

**Nuffield Orthopaedic Centre NHS Trust and
Oxfordshire Primary Care Trust
Shared Care Protocol and Information for GPs**

Hydroxychloroquine (paediatric)

**This document provides the necessary information and guidance for the shared care of children and adolescents requiring hydroxychloroquine therapy
(available on www.noc.nhs.uk/oxparc)**

Introduction

Hydroxychloroquine is a (non –biologic) disease modifying anti-rheumatic drugs (DMARDs) used in the treatment of Juvenile Idiopathic Arthritis, paediatric Systemic Lupus Erythematosus, Juvenile Dermatomyositis and Sarcoidosis. It is often used in combination with other DMARDs such as Methotrexate or Sulfasalazine. The optimum therapeutic dose of DMARDs should be achieved to minimise disease progression and joint erosions.

Dose and administration

Hydroxychloroquine is prescribed according to weight (up to 6.5mg/kg/day in one or two divided doses), Maximum 400mg per day.

Benefit is seen after 6 to 8 weeks and improvement may continue over a further 4 to 6 months.

Supply

Hydroxychloroquine is available as 200mg tablets. Tablets may be halved or crushed and dispersed in water.

Proprietary liquids are not available and so in children unable to take solid dosage forms, a specially manufactured liquid is required. These are unlicensed preparations and are generally **less** cost-effective than proprietary products and so should only be used when a child is unable to take a tablet/capsule. Only in exceptional cases should the use of specially manufactured liquids be required.

If a liquid preparation is required, children should be reviewed regularly and changed to the tablets/ capsules when they are able to take these. This can be arranged by GP with follow-up communication with our service.

Adverse effects.

Gastrointestinal disturbance	Discuss with paediatric rheumatology team if continues to be a problem or is severe.
Skin rashes	These are often photosensitive. Pigmentary changes, bleaching of hair and hair loss, are both rare and usually resolve on stopping the drug. Discuss with paediatric rheumatology team.
Visual disturbances	Anti-malarials can cause eye damage in doses over 6.5mg per kg. Report any concerns with eyesight to the paediatric rheumatology team.
Over dosage	Hydroxychloroquine is very toxic in over dosage. Immediate advice from the poisons centre is essential. Children presenting within 1 hour of ingesting doses greater than 20mg/kg should be considered for activated charcoal 1mg/kg.

Notes:

- **Hydroxychloroquine can be withheld for 2-3 weeks without inducing a flare.**
- **Hydroxychloroquine should not be stopped prior to elective surgery.**

Contra Indications and Precautions

Problem	Risk
Pregnancy and breastfeeding	Before planning a family, it is advisable to discuss this with the doctor. Breast feeding is not recommended
Antacids	Avoid within 4 hours of dose as they can stop hydroxychloroquine being absorbed.
Epilepsy	May reduce threshold for convulsions
Hepatic and renal impairment	Use with caution
Pre-existing maculopathy	Hydroxychloroquine use is contra-indicated

Vaccinations

- **Live vaccines such as oral polio, rubella, MMR, BCG and yellow fever should not be given due** to the risk of increased antigenic reaction and possible reduced immunological response.
- Pneumovax is recommended
- Annual flu vaccines are safe and recommended.

Up to date advice on vaccines can be obtained from website / paediatric rheumatology team.

Drug interactions (refer also to BNF or SPC)

NSAID's in addition to the recommended doses of hydroxychloroquine are **not** contraindicated.

- Moxifloxacin/ Amiodarone/ Mefloquine/ quinine: Avoid concomitant use.
- Digoxin / Ciclosporin: Hydroxychloroquine may increase the plasma concentration of these drugs.
- Methotrexate and hydroxychloroquine are often used in combination, but concomitant administration may increase the plasma concentration of methotrexate.

Monitoring

Monitoring levels and frequency of blood tests do differ from the adult rheumatology shared care protocols to reduce the burden of blood tests which have been shown to be unnecessary in paediatric populations or to adjust lab data to normal paediatric physiology.

Pre treatment assessment by Rheumatologist

FBC, ESR, CRP, LFT's and U&E's can be checked prior to commencement, but this is not essential.

Ophthalmology Monitoring

There is a link between hydroxychloroquine use and retinal toxicity. However the Royal College of Ophthalmologists guidelines 2009 state that systematic screening for hydroxychloroquine toxicity is not necessary because clinically significant maculopathy is very rare and there is currently no reliable test for detecting it at a reversible stage.

Visual impairment will be discussed annually at clinic visits. Ophthalmology referral will be made by the rheumatology team if there are any concerns with vision.

Monitoring by GP

No regular blood tests are required

If a second DMARD is introduced as a combination then monitoring may be required as per the other drug guidelines.

Patient / Parent information leaflet

Parents and patients should be supplied with an information leaflet from the manufacturer.

Shared Care Responsibilities

Shared care assumes communication between the specialist, GP and patient. The intention to share care should be explained to the patient and accepted by them. Patients should be under regular follow-up which provides an opportunity to discuss drug therapy.

a) Rheumatology Consultant

- Pre treatment assessment and recommendation of the appropriate DMARD to be prescribed.
- Write to the GP requesting shared care and outline shared care protocol criteria.
- Pre treatment counselling to include rationale for treatment, benefits, potential side effects, precautions and monitoring requirements ensuring patients/parents/guardians understand their role in reporting adverse effects promptly. Patients (where possible) and parents/guardians consent to treatment should be sought and recorded.
- Issue written patient drug information, shared care monitoring booklet, contact telephone number.
- Ensure clinical supervision of the patient is done by follow-up as appropriate.
- Liaise with GP regarding changes in disease management, drug dose, missed clinic appointments.
- Provide telephone /e-mail support in the event of any serious adverse reactions by a member of the medical team.
- Additional support for patients and members of the primary care team, via the rheumatology telephone Advice-line.

b) General Practitioner

- Prescribing the hydroxychloroquine as per recommendation of consultant
- Provision of services related to the shared care agreement as listed in the GMS contract, in respect of near patient testing.
- Ensuring blood tests are taken in accordance with this paediatric rheumatology unit information sheets which have been adapted for paediatric purposes from the National Guidelines for the monitoring of second line drugs (BSR 2009)
- Monitor for adverse effects as detailed above.
- Advise the consultant rheumatologist of any changes in the patient’s condition or any adverse drug reactions.

c) The patient/parent/guardian

- Reporting any adverse side effects to medication to the GP or a member of the hospital rheumatology team.
- Ensuring that they bring a list of all medications to the surgery and out patient consultations.

Contact Numbers

Nuffield Orthopaedic Centre. Rheumatology Registrar on call	01865 741155 Bleep Rheumatology Registrar on call
Website (contains all shared care protocols some basic information to understanding blood results)	www.noc.nhs.uk/oxparc
Email enquiries	cnspaedrheum@noc.nhs.uk
Rheumatology Advice line (Answer phone)	01865 737656
Copies of all these sheets are available for general use by GP’s via www.noc.nhs.uk/oxparc , the unit or the PCT Intranet (nww.oxfordshirepct.nhs.uk under General Practice / Prescribing and Medicines Management / Shared Care Protocols)	

These guidelines are based on:

- Oxford Heatherwood and Wexham Park Rheumatology Depts Shared Care Agreement 2010
- National Guidelines for monitoring second line drugs. British Society for Rheumatology 2009
- BSPAR (British Society for Paediatric and Adolescent Rheumatology) Clinical Guidelines 2007 – Hydroxychloroquine
- Royal College of Ophthalmologists guidelines 2009
- Hydroxychloroquine Oxford and Berkshire Regional Rheumatology Guidelines 2010