Berkshire West Integrated Care System
Representing
Berkshire West Clinical Commisioning Group
Royal Berkshire NHS Foundation Trust
Berkshire Healthcare NHS Foundation Trust
Berkshire West Primary Care Alliance

Prescribing Guidelines

Prescribing arrangement for the management of patients transferring from ***Secondary Care to Primary Care***

Ciclosporin for the treatment of inflammatory joint disease

APC PG 004

For the latest information on interactions and adverse effects, always consult the latest version of the Summary of Product Characteristics (SPC), which can be found at: http://www.medicines.org.uk/

Approval and Authorisation

Approved by	Job Title	Date
Drugs & Therapeutics Committee	Sakeb Hussain, DTC Chair	*December 2016*
Area Prescribing Committee	A Penn, APC Chair	*November 2016*

Change History

Version	Date	Author	Reason
v.1.0	August 2016	A Scott	New Guideline
V.1.1	October 2018	n/a	Updated APC Category

This prescribing guideline remains open to review considering any new evidence.

This guideline should only be viewed online and will no longer be valid if printed off or saved locally

Author	A Scott	Date of production:	August 2016
Job Title	Lead Interface Pharmacist	Review Date	Auguist 2019
Protocol Lead	Dr A Chan, Consultant Rheumatologist	Version	v.1.1

SHARED CARE PRESCRIBING GUIDANCE
Ciclosporin for the treatment of inflammatory joint disease

Introduction
Ciclosporin is a cyclic polypeptide with immunosuppressive properties. Studies suggest that ciclosporin inhibits the development of cell-mediated reactions. It appears to block the resting lymphocytes in the G0 to G1 phase of the cell cycle, and also inhibits lymphokine production and release, including interleukin 2 (T-cell growth factor). The available evidence suggests that ciclosporin acts specifically and reversibly on lymphocytes. It does not depress haemopoeisis and has no effect on the function of phagocytic cells. Response to treatment may take up to 3 months.

This information sheet does not replace the SPC, which should be read in conjunction with this guidance. Prescribers should also refer to the appropriate paragraph in the current edition of the BNF.
Link to the relevant SPC website: www.medicines.org.uk

Dose
Cyclosporin (CSP) should be given at a starting dose of 2.5mg/kg per day in divided doses, for the first six weeks of treatment. If the clinical effect is considered insufficient, the daily dose may be increased gradually, but should not exceed 4mg//kg/day.

Cautions
Pregnancy
Ciclosporin increases the risk of malignancies including skin cancer, patients should be advised to avoid excessive exposure to the sun and to use high factor sunscreens.

Contraindications
- Uncontrolled hypertension.
- Renal failure and liver failure.
- Hyperkalaemia.
- Suspected systemic infection or sepsis.
- Breastfeeding.

Side effects
Major: Impaired renal and hepatic function

Others: Hypertrichosis, Tremor, Fatigue, Gingival Hypertrophy, Gastro-Intestinal disturbances. Burning sensation in hands and feet may occur early in treatment. Dysmenorrhoea or amenorrhoea.

Occasionally: Headaches, Rashes, Hyperkalaemia, Hyperuricaemia, Gout, Weight gain, Oedema, Pancreatitis, Neuropathy/Confusion, Malignancy and Lymphoproliferative disorders.

Patients should be advised to avoid exposure to strong sunlight.

Interactions

Increase Nephrotoxicity	**Increase CSP activity**	**Decrease CSP activity**
Aminoglycosides	Ketoconazole	Phenytoin
Amphotericin B	Erythromycin	Carbamazepine
Ciprofloxacin 4-quinolones	Oral Contraceptives	Barbiturates
Melphalan	Calcium channel blockers e.g. Diltiazem, Nicardipine, Verapamil.	Rifampicin

Trimethoprim	Doxycycline, Fluconazole, Itraconazole, Propafenone and lipid solutions are thought to have the same effect.	
Colchicine	Chloroquine	

Other interactions:

Hyperkaleamia - ACE inhibitors can increase the risk of hyperkaleamia and should be avoided, as should potassium sparing diuretics and potassium salts.

