Shared Care Guideline

Trientine for the treatment of Wilson's disease

Executive Summary

- Trientine dihydrochloride and trientine tetrahydrochloride are commissioned by NHS England for the treatment of Wilson's disease
- Trientine will be routinely commissioned by NHS England through specialist neurology, liver and metabolic units, and in a formal shared care arrangement with such a centre
- Cambridge University Hospital NHS Foundation Trust (CUH) is designated as the specialist centre with shared care arrangements established as set out below
- As part of shared care arrangements, CUH is responsible for completion of funding request (blueteq) for all patients treated under shared care.
- The patient pathway is presented in appendix 1.

The responsibilities of the hospital specialist, local hospital and patient for this Shared Care Guideline can be found within this document here

Sharing of care depends on communication between the specialist, GP and the patient or their parent/carer. The intention to share care should be explained to the patient and accepted by them. Patients are under regular follow-up and this provides an opportunity to discuss drug therapy. The doctor/healthcare professional who prescribes the medication has the clinical responsibility for the drug and the consequences of its use. Further information about the general responsibilities of the hospital specialists can be found here

1. Scope

This document provides advice on the responsibilities of hospitals prescribing or monitoring trientine (all salts) for adult patients under the direction of CUH as a commissioned specialist centre.

2. Aim

To inform all parties involved in care for patients with Wilson's disease about the monitoring, funding and prescribing of trientine dihydrochloride or trientine tetrahydrochloride.

3. Introduction

Trientine is commissioned for patients intolerant of penicillamine or who have failed to respond to penicillamine (the commissioned indications relating to shared care are specified in section 12).

Trientine (as dihydrochloride or tetrahydrochloride salts) treatment will only be initiated either in a specialist centre or by a non-specialist centre only after discussion with a specialist centre. All patients prescribed trientine will have an annual review by their specialist centre to consider the appropriateness of continued prescribing.

Penicillamine is used as a first-line treatment for Wilson's disease, and is prescribed in secondary or primary care following specialist initiation in secondary care at non-specialist provider and agreement to shared care.

Paediatric patients with Wilson's disease are not routinely treated under the care of CUH and this shared care guideline is therefore not applicable for paediatric patients.

4. Abbreviations

CUH Cambridge University Hospitals NHS Foundation Trust
GP General Practitioner
SPC Summary of Product Characteristics

5. Dose and Administration

The starting dose would usually correspond to the lowest dose in the range and the dose should subsequently be adapted according to the patient's clinical response.

Individual brands are not directly changeable in respect to dose due to reporting as either the weight of base (i.e. trientine) or the base and salt (e.g. trientine dihydrochloride) Any change between brands must be carefully monitored.

Trientine should be taken on an empty stomach; 1 hour before meals or 2 hours afterwards.

Cufence (200 mg capsules trientine dihydrochloride)

The recommended dose is 800 – 1,600 mg (4-8 capsules) daily in 2 to 4 divided doses.

NB: This is a rebranding of the previously used Univar manufactured trientine dihydrochloride 300mg capsules. 1 capsule of Cufence (200 mg capsules of trientine base) is equivalent to 1 capsule of Univar 300 mg capsules (which also contained 200mg of trientine base).

Cuprior (150 mg film-coated tablets trientine tetrahydrochloride)

The recommended dose is between 450 mg and 975 mg (3 to 6½ film-coated tablets) per day in 2 to 4 divided doses.

Tillomed brand (250 mg capsules trientine dihydrochloride)

Adults (including elderly): 1.0 -2.0 grams (4-8 capsules) daily in 2 to 4 divided doses.

As a specialist centre we have no experience with this brand.

6. Adverse Effects

Common (≥ 1 in 100 and < 1 in 10) • Nausea • Arthralgia • Gastric pain
Uncommon (≥ 1 in 1000 and < 1 in 100) • Skin rash • Pruritus

• Muscle weakness • Kidney damage • Leukopenia • Hirsutism • Lupus-like reactions
Rare (≥ 1 in 10000 and < 1 in 1000) • Colitis • Duodenitis • Anaemia

Further information can be found in the SPC for individual products

7. Cautions

- Patients with low Iron levels may need iron supplementation. Iron supplementation must be given at a different time of day from trientine.
- Careful consideration must be made to the use of trientine in pregnancy and advice can be provided by the specialist centre on the risks and benefits.

