Shared care guidelines

Drug	CICLOSPORIN	
Speciality	RHEUMATOLOGY/DERMATOLOGY	
Indication	DISEASE MODIFYING ANTI-RHEUMATIC/IMMUNOSUPPRESSION	
Overview	Ciclosporin is licensed for active rheumatoid arthritis when other second-line therapy is inappropriate or ineffective. It is virtually non-myelotoxic, but markedly nephrotoxic. It is licensed for severe psoriasis and for the short-term treatment of severe atopic dermatitis where conventional therapy is ineffective or inappropriate.	
Hospital Specialist's responsibilities	**Initial Investigations**	FBC, U&E, Creatinine, eGFR, LFTs, Fasting lipids, Urate, Varicella zoster serology, Hep B surface antigen, Hep B core (IgG) antibody, Hep C antibody & HIV 1 & 2 antibodies. Blood pressure. Urinalysis. Body weight. **Rheumatology additional investigations:** ESR/CRP
	Initial regimen	**Rheumatology dosing:** Total ciclosporin 2.5mg/kg per day in two divided doses for 6 weeks. May be increased by 25mg every 2-4 weeks. Max 4mg/kg/day. **Dermatology dosing:** Total **c**iclosporin 2.5-5mg/kg/day in two divided doses depending on disease severity and titrated according to response.
	Clinical Monitoring	For adverse effects and usual disease management
	Frequency	As required, typically every 6 months once stable
	Safety Monitoring and frequency	FBC, U&E, Creatinine, eGFR, LFTs, BP. **Rheumatology additional monitoring:** ESR/CRP. Frequency: Fortnightly for 6 weeks; Monthly for 12 months; Thereafter every 3 months. Monitor fortnightly for 6 weeks following any dose increase. Check fasting lipids after one month. Little role for measuring ciclosporin levels.
	Prescribing arrangements	Minimum of 3 months from hospital then transferred to GP, when the patient's dose is stable
	Documentation	Clinic letters and results to GP. Separate patient information. Offer patient-held shared care diary
GP's Responsibilities	**Maintenance Prescribing**	As recommended by specialist (Rheumatology range 2.5 – 4 mg/kg/day; Dermatology range 1-5mg/kg/day)
	Clinical monitoring	For adverse effects and usual disease management
	Frequency	As required and determined by patient symptoms
	Safety Monitoring	FBC, U&E, Creatinine, eGFR, LFTs, BP **Rheumatology additional monitoring:** ESR/CRP
	Frequency	Monthly for 12 months; Thereafter every 3 months
	Duration	Long term as recommended by specialist
	Documentation	Practice records. Correspondence with specialist as required. Copies of blood results to specialist using shared care diary or available via web ICE.

Adverse Events	Action:
eGFR decrease of >25% from baseline on 2 occasions (1 week apart)	Reduce dose by 25-50%. Discuss with specialist.
eGFR decrease of >50% from baseline on 2 occasions (1 week apart)	Withhold and discuss with specialist.
↑ K+ above normal	Withhold & discuss with specialist
AST, ALT or ALP >2x upper limit of normal	Withhold & discuss with specialist
Hypertension (≥ 140/90 on 2 consecutive readings 2 weeks apart)	Treat with amlodipine (N.B. note drug interactions); if BP remains uncontrolled, stop ciclosporin & discuss with specialist.
Significant rise in fasting lipids	Discuss with specialist

Any rapid fall or consistent downward trend for blood counts or rapid rise or consistent upward trend for liver enzymes should prompt caution, and require further investigation as to likely cause. Action may be required even if values are within normal range. If in doubt please contact specialist team.

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Further Information	Ciclosporin should be prescribed by brand name as significant differences exist between different formulations. Patients should continue treatment with the same brand of ciclosporin. **Adverse Effects** More common adverse effects include abdominal pain; acne; anorexia; convulsion; diarrhoea; fatigue; flushing; gingival hyperplasia; headache; hepatic dysfunction; hirsutism; hyperglycaemia; hyperkalaemia; hyperlipidaemia; hypertension; hypertrichosis; hyperuricaemia; hypomagnesaemia; leucopenia; muscle cramps; myalgia; nausea; paraesthesia; peptic ulcer; pyrexia; renal dysfunction, tremor; vomiting. **Intercurrent infection** During an acute infection, ciclosporin should be temporarily discontinued until the patient has recovered from the infection. **Monitoring** Watch for a falling trend in eGFR. Action may need to be taken even if the values are in normal range in this scenario. **Vaccinations** Live vaccines are not recommended with ciclosporin, although the live shingles vaccine is appropriate in some patients (refer to Green Book for advice). Recommend annual Flu vaccination and Pneumococcal vaccination in line with current guidance (see JCVI Green Book). If a patient is exposed to shingles or chicken pox and lacks immunity to varicella zoster virus, aciclovir may be required (contact Rheumatology/Dermatology). **Fertility issues** Ciclosporin can be used in pregnancy and in breast-feeding where the benefits are considered to outweigh the risks. **Important drug interactions** There are numerous drug interactions involving ciclosporin – check SPC/BNF when introducing new drugs. Avoid grapefruit juice (raises plasma ciclosporin level). **Thank you for sharing the care of this patient. The medical and nursing staff in the departments of Rheumatology and Dermatology are happy to answer any queries your staff may have concerning the patient's treatment or any adverse events.** **If you are contemplating discontinuing treatment please discuss with the consultant or nursing staff first**. If the patient has any problems with their medication, adverse effects, or an exacerbation of their disease requiring an earlier review, please contact the rheumatology specialist nurse practitioners or dermatology team using the contact details overleaf. **References** BSR and BHPR guideline for the prescription and monitoring of non-biologic disease-modifying anti-rheumatic drugs. *Rheumatol* 2017; **56**: 865-8. British Association of Dermatologists guidelines for the safe and effective prescribing of oral ciclosporin in dermatology 2018. *Br J Dermatol* 2018; **180**: 1312-38.

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