Hydroxychloroquine

Shared Care Guideline

Specialist details	Patient identifier
Name: _____	
Location: _____	
Tel: _____	**Date:** _____

Introduction

Licensed indications include: rheumatoid arthritis, juvenile idiopathic arthritis, discoid and systemic lupus erythematosus, and dermatological conditions caused or aggravated by sunlight.

Unlicensed indications include: connective tissue disease, sarcoidosis, other cutaneous lupus erythematosus

Dosage and administration

A typical adult dose may be 200 - 400mg daily (400mg should be given in divided doses). Total daily dose should not exceed 6.5mg/kg/day based on ideal body weight. Dosage may be reduced to 200mg daily depending on clinical response.
In adult patients with porphyria cutanea tarda, a twice weekly dose may be used.
Dosage may need to be reduced in renal and/or hepatic impairment.
When used for systemic lupus erythematosus or juvenile idiopathic arthritis in paediatric patients the dose is 5-6.5mg/kg/day based on ideal body weight, maximum per dose is 400mg.
Available as: hydroxychloroquine 200mg, 300mg tablets.

Hospital specialist responsibilities

- Assess if the patient is suitable for treatment with hydroxychloroquine.
- Agree shared care with the patient's GP.
- Advise GP on dose of hydroxychloroquine to be prescribed.
- Provide the patient/carer with relevant (preferably written) information on use, side effects and need for monitoring of medication.
- Undertake baseline tests as indicated in monitoring table below.
- Review results of safety monitoring and request additional tests as required. Check FBC at each review appointment.
- Monitor disease response to treatment and need to continue therapy.
- Continue to review the patient at agreed specified intervals, sending a written summary to the GP whenever the patient is reviewed.
- Provide any other advice or information for the GP if required.

***Ophthalmic screening**

- Enquire about any visual impairment which is not corrected with spectacles.
- Refer to ophthalmology for annual monitoring for retinopathy, as per the Royal College of Ophthalmologists (RCOphth) guidelines (https://www.rcophth.ac.uk/wp-content/uploads/2020/12/Hydroxychloroquine-and-Chloroquine-Retinopathy-Monitoring-Guideline.pdf) if:
  - treatment continued for more than 5 years, or
  - treatment continued for more than 1 year and additional risk factors are present: e.g. pre-existing retinal disease, a dose of hydroxychloroquine greater than 5mg/kg/day actual body weight), chloroquine use, concomitant tamoxifen therapy, or renal insufficiency (eGFR less than 60ml/min/1.73m^2).

Monitoring table		Hospital specialist	GP	Hospital specialist
Test	**Indication**	Pre-treatment baseline	During treatment	At review
FBC	Baseline assessment, dose adjustment	✓	Not routinely required	As part of the review or as clinically indicated
LFTs				
U&Es, eGFR				
ESR/CRP (Rheumatology only)	Disease activity scoring			
Height & weight	Baseline assessment			
Blood pressure	Baseline assessment, respiratory and TB screening	If clinically indicated		
Chest x-ray				
PFTs, TB screening if indicated				
Ophthalmic screening *	To assess ocular toxicity			See comments above and below *
There may be clinical circumstances where the frequency of monitoring may vary and this should be specified by the initiating specialist. Prescribers should be aware of the potential for delay in timely ophthalmic screening and consider discontinuation of treatment if at risk patients have not had a retinal eye screen.				

GP responsibilities

- Prescribe hydroxychloroquine.
- Report any adverse drug reactions to the initiating specialist and the usual bodies (e.g. MHRA/CHM).
- Ensure no drug interactions with other medicines.

Adverse effects, precautions and contraindications

Contraindications include pre-existing maculopathy of the eye.
Caution is advised in patients with renal or hepatic disease, with sensitivity to quinine, those with glucose-6-phosphate dehydrogenase deficiency, those with porphyria cutanea tarda which can be exacerbated by hydroxychloroquine and in patients with psoriasis as it appears to increase the risk of skin reactions.
Significant cardiac arrhythmias due to the risk of QT interval prolongation
Psychiatric reactions including reports of depression, anxiety, hallucinations, and psychosis and thoughts of self-harm or suicide have been reported. Be vigilant especially in the first month of treatment. Psychiatric events have been reported in patients with no prior history of psychiatric disorders
***Ophthalmic**: (significantly higher risk at doses > 5mg/kg/day actual body weight) retinopathy, corneal changes, impaired or blurred vision. If the patient experiences any visual impairment whilst on treatment, contact the initiating specialist.
Hypoglycaemia: Hydroxychloroquine has been shown to cause severe hypoglycaemia including loss of consciousness that could be life threatening in patients treated with and without antidiabetic medications. Patients treated with hydroxychloroquine should be warned about the risk of hypoglycaemia and the associated clinical signs and symptoms. Patients presenting with clinical symptoms suggestive of hypoglycaemia during treatment with hydroxychloroquine should have their blood glucose level checked and treatment reviewed as necessary.
Skin: unexplained skin rash; pigmentary changes.
Gastrointestinal: nausea, diarrhoea, abdominal cramps.
Blood: (rarely) bone marrow depression: screened for at outpatient appointments.
Other: cases of muscle weakness (skeletal muscle toxicity more common with long term treatment), hair loss, vertigo, tinnitus, isolated cases of abnormal liver function, headache, nervousness and emotional upset have been reported. May lower seizure threshold in patients with epilepsy.
Pregnancy / Contraception. Women of childbearing potential receiving hydroxychloroquine should be advised to use effective contraception. Patients discovered or planning to become pregnant should be referred to the initiating specialist at the earliest opportunity without discontinuing hydroxychloroquine.
Breastfeeding. Women being treated with hydroxychloroquine should seek specialist advice.

Common drug interactions

Amiodarone, **droperidol** and **moxifloxacin**: increased risk of ventricular arrhythmias: avoid concomitant use.
Antacids: reduce absorption of hydroxychloroquine. Avoid administration within four hours of dose.
Azithromycin or other systemic macrolide antibiotics (erythromycin or clarithromycin) An observational study in patients with rheumatoid arthritis has shown that co-administration of azithromycin with hydroxychloroquine is associated with an increased risk of cardiovascular events and cardiovascular mortality.
Drugs that can prolong the QT interval: for example, amiodarone, moxifloxacin, quinine, citalopram. Avoid concomitant use; possible increased risk of QT prolongation/ventricular arrhythmias.
Ciclosporin: possible increase in plasma concentration of ciclosporin.
Digoxin: possible increase in plasma concentration of digoxin.
Hypoglycaemic agents: may enhance the effect of hypoglycaemic agents.
Tamoxifen: increased risk of retinal toxicity, necessitates annual ophthalmic monitoring.
Mefloquine: increased risk of convulsions.

Communication

For any queries relating to this patient's treatment with hydroxychloroquine, please contact the specialist named at the top of this document.

This information is not inclusive of all prescribing information and potential adverse effects.
Please refer to full prescribing data in the SPC at www.medicines.org.uk or the BNF

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