

d) If there is a risk of bleeding, give the contents of ONE pair of Pabrinex® Intravenous High Potency (IVHP) 5mL ampoules (No 1 ampoule and No 2 ampoule) by intravenous infusion in 50 - 100mL sodium chloride 0.9% or glucose 5% over 30 minutes once daily for a further two to four days.

e) Thereafter prescribe thiamine 100mg three times a day. Review prior to discharge. The Scottish Intercollegiate Guidance recommends that patients who have a chronic alcohol problem and whose diet may be deficient should be given oral thiamine indefinitely.

3. Prophylaxis For The ‘Low Risk’ Group

Prescribe thiamine 100mg three times a day during detoxification. Review prior to discharge. The Scottish Intercollegiate Guidance recommends that patients who have a chronic alcohol problem and whose diet may be deficient should be given oral thiamine indefinitely.

4. Vitamin And Mineral Supplementation In Patients With Decompensated Liver Disease

Seek specialist advice for this patient group.

Signs of decompensated liver disease include encephalopathy, ascites, oedema, variceal bleeding and impaired synthetic function (low albumin, elevated bilirubin and prolonged prothromin time).

5. Refeeding Syndrome

Patients who are at risk of refeeding syndrome should be monitored as per NHS Grampian refeeding syndrome guidance and any biochemical abnormalities should be corrected. Detailed NHS Grampian guidance for the treatment of hypokalaemia, hypocalcaemia and hypomagnesaemia are available on the intranet.
Algorithm for Prophylaxis and Treatment of Wernicke-Korsakoff syndrome

This algorithm must be used in conjunction with the NHS Grampian Mental Health service staff guidance for the prescribing of vitamin supplementation during in-patient admission (Mental Health) for alcohol withdrawal.

Treatment of acute Wernicke-Korsakoff syndrome

Administer TWO - THREE pairs of PABRINEX® IVHP 5mL ampoules EVERY EIGHT HOURS for TWO DAYS.

For intravenous administration mix TWO - THREE pairs of Pabrinex® IVHP 5mL ampoules (No 1 and No 2) with 50-100mL of sodium chloride 0.9% or glucose 5% and infuse over 30 minutes.

Response – continue with
ONE pair of PABRINEX® IVHP 5mL ampoules OR
ONE pair of PABRINEX® IMHP (5mL+2mL) ampoules ONCE DAILY for FIVE DAYS or until clinical improvement ceases.

NB: IM or IV depending on blood results
For intravenous administration mix ONE pair of Pabrinex® IVHP 5mL ampoules (No 1 and No 2) with 50-100mL of sodium chloride 0.9% or glucose 5% and infuse over 30 minutes.

Oral thiamine 100mg three times a day

No Response
Discontinue supplementation.

Prophylaxis in “at-risk” group

NB: IM or IV administration depending on blood results

Administer ONE pair of PABRINEX® IMHP (5mL+2mL) ampoules OR ONE pair of PABRINEX® IVHP 5mL ampoules ONCE DAILY for at least THREE TO FIVE days.

For intravenous administration mix ONE pair of Pabrinex® IVHP 5mL ampoules (No 1 and No 2) with 50-100mL of sodium chloride 0.9% or glucose 5% and infuse over 30 minutes.

Oral thiamine 100mg three times a day

Prophylaxis in “low risk” group

Oral thiamine 100mg three times a day

N.B. There are TWO formulations of Pabrinex® injection, one for intravenous (IV) and one for intramuscular (IM) use. These formulations are NOT interchangeable.

Pabrinex® IVHP = Pabrinex® intravenous high potency injection
Pabrinex® IMHP = Pabrinex® intramuscular high potency injection

1 pair = ampoule No 1 plus ampoule No 2
References

- BNF 69 March 2015
- Royal College of Physicians, 2001: Alcohol - can the NHS afford it?
- SmPC for Pabrinex® Intravenous High Potency Injection, date of revision of text - June 2014.
- SmPC for Pabrinex® Intramuscular High Potency Injection, date of revision of text Jan 2013.