Prescribing Framework for Lithium in Affective Disorders and Cluster Headache

Patient’s Name: …………………………………………………………. NHS Number: ……………

Patient’s Address: …………………………………………………………..(Use addressograph sticker)

GP’s Name: ………………………………………………………………………

Communication

We agree to treat this patient within this Prescribing Framework.

Specialist Prescriber’s Name ………………………………………………………………………

Specialist Prescriber’s Signature ……………………………………… Date: ………

GP’s Signature: ……………………………………………………………………… Date: ………

The front page of this form should be completed by the specialist and the form sent to the patient’s general practitioner.

The patient’s GP should sign and send back to specialist, to confirm agreement to enter into shared care arrangement. If the General Practitioner is unwilling to accept prescribing responsibility for the above patient the specialist should be informed within two weeks of receipt of this framework and specialist’s letter.

Full copy of framework can also be found at: http://www.hey.nhs.uk/content/prescribingCommittee/amber.aspx

APPROVAL PROCESS

| Written by: | Jackie Stark (Medicines Management Pharmacist) |
| Consultation process: | HFT Drug and Therapeutics Committee, Dr F Ahmed, Consultant Neurologist, Hull & East Yorkshire Hospitals NHS Trust |
| Approved by: | MMIG Sep 12 |
| Ratified by: | HERPC |
| Review date: | 2 years |

Prescribing framework for Lithium
Date approved by the HERPC: Sep 2012
Review date: Sep 2014
1. Background

These guidelines aim to provide a framework for the prescribing of lithium by GPs and to set out the associated responsibilities of GPs and hospital specialists who enter into the shared care arrangements.

The guidelines should be read in conjunction with the general guidance on prescribing matters given in EL (91) 127 “Responsibility for prescribing between hospitals and GPs”.

2. Indication

Lithium (Camcolit®, Liskonum®, Priadel®, LiLiquid®) may be used for the management and prophylaxis of:
- Bipolar affective disorder (BPD)
- Acute manic / hypomanic episodes
- Treatment resistant or recurrent depressive disorders
- Aggressive behaviour or intentional self-harm
- Cluster headache (unlicensed use)

3. Dose

Initiation of lithium should be by or under the supervision of a specialist only.

Greater caution must be taken in older or frail adults or patients with renal impairment who may require a third to a half less lithium due to reduced clearance.

When prescribing, the brand of lithium should always be specified to ensure bioequivalence.

4. Duration of treatment

The duration of treatment will vary according to the individual patient, specific information will be provided to the GP on dose alterations and on length of treatment. There is a significant risk of relapse if patient therapy is suddenly discontinued.

5. Contraindications and cautions

Hypersensitivity to lithium or to any of the excipients, cardiac disease, QT prolongation, clinically significant renal impairment, untreated hypothyroidism, breast-feeding, patients with low body sodium levels (including dehydrated patients or those on low sodium diets, Addison's disease.

Lithium therapy should not be used during pregnancy, especially during the first trimester, unless considered essential.

6. Adverse effects

Side effects are usually related to plasma levels and are less common in patients with lithium levels less than 1.0 mmol/L.

Elderly patients may be particularly sensitive to side effects, even at levels below 1.0mmol/L

Initial therapy: fine tremor of the hands, polyuria and thirst may occur.
**Body as a whole:** muscle weakness, peripheral oedema.

**Cardiovascular:** cardiac arrhythmia (NOS), mainly bradycardia, sinus node dysfunction, peripheral circulatory collapse, hypotension, oedema, ECG changes such as reversible flattening or inversion of T-waves and QT prolongation, cardiomyopathy.

**CNS:** ataxia, hyperactive deep tendon reflexes, extrapyramidal symptoms, seizures, slurred speech, dizziness, nystagmus, stupor, coma, pseudotumor cerebri, myasthenia gravis, vertigo, giddiness, dazed feeling, memory impairment.

**Dermatology:** alopecia, acne, folliculitis, pruritus, aggravation or occurrence of psoriasis, allergic rashes, acniform eruptions, papular skin disorders, cutaneous ulcers.

**Endocrine:** euthyroid goitre, hypothyroidism (women more at risk), hyperthyroidism and thyrotoxicosis. Lithium-induced hypothyroidism may be managed successfully with concurrent levothyroxine. Hypercalcemia, hypermagnesemia, hyperparathyroidism have been reported.

**Gastrointestinal:** anorexia, nausea, vomiting, diarrhoea, excessive salivation, dry mouth, abdominal discomfort, taste disorder, gastritis.

**Haematological:** leucocytosis.

**Metabolic and Nutritional:** weight gain, hyperglycaemia.

**Renal:** polydipsia and/or polyuria, symptoms of nephrogenic diabetes insipidus, histological renal changes with interstitial fibrosis after long term treatment

**Reproductive:** sexual dysfunction.

**Senses:** dysgeusia, blurred vision, scotomata

*Rare cases* of nephrotic syndrome, speech disorder, confusion, impaired consciousness, myoclonus and abnormal reflex have been reported.

**Signs of toxicity:**

**GI:** increasing anorexia, diarrhoea, vomiting

**CNS:** muscle weakness, lack of co-ordination, drowsiness or lethargy progressing to giddiness with ataxia, tinnitus, blurred vision, dysarthria, coarse tremor and muscle twitching leading to seizures and coma.

