NHS LINCOLNSHIRE in association with
UNITED LINCOLNSHIRE HOSPITALS TRUST

SHARED CARE GUIDELINE: LANTHANUM in the management of Hyperphosphataemia in adult patients receiving haemodialysis or periotoneal dialysis who did not respond to or were unable to tolerate treatment with sevelamer and for controlling hyperphosphataemia associated with chronic kidney disease (CKD)

General Principles

Shared Care Responsibilities:
In its guidelines on responsibility for prescribing (circular EL (91) 127) between hospitals and general practitioners, the Department of Health has advised that legal responsibility for prescribing lies with the doctor who signs the prescription. (*BNF* 63, March 2012, pg.1)

Aims:
(1) The aim of shared care guidelines is to provide information and/or guidance to GPs and hospital staff relating to the potentially complex implications of sharing patient care for a specific drug between primary and secondary/tertiary care.

(2) Specific shared care guidance should be available for any high cost drug, high-risk drug therapy or device that may be prescribed for a patient following specialist referral. Such guidance will only be produced where shared care is considered an appropriate option.

(3) Each guideline will include a clear statement of the responsibilities of both the GP and the specialist unit within the overall provision of the treatment to the patient.

(4) Shared care guidelines will ensure that the GP has sufficient information available to undertake to prescribe a specialist treatment if s/he so wishes. It is not the intention of these guidelines to insist that GPs prescribe such treatment and any doctor who does not wish to accept clinical or legal responsibility to prescribe such a drug is under no obligation to do so. Nonetheless the development of a shared care guideline will only be undertaken within the context of a broad acceptance between the Lincolnshire Prescribing and Clinical Effectiveness Forum (PACEF) and secondary/tertiary care that GP prescribing of such a treatment is appropriate within the constraints of formal shared care. Any drug approved for the development of a shared care guideline will automatically be classified as amber on the Lincolnshire Traffic Lights List and, if high-cost, will be supported financially through the High Cost Drugs Reserve. Thus there should be no financial reason why a GP should be deterred from prescribing a high cost drug under a shared care guideline.

Further copies

Further copies of any guidelines in this series are available from NHS Lincolnshire Prescribing Advisers.

Date of Issue: June 2012
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Drug Details

Approved Name: **Lanthanum carbonate**
Brand Name: Fosrenol
Form and Strength: 250mg, 500mg, 750mg and 1g chewable tablets

Specialist Responsibilities

The specialist secondary/tertiary care service will:

1. Send a letter to the GP suggesting that shared care is agreed for this patient.
2. Carry out baseline measurements of U&Es, calcium, phosphate and parathyroid hormone levels and before commencing therapy will communicate these to the GP.
3. Provide patient with pre-treatment information leaflet and patient held record booklet.
4. Provide the GP with clear instructions as to the initial dose of lanthanum including details of any dose titration that might be required and when the patient will next be reviewed in clinic.
5. Periodically (at one to six monthly intervals in clinic) review the patient's clinical condition.
6. Communicate promptly any changes in biochemistry monitoring and modification of lanthanum dose to the GP.
7. Have a mechanism in place to receive rapid referral of a patient from the GP in the event of deteriorating clinical condition.
8. Follow up any adverse drug reactions reported by the GP and report back to the GP.
9. Advise the GP in stopping treatment.

GP Responsibilities

The GP will:

1. Notify the consultant in writing, within two weeks, if they agree to share care.
2. Initiate treatment with lanthanum according to instructions provided by the specialist service.
3. Provide repeat prescriptions according to recommendations on dosage by the renal unit, Lincoln County Hospital.
4. Monitor the patients overall health and wellbeing.
5. Monitor the patient for adverse drug reactions and remain vigilant to the risk of potential drug interaction.
6. Carry out any investigations that are communicated and deemed appropriate.

Referral Criteria

1. Patients will have been stabilised on their Vitamin D analogues and other phosphate binders.
2. The specialist will have carried out an assessment of efficacy.

