North Yorkshire and York NHS | Tees NHS | North Tees and Hartlepool NHS Foundation Trust | South Tees Hospitals NHS Trust

Shared care guidelines

Drug	CICLOSPORIN			
Speciality	RHEUMATOLOGY			
Indication	IMMUNOSUPPRESSION / DISEASE MODIFYING ANTI-RHEUMATIC			
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.			
Hospital Specialist's responsibilities	**Initial Investigations:**	FBC, ESR/CRP, U&E, eGFR, LFTs, glucose, lipids. Blood pressure. Baseline ECG. Urine protein/creatinine ratio. Assessment for comorbidities such as lung disease and occult viral infection.		
	Initial regimen:	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.		
	Clinical Monitoring:	For adverse effects and usual disease management		
	Frequency:	As required, typically every 3-6 months once stable		
	Safety Monitoring and frequency:	FBC, ESR/CRP, U&E, eGFR, LFTs, glucose, BP. Frequency: Fortnightly for 6 weeks, monthly for 12 months then every 3 months thereafter. Monitor fortnightly for 6 weeks following any dose increase. Check lipids at one month.		
	Prescribing arrangements:	Minimum of 3 months from hospital then transferred to GP		
	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 (range 2.5 – 4.0 mg/kg/day)		
	Clinical monitoring:	For adverse effects and usual disease management		
	Frequency:	As required and determined by patient symptoms.		
	Safety Monitoring:	FBC, ESR/CRP, U&E, eGFR, LFTs, glucose, BP		
	Frequency:	Monthly for 12 months then every 3 months		
	Duration of Treatment:	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 webICE.		
	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 >35% from baseline on 2 occasions (1 week apart)		Further dose reduction should be considered (even if within normal range); discontinue if reduction not successful within 1 month. Discuss with specialist	
	↑ K+ above normal		Withhold & discuss with specialist	
	WCC<3.5, neutrophils <1.6, platelets ↓ <140		Withhold & discuss with specialist	
	↓ trend in WCC / platelet count		repeat FBC & discuss with specialist	
	AST, ALT or ALP >2x upper limit of normal		Withhold & discuss with specialist	
	Elevated blood glucose		Assess for diabetes mellitus or impaired glucose tolerance	
	Hypertension (≥ 140/90 on 2 consecutive readings 2 weeks apart)		Treat (N.B. note drug interactions); if BP remains uncontrolled, stop ciclosporin & discuss with specialist.	
Other Information	Abnormal bruising		Withhold, check FBC & discuss with specialist	
	'Significant' rise in fasting lipids		Withhold & discuss with specialist	
	Contact Details			
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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**: Please watch for a falling trend for blood counts and falling trend in eGFR. Action may need to be taken even if the values are in normal range in these scenarios. **Vaccinations** Live vaccines in general are not recommended with ciclosporin, although the live shingles vaccine is appropriate in some patients (refer to Green Book for advice). We 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, passive immunization may be required (contact Rheumatology). **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 concs). **Thank you for sharing the care of this patient. The medical and nursing staffs in the department of Rheumatology 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 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 using the contact details overleaf. Reference : BSR and BHPR guideline for the prescription and monitoring of non-biologic disease-modifying anti-rheumatic drugs. Rheumatology 2017; 56 : 865-8.

Drug & Therapeutics Committee, Approved: July 2019: Review date: July 2021