Care should be taken with concomitant NSAID's. Diclofenac dosages should be halved as, when given with Cyclosporin, the plasma concentration of diclofenac increases.

Cyclosporin should not be ingested with grapefruit as this may affect absorption.

During treatment with Cyclosporin, use of live attenuated vaccines should be avoided, as vaccination may be less effective.

Administration of Cyclosporin may enhance the potential of HMG-CoA reductase inhibitors to induce rhabdomyolosis. The potential for interaction with other drugs in this class should be considered.

It is important when prescribing, that you state NEORAL (Cyclosporin) as brands are not interchangeable.

Criteria for Use

RESPONSIBILITIES and ROLES

Specialist responsibilities	
1	Initiate treatment and prescribe the first month of treatment.
2	Carry out baseline and subsequent monitoring through the DAWN monitoring system for patients within Berkshire West CCGs.
3	Send a letter to the GP requesting shared care for the patient.
4	Routine clinic follow-up 1-2 times a year.
5	Send a letter to the GP after each clinic attendance ensuring current dose, most recent blood results and frequency of monitoring are stated. In some cases patients can be given a 3 year follow up with annual review in primary care.
6	Evaluation of any reported adverse effects by GP or patient.
7	Advise GP on review, duration or discontinuation of treatment where necessary.
8	Inform GP of patients who do not attend clinic appointments.
9	Ensure that backup advice is available at all times

General Practitioner responsibilities	
1	Monitor patient's overall health and well being.
2	Prescribe the drug treatment as advised by the specialist.
3	Report any adverse events to the hospital specialist, where appropriate
4	Monitoring of blood results is through DAWN and GPs will be informed if any action is necessary such as a decrease in dose etc.
5	Help in monitoring the progression of disease.

Monitoring requirements and actions

- Pre-treatment FBC, U&Es, creatinine clearance, LFTs, and blood pressure in accordance with BSR/BHPR guidance 2008
- Subsequent Monitoring
  - **FBC, LFTs, U&E's** – Once monthly for the first 3 months or until stable then 3 monthly thereafter.
  - **Serum electrolytes** incl. potassium and creatinine every 2 weeks until stable for 3 months then monthly.
  - Caution when diclofenac or another NSAID added

FBC	WBC	<4.0 but > 3.0x 10^9/L	Withhold and discuss with the rheumatology team
	Lymphocytes	< 0.5 x 10^9/L	Discuss with the rheumatology team
	Neutrophils	< 2.0 x 10^9/L	Discuss with the rheumatology team
		< 1.5 x 10^9/L	Stop treatment and contact the rheumatology team
	Platelets	< 150 x 10^9/L	Withhold treatment and contact the rheumatology team

LFT's	> 2 fold rise in AST, ALT or Alk Phos (from upper limit of reference range)	Withhold treatment and discuss with the rheumatology team
MCV	> 105fl	Investigate and if B12 or folate low start appropriate supplementation
Lipids	Any rise in lipids	Withhold treatment and discuss with the rheumatology team
Creatinine	If the level rises above 30% of baseline	Withhold treatment and discuss with the rheumatology team
BP	Increase in BP	Treat with antihypertensives. Stop treatment if hypertension remains uncontrolled.

Symptoms and actions	
Abnormal bruising or sore throat	Withhold until FBC available. Contact the rheumatology team

Patient's / Carer's role
1 Ask the specialist or GP for information, if he or she does not have a clear understanding of the treatment.
2 Tell the specialist or GP of any other medication being taken, including over-the-counter products.
3 Read the patient information leaflet included with your medication and report any side effects or concerns you have to the specialist or GP.
4 Patients will be given a booklet for the blood results to be entered and are expected to bring this to each appointment.

BACK-UP ADVICE AND SUPPORT

Royal Berkshire Foundation Trust Hospital, 0118 322511	
Lead Consultant	0118 322 6559
Lead Nurse	0118 322 7665 or 0118 322 6574
Medicines Information	0118 3227803