Further information can be found in the SPC for individual products

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8. Contraindications

- Severe allergic reaction to the active substance or to any of the excipients

Further information can be found in the SPC for individual products

9. Interactions

- No interaction studies have been performed

Further information can be found in the SPC for individual products

10. Monitoring Standards & Actions to take in the event of abnormal test results/symptoms

Monitoring standards to be undertaken by non-specialist provider:

General	**Frequency**
Ensure dosing appropriate	On review of patient
Check adherence	On review of patient
Laboratory tests	
Urea and electrolytes	At least every 6 months
Liver blood tests	At least every 6 months
Full blood count	At least every 6 months

Prothrombin time	At least every 6 months
24 hour urinary copper 'off treatment' (suspend trientine for 48 hours prior to urine collection)	At least every 12 months
Imaging	
Liver US	According to symptoms or as advised by specialist centre
MRI scan of brain	According to symptoms or as advised by specialist centre

Actions to take if abnormal test results: Inform the specialist centre of any abnormal results

11. Shared Care Responsibilities

The patient pathway is presented in appendix 1.

a. Specialist Centre:

- Initiate treatment under the care of specialist centre OR:
- Recommend initiation of treatment and initial titration regime with confirmation letter to non-specialist provider (include criteria meeting commissioning position; see section 12)
- Accept referrals from non-specialist providers for review of transfer care to the specialist centre
- Complete funding declaration via blueteq and share this number with non-specialist provider
- Complete yearly review and confirm decision to continue treatment with non-specialist provider
- Complete yearly declaration via blueteq and share this number with non-specialist provider
- Inform non-specialist provider of patients who do not attend yearly review
- To provide any advice to the non-specialist provider /patient/carer when requested.
- Review and approve any recommendations for dose adjustment.
- The patient's GP should be copied into all correspondence.

b. Non-specialist provider:

- Agreement to shared care with specialist centre
- Prescribe ongoing treatment with trientine
- Arrange for medicine supply and delivery via homecare provider
- Follow up patients at least every 6 months
- Report any adverse events to the hospital specialist at CUH
- Request advice from the hospital specialist when necessary.
- The patient's GP should be copied into all correspondence.
- Provide yearly review information to the specialist centre including where specifically requested.

c. Patient or parent/carer:

- Report to the specialist centre if they do not have a clear understanding of their treatment.
- Patients must attend their scheduled appointments both at CUH and non-specialist provider.
- Report any adverse effects to the non-specialist provider.
- Consent to homecare delivery of medication

d. Procurement/reimbursement process

- The funding request created by the specialist centre must be shared with the non-specialist provider in order to allow reimbursement by NHS England & Improvement.
- Billing by the non-specialist provider should be to NHS England & Improvement via local high-cost drug billing mechanisms and must include the blueteq request number raised at the specialist centre.
- Clinical Commissioning position CCP 170094P - Trientine dihydrochloride will be routinely commissioned by NHS England through specialist neurology, liver and metabolic units, and in a formal shared care arrangement with such a centre. The activity will be invoiced through the contracts that the specialist trust has with NHS England.

12. Commissioning positions for shared care arrangements (as per CCP 170094P)

a) An existing patient already on trientine who has transferred their care from the non-specialist provider to the specialist centre
b) An existing patient already on trientine and treated under shared care arrangements between the specialist centre and a non-specialist provider
c) A new patient being treated under shared care arrangements between the specialist centre and a non-specialist provider

13. Contact numbers for advice and support

Cambridge University Hospitals NHS Trust		
Specialist	**Post**	**Telephone**
Dr Bill Griffiths	Consultant Hepatologist	01223 586891
Paul Selby	Advanced Clinical Pharmacist	01223 217611

Non-specialist providers linked to specialist centre		
Norfolk and Norwich University Hospitals NHS Trust		
Specialist	**Post**	**Telephone**
Dr Shankar	Consultant	01603 288534
[This section to be updated on discussion with NHS England for additional providers]		

14. Equality and Diversity Statement

This document complies with the CUH Equality and Diversity statement.

15. Disclaimer

It is your responsibility to check that this printed out copy is the most recent issue of this document.

16. Document Management

Document ratification and history	
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The information contained in this guideline is issued on the understanding that it is accurate based on the resources at the time of issue. For further information please refer to the most recent Summary of Product Characteristics [https://www.medicines.org.uk/emc/].

Appendix 1: Patient pathway for Trientine use in Wilson's disease