Licensed Indications

Lanthanum carbonate is indicated as a phosphate binding agent for use in the control of hyperphophataemia in chronic renal failure patients on haemodialysis or continuous ambulatory peritoneal dialysis (CAPD).
Lanthanum carbonate is also indicated in adult patients with chronic kidney disease not on dialysis with serum phosphate levels ≥1.78 mmol/L in whom a low phosphate diet alone is insufficient to control serum phosphate levels.

Recommended Dosage and Administration

250mg-1g with or immediately after each meal. Tablets must be chewed and not swallowed whole.
Patients who respond to lanthanum therapy, usually achieve acceptable serum phosphate levels at doses of 1500-3000mg lanthanum per day.

Use only in patients whose calcium is 2.4mmol/l or greater, who are intolerant of sevelamer.

Background Pharmacology

Lanthanum carbonate is a non-absorbed, non-calcium containing phosphate binder. On administration with food, lanthanum carbonate forms lanthanum phosphate which does not readily pass through the gastrointestinal tract into the blood. As a result, phosphate absorption is decreased. Serum phosphate is lowered. Lanthanum carbonate has low systemic absorption and avoids the risk of systemic adverse effects.

Preparations Available

Chewable tablets containing 250mg, 500mg, 750mg or 1g of lanthanum carbonate.

Adverse Effects

Black triangle drug – report any adverse effect to CHM.
Commonly – hypocalcaemia and gastrointestinal disturbances including nausea, vomiting, abdominal pain, constipation, diarrhoea, dyspepsia and flatulence. Other adverse effects that occur less commonly are anorexia, increased appetite, taste disturbance, dry mouth, thirst, stomatitis, chest pain, peripheral oedema, headache, dizziness, vertigo, asthenia, fatigue, malaise, hyperglycaemia, hyperparathyroidism, hypercalcaemia, hypophosphataemia, eosinophilia, arthralgia, myalgia, osteoporosis, sweating, alopecia, pruritis and erythematous rash, accumulation of lanthanum in the bone and transient changes in QT interval. For full list of reported adverse effects refer to SPC.

Drug Interactions

Lanthanum may increase gastric PH. It is recommended that compounds known to interact with antacids should not be taken within 2 hours of taking lanthanum carbonate e.g. chloroquine, hydroxycholoroquine and ketoconazole.

Manufacturer recommends that tetracyclines, doxycline, ciprofloxacin, levofloxacin, moxifloxacin, norfloxacin and oxfloxacin must not be taken within two hours of dosing with lanthanum, **as** interaction theoretically possible.

Precautions and Contraindications

Precautions
Pregnancy Manufacturer advises avoid as toxicity reported from animal studies.

Breast-feeding. Manufacturer advises caution as no information available. Use only if benefits outweigh risks to the baby.
Use with caution in ; - acute peptic ulcer, ulcerative colitis, Crohn's disease, bowel or biliary obstruction.
Hepatic impairment - use with caution, lanthanum excreted in the bile possible accumulation in obstructive jaundice.
Contraindication
Hypersensitivity to lanthanum carbonate, or any of the excipients in the product.
Hypophosphataemia.

Monitoring

Baseline:
Blood levels of U&Es, calcium and phosphate at each clinic visit, parathyroid hormone levels every 3 months. All monitoring is the responsibility of the renal services (see specialist responsibilities page 2).

Treatment should be stopped and advice from the supervising specialist sought if:
- there is deterioration in the clinical condition and/or the patient experiences major side-effects.
- serum calcium levels fall outside the range of 2.2 to 2.6mmol/l.

Indication of Likely Cost of Therapy in Primary Care

One month's supply (excluding VAT):

500mg three times daily:	£114.13
750mg three times daily:	£168.00
1000mg three times daily:	£178.11

Information Given to the Patient

Patient information leaflet with dispensed product.

Contact Details

Consultant Nephrologists
Dr Little's Secretary: 01522 573961
Dr Malik's Secretary: 01522 572335
Dr Williams' Secretary: 01522 572335

Renal Pharmacist
Caroline Taylor: 01522 573598
Renal Pharmacist
County Hospital

References

BNF 63 March 2012.
SPC Fosrenol Shire Pharmaceuticals Limited. Last updated 20th January 2012. Accessed from eMC website June 19th 2012.
Prices from Drug Tariff June 2012

Author(s)

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