

June 2016 ♦ Produced by the Prescribing Team

Indications for Ascorbic Acid

Ascorbic acid is included on the NHSGGC formulary for prevention and treatment of scurvy. Most patients should be able to get adequate vitamin C via a balanced diet and advice on fruit and vegetable intake should be offered. Prescribed ascorbic acid may be necessary in a few limited situations such as treatment of scurvy, homocystinuria or autistic spectrum disorder when the diet is restricted to a limited number of foods. All other patients should be reviewed and stopped as appropriate.

Ascorbic acid is **not** recommended in the new [Obstetric Management Guideline](#) to increase absorption of oral iron for anaemia during pregnancy for patients with Haemoglobin < 105g/l. Licensed ascorbic acid preparations have been subject to significant price increases recently and may cost up to 50p per tablet. Currently around £200,000 is spent annually on this across GGC.

SGLT2 Inhibitors: Diabetic Ketoacidosis Risk

SGLT2 (sodium-glucose co-transporter 2) inhibitors are licensed for use in type 2 diabetes to improve diabetic control.

Preliminary advice on the risk of diabetic ketoacidosis (DKA) with SGLT2 inhibitors was published in the [Drug Safety Update](#) and the [GGC Medicines Update](#) in 2015. The EU medicines regulators have since completed a review of DKA with SGLT2 inhibitors and further guidance has been published in the [Drug Safety Update](#) in April 2016.

Suggested actions to reduce the risk of patients on SGLT2 inhibitors developing DKA are:

- Inform patients of the symptoms of DKA and action to be taken if they develop. Also discuss the above risk factors with patients on SGLT2 inhibitors and use with caution in people who have them.
- Discontinue the SGLT2 inhibitor immediately if DKA is suspected or diagnosed and do not re-start unless another cause for the DKA is identified and treated.

- Interrupt treatment if a patient on an SGLT2 is admitted to hospital for major surgery or acute serious illness. Only re-start when stable.
- report suspected side effects to SGLT2 inhibitors on a [Yellow Card](#)

Points to note from the new guidance are as follows:

- DKA is a rare side effect of SGLT2 inhibitors (occurring in between 1 and 1000 and 1 in 10000 patients).
- A substantial proportion of reports of DKA involved off-label use in patients with type 1 diabetes. SGLT2 Inhibitors should **NOT** be used in type 1 diabetes.
- The presentation of DKA in patients on SGLT2 inhibitors is atypical, with only mildly elevated blood glucose levels, so it is important for prescribers and patients to be alert to the symptoms of ketoacidosis (refer to [Drug Safety Update](#) for details) and take appropriate action (see below).

The mechanism by which SGLT2 inhibitors might lead to DKA has not been established, however some potentially predisposing risk factors have been identified as follows:

- a low beta cell function reserve (eg patients with type 2 diabetes who have low C-peptide levels, latent autoimmune diabetes in adults [LADA], or a history of pancreatitis)
- conditions leading to restricted food intake or severe dehydration
- sudden reduction in insulin
- increased insulin requirements due to acute illness
- surgery
- alcohol abuse

Vaccines: Immunosuppressed Patients

The [Drug Safety Update](#) published in April 2016 reminds healthcare professionals of the risks of administering live attenuated vaccines to patients who are clinically immunosuppressed, either due to drug therapy or underlying illness.

Reminder for healthcare professionals:

- Live attenuated vaccines should not routinely be given to people who are clinically immunosuppressed (either due to drug treatment or underlying illness)

Any infant exposed to immunosuppressives in utero should have live attenuated vaccination deferred for the duration of postnatal influence on the immune system of the infant. For TNF α antagonists and other biologicals the recommendation is to defer until the infant is 6 months old.

Where there is any doubt about immune status, live attenuated vaccines should be deferred until advice can be sought from a specialist in secondary care. Close contacts of immunosuppressed individuals should be fully immunised to minimise the risk of spread of preventable infection.

Adverse reactions have been reported in several elderly patients who received shingles vaccination whilst possibly immunosuppressed. There have also been reports of deaths of neonates who were exposed to immunosuppressive treatment from the mother (either in utero during pregnancy or via breastfeeding) after live vaccines were administered.

Quetiapine

License considerations

Quetiapine is on the NHSGGC formulary for the treatment of schizophrenia and bipolar disorder. It is available in licensed tablet and modified release tablet formulations in various strengths. **All quetiapine liquid formulations are unlicensed.**

Prescribing in Dementia

The licensed indications for quetiapine are wider than the formulary indications, but it should be noted that quetiapine is not licensed for the treatment of behavioural and psychological symptoms of dementia i.e. the often distressing non-cognitive symptoms including agitation and aggressive behaviour. However on occasion old age specialists may recommend its use for such symptoms as part of a considered care plan.

Prescribers are reminded of the general advice to choose a licensed medication whenever possible when initiating a prescription. Risks associated with prescribing of antipsychotics in dementia are well documented and should be considered before prescribing. An excellent [Presgipp toolkit](#) is available to aid decision making. Advice should be sought from secondary care as appropriate.

If a patient with dementia established on quetiapine develops swallowing difficulties or poor oral intake, all medication should be re-assessed for

appropriateness in light of the deterioration in their clinical condition. In particular, a review of continued need for an antipsychotic should take place.

Cost considerations

ScriptSwitch messages have been added to the following preparations;

- Quetiapine Modified Release tablets - Standard release tablets are more cost effective. Patients currently under mental health team care should have the switch [to standard release] confirmed as appropriate
- Quetiapine Liquid - QUETIAPINE oral solution is an unlicensed special. Costs of specials are variable and can be extremely high.

The costs per dose of various strengths of quetiapine are listed below for comparison (Scottish Drug Tariff March 2016).

Prescribers are advised to review the need for the higher cost formulations and particularly the use of quetiapine liquid due to the unlicensed status of this product and discuss with secondary care as appropriate.

	Cost per dose		
	Standard release tablets	MR tablets	(Unlicensed) Liquid per 5ml
12.5mg	Unavail strength	Unavail strength	£ 3.20
25mg	£ 0.02	Unavail strength	£ 3.17
50mg	Unavail strength	£ 1.13	£ 2.43
100mg	£ 0.04	Unavail strength	£ 3.67
150mg	£ 0.12	£ 1.89	Unavail strength
200mg	£ 0.11	£ 1.89	Unavail strength
300mg	£ 0.17	£ 2.83	Unavail strength
400mg	Unavail strength	£ 3.77	Unavail strength