Patients presenting with signs of toxicity should be instructed to stop taking lithium and have their lithium levels checked immediately. Levels over 1.5mmole/L require urgent hospital treatment.
7. Interactions

<table>
<thead>
<tr>
<th>Reduced excretion of lithium leading to increased plasma levels of lithium</th>
<th>Increased excretion leading to reduced plasma levels of lithium</th>
<th>Interactions causing neurotoxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE Inhibitors, Angiotensin II inhibitors Loop, thiazide and associated diuretics Metronidazole NSAIDs (azapropazone, diclofenac, ibuprofen, indometacin, mefenamic acid, naproxen, parecoxib, piroxicam, rofecoxib, valdecoxib, ketorolac), Tetracyclines</td>
<td>Acetazolamide Xanthines (theophylline and caffeine) Products containing sodium bicarbonate</td>
<td>SSRI’s increased risk of serotonin syndrome Antipsychotics may lead in rare cases to neurotoxicity in the form of confusion, disorientation, lethargy, tremor, extra-pyramidal symptoms and myoclonus Methyl dopa Calcium channel blockers Carbamazepine</td>
</tr>
</tbody>
</table>

Details of contraindications, cautions, drug interactions and adverse effects listed above are not exhaustive. For further information always check with BNF [www.bnf.org.uk](http://www.bnf.org.uk) or SPC ([www.medicines.org.uk](http://www.medicines.org.uk)).

8. Monitoring

Full prophylactic effect may not occur for 6-12 months after initialisation of therapy. Monitoring of the patient remains the responsibility of the specialist and CMH team until the patient is discharged from the specialist trust.

Prior to initiating therapy patient’s thyroid and renal functions should be checked. (Any abnormality in thyroid function should be corrected prior to initiating therapy). On initiation lithium levels should be monitored weekly until dosage has remained constant for 4 weeks . It is recommended that once stabilised, lithium levels should be checked at least every 3 months. Additional monitoring should be carried out until levels become stable if medication is prescribed or changed that has the potential to interact to alter lithium levels. Electrolytes (including creatinine) and thyroid function should be checked every 6 months. If abnormal discuss with specialist. Similarly if TSH starts to rise (even within normal limits) discuss with specialist.

Steady state lithium levels (5 to 7 days after initiation, dose change, or introduction/change in medication that affects lithium levels) should be checked 12 hours after a dose of a slow release preparation. In the case of twice daily levels should be taken before the morning dose.

Doses should be adjusted according to plasma levels, depending on the individual and condition treated. The specialist will advise on the appropriate level for each individual patient.

The following post 12 hour slow release dose levels are for guidance only, for specific patients the specialist will advise on the patients individual target level

- Acute Mania 0.8 to 1.0 mmol/l
- Maintenance in affective disorder 0.6 to 0.8 mmol/l (In elderly patients, levels of 0.4 to 0.6 mmol/l may be appropriate)
• Cluster Headache 0.6-1.0 mmol/L (levels above 1.0 mmol/L occasionally required and will be monitored by specialist)

For patients on twice daily dosing on IMMEDIATE RELEASE lithium reference levels do not fall within these guidelines. The specialist will provide details and further information is available in the product SPC.

Further advice on the requirements for sampling, interpretation of lithium levels and very urgent results can be sought from Biochemistry on 01482 607753. Advice is also available from Humber NHS Foundation Trust Pharmacy Department on 01482 301724

9. Information to patient

All patients should be provided with the Record Book, “Important Information for Patients” and the Lithium Card at the beginning of the treatment
The patient should be informed to contact their GP immediately if any of the following signs of toxicity occur:
GI: increasing anorexia, diarrhoea, vomiting
CNS: muscle weakness, lack of coordination, drowsiness or lethargy progressing to giddiness with ataxia, tinnitus, blurred vision, dysarthria, coarse tremor and muscle twitching leading to seizures and coma.

Additionally patients should seek advice when planning for pregnancy or having an unexpected pregnancy.

10. Responsibilities of clinicians involved

<table>
<thead>
<tr>
<th>Stage of Treatment</th>
<th>Hospital Specialist</th>
<th>General Practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation</td>
<td>• Selection of suitable patient • Perform baseline tests as recommended in product licence (thyroid function test, biochemical profile including creatinine, and ECG if appropriate.) • Provide patients with the Record Book, “Important Information for Patients” and the Lithium Card at the beginning of the treatment (for HFT order from Supplies as a complete ‘Lithium Pack’) • Monitor lithium plasma levels adjust dose accordingly • Continue lithium until patient is on a stable dose</td>
<td>• Liaise with Community Psychiatric Nurses (CPNs) and the specialist • Take over prescribing responsibility once the patient is on a stable dose.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>• Provide support to GP • Advise on dose alterations when necessary. • Monitor response to treatment during dose titration • Inform patient of the need to contact the GP or specialist if pregnancy is planned or confirmed</td>
<td>• Monitor lithium levels at least every 3 months (adjust dose according to result, seeking advice from specialist when necessary) • Monitor lithium levels until they become stable if medication is prescribed or changed that has the potential to interact to alter lithium</td>
</tr>
</tbody>
</table>
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| Planned or unexpected pregnancy | • Advise patient that abrupt withdrawal of lithium is associated with significant risks of relapse  
  • Co-ordinate planned withdrawal of lithium with the patient and GP | • Monitor thyroid function test and biochemical profile (including creatinine) every 6 months.  
  • Monitor response to treatment and refer to specialist if deterioration in patients’ mental state (or headaches) occurs.  
  • Liaise with CPN and the specialist when required, e.g. if patient has not been monitored for more than six months  
  • Refer patient to the specialist if pregnancy is planned or confirmed  
  • Co-operate with the specialist in any planned withdrawal of lithium |

| • Weighing the balance of risk and benefit with the patient  
• Produce treatment plan with patient | • Liaise with the specialist to support the patient |

**Contact Details:**

**Humber NHS Foundation Trust:** contact as advised in clinic letter

**Hull and East Yorkshire Hospitals NHS Trust**

During office hours: Neurology secretaries 01482 675592

Out of hours: Contact on-call Physician for Neurology via Switchboard: 01482 875875

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