Interface Prescribing Subgroup
DRUGS FOR DEMENTIA: Memantine
INFORMATION FOR PRIMARY CARE

RAG List Status

Memantine is classified as a GREEN (following specialist initiation) drug by the Greater Manchester Medicines Management Group.

Licensed Indications

Memantine is licensed for the symptomatic treatment of patients with moderate to severe Alzheimer's disease. Memantine is not licensed for use in combination with Acetylcholinesterase inhibitors.

NICE Guidance

NICE TA217 recommends memantine as an option for managing moderate Alzheimer's disease in those who cannot take acetylcholinesterase inhibitors, or as an option in severe Alzheimer's disease.

Who will diagnose and decide who is suitable for which drug?

Specialists will continue to diagnose, assess suitability and safety of drug treatment for patients referred to Memory Services. Specialists will counsel and inform patients of their diagnosis and treatment options. Specialists will then follow up the patients until the patient is stable on the maximum tolerated dose of medication, this is usually for a period of one to three months.

Preparations available

10mg and 20mg film coated tablets
10mg/ml (or 5mg per pump actuation) oral solution

Dosage and Administration

Memantine: Initially 5mg daily for a minimum of seven days.
Increase by 5mg in weekly intervals to a maximum daily dose of 20mg.
Tablets should be administered once a day with or without food, and should be taken at the same time every day.

Dose Modifications

Renal Impairment		**Hepatic Impairment**
eGFR >49	No dose adjustment required	Mild to moderate – no dose adjustment required. Severe – avoid.
eGFR 30-49	10-20mg daily depending on tolerability	
eGFR 5-29	Reduce to 10mg daily	
eGFR <5	Avoid	

Contraindications

Known hypersensitivity to memantine or any excipient

Cautions

History of seizures
Recent MI, uncompensated congestive heart failure, bradycardia, or uncontrolled hypertension.
Oral solution contains sorbitol – avoid in rare hereditary problems of fructose intolerance.

What are the main side-effects?

The most common side-effects are constipation, hypertension, dyspnoea, headache, dizziness, and somnolence. Please refer to the BNF for further details.

Drug Interactions

Avoid concomitant use of ketamine, dextromethorphan and amantadine. Memantine possibly enhances the anticoagulant effect of warfarin so if these drugs are to be used concurrently additional INR monitoring should be carried out and dose adjusted accordingly. Drugs that increase the pH of the urine (e.g. sodium bicarbonate, carbonic anhydrase inhibitors) may reduce the elimination of memantine.

Approved: 19.3.15
Reviewed: 18.8.2017
Review date: 18.8.2019

L-dopa.dopaminergic agonists and anticholinergics may be enhanced. Effects of barbiturates and antipsychotics may be reduced. Concomitant administration with antispasmodics, dantrolene or baclofen can modify their effects and dosage adjustment may be necessary.
Increased plasma levels possible with cimetidine, ranitidine, procainamide, quinidine, quinine and nicotine.

Monitoring -

1. **Adverse effects:** Most common side effects are gastrointestinal disturbance (nausea, vomiting, and diarrhoea).
2. **Concurrent medication:** Medication should be reviewed at each visit in order to identify potential drug interactions.
3. **Renal and hepatic function:** Baseline creatinine and LFTs should be measured; Patients with renal or hepatic impairment should have doses titrated slowly and be monitored closely for adverse effects.
4. **Cognitive, global functional and behavioural assessment:** Patients who continue on treatment should be reviewed at least annually by the GP. A cognition test may be done but, especially in more advanced dementia where benefits of cholinesterase inhibitors may cease to outweigh risks of continued treatment, an assessment of well-being and functioning is more important. Carers' views on the patient's condition at follow-up should be sought.

When should the drug be stopped?
Drugs should be stopped if a patient develops an allergy or contra-indication to the medication.
If treatment is considered to be no longer having a worthwhile effect on cognitive, global, functional or behavioural symptoms contact specialist for advice.
Where withdrawal of the treatment is advised this should be done gradually over a 4 week period.

When to seek Specialist advice / review
You can get advice regarding patients taking drug treatments for dementia from the locality memory treatment services in addition to CCG community pharmacy support
Tolerability may change over time consequent upon the ageing process and the emergence of medical co-morbidities and frailty. In this situation it may appropriate to reduce the dose or discontinue treatment &/or consider an alternative drug. It may be appropriate to make such decisions in consultation with the specialist who initiated treatment.
You may wish to seek advice in the following circumstances:
• Emergent concerns regarding tolerability
• To consider whether to discontinue treatment at an advanced stage of the illness

Patient Counselling Points
Oral solution: patient/carer should be shown how to use the dosing pump.
Oral solution must not be poured or pumped into the mouth directly from the bottle/pump but should given via a spoon or into a glass of water.

Advice for patients having a general anaesthetic
No specific studies looking at use of memantine in patients undergoing surgery. In addition the company are not aware of any studies looking at memantine use with anaesthetics. Theoretically there may be a risk of pharmacotoxic psychosis if memantine is used concomitantly with ketamine. This is based on a report for amantadine as there are no reports with ketamine specifically (April 2011). Neuroleptics and anticholinergics used in surgical procedures may interact with memantine. The effect of neuroleptics may be reduced and the effect of anticholinergics may be enhanced although these interactions may be overcome by change of dose. See SPC for full list of drug interactions.

Drug	Situation	Advice
Memantine	Planned Operations	If a decision is made to discontinue memantine before surgery the total washout period would be 2 to 3weeks. When to restart memantine will depend on the dose and half life of the drug used in surgery.