Mycophenolate mofetil (non-transplant indications)

Shared Care Guideline

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

Introduction

Unlicensed indications include: Connective tissue diseases (rheumatoid arthritis, cutaneous and systemic lupus erythematosus and lupus nephritis, scleroderma, dermatomyositis and polymyositis), severe psoriasis, severe atopic dermatitis, blistering conditions, pyoderma gangrenosum, vasculitis of any aetiology, autoimmune bullous dermatoses such as pemphigus, Crohn's disease, ulcerative colitis, autoimmune hepatitis, inflammatory eye disease (uveitis and scleritis), myasthenia gravis, chronic inflammatory demyelinating neuropathy, haemolytic anaemia, idiopathic thrombocytopenic purpura, interstitial nephritis, interstitial lung disease associated with connective tissue diseases, organising pneumonia, vasculitis with pulmonary involvement, fibrotic hypersensitivity pneumonitis, sarcoidosis, and nonspecific interstitial pneumonia (NSIP), lymphocytic interstitial pneumonia, cryptogenic organising pneumonia, DIP.

Adult dosage and administration

The recommended adult dose is between 1g and 3g daily, taken in 2 divided doses. Gastrointestinal adverse effects (most commonly diarrhoea and nausea) may be limited by increasing dose frequency (eg. 500mg four times daily). Dosage may need to be reduced in patients with renal impairment.

Available as: 500mg tablets, 250mg capsules and oral suspension 1g/5ml.

Hospital specialist responsibilities

- Assess if the patient is suitable for treatment with mycophenolate mofetil.
- Agree shared care with patient's GP.
- Varicella Zoster immune status: if non-immune, consider immunisation prior to starting treatment.
- Advise GP on dose of mycophenolate mofetil 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.
- Review results of safety monitoring and request additional tests as required.
- 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. Highlight baseline neutrophil count in lupus patients if present.

Monitoring table		Hospital specialist	GP			Hospital specialist
Test	Indication	Pre-treatment baseline	During treatment			At review
			Until on stable dose for 6 weeks	Next 3 months	Thereafter**	
FBC	Baseline assessment, dose adjustment	✓	Every 2 weeks	Every month	Every 3 months	As part of review or as clinically indicated
LFTs						
U&Es, eGFR						
ESR/CRP (Rheumatology and Gastroenterology only)	Disease activity scoring		Every 3 months			
Height & weight	Baseline assessment	✓	Not routinely required			If clinically indicated
Lipids						
Blood pressure	Baseline assessment, respiratory and TB screening	If clinically indicated				
Chest x-ray						
PFTs, TB screening if indicated						
Ask about oral ulceration, sore throat, unexplained rash or unusual bruising/bleeding		✓	At every consultation			✓

If a further DMARD /JAK is added as combination therapy, or the dose is increased, the initial starting schedule should be reinstated. There may be clinical circumstances where the frequency of monitoring may vary and this should be specified by the initiating specialist.
** Patients who have been stable for 12 months can be considered for reduced frequency monitoring on an individual patient basis.

GP responsibilities

- Prescribe mycophenolate mofetil. See pregnancy / contraception advice below*.
- Arrange and record ongoing monitoring as advised by specialist (see monitoring table), ensuring practice systems are in place to recall patients for monitoring blood tests.
- Follow-up any non-compliance with the monitoring schedule. The risks of cessation of therapy versus risks of toxicity should be considered. Contact the specialist if treatment is stopped or further advice required.
- Report any adverse drug reactions to the initiating specialist and the usual bodies (eg. MHRA/CHM).
- Ensure no drug interactions with other medicines.
- Administer **inactivated** influenza vaccine annually unless otherwise advised by the initiating specialist.
- Check patient has had ONE DOSE of pneumococcal vaccine (revaccination is not recommended except every five years in patients whose antibody levels are likely to have declined more rapidly eg. asplenia), see BNF or Green Book.
- Provide COVID 19 and **inactivated** shingles (Shingrix®) vaccination as appropriate as per local arrangements and Green Book
- Post exposure prophylaxis (antivirals or VZIG if antivirals are contraindicated) should be considered in non-immune at risk patients if exposed to chickenpox or shingles. Contact the consultant virologists, Regional Virus Laboratory, Royal Group of Hospitals on 07889 086 946 for advice if exposure is suspected. For other queries eg. those concerning exposure, infection or any recommendations relating to healthy susceptible household contacts, consult the Green Book and/or take additional advice from Regional Virus Laboratory, Royal Group of Hospitals
- Ask about oral ulceration, sore throat, unexplained rash or unusual bruising/bleeding at every consultation.

Withhold mycophenolate and contact specialist if:

- WCC < 3.5 x 10^9/L
- Neutrophils < 1.6 x 10^9/L
- **Unexplained** eosinophilia > 0.5 x 10^9/L
- Platelets < 120 x 10^9/L
- MCV > 105fL, (check B12 & folate & TFT)
- AST/ALT > 3 times the upper limit of normal (for results between 2 - 3 x ULN, continue mycophenolate, repeat bloods and seek specialist advice). Minor elevations of AST/ALT are common
- If renal impairment develops (not always appropriate to stop but may need dose adjustment)
- Unexplained fall in serum albumin
- Oral ulceration / sore throat
- Unexplained rash / abnormal bruising.

Normal reference range may vary slightly between labs.
Please note an unusual fall or rise or a consistent downward or upward trend in any value should prompt review of the patient and extra vigilance. Some patients may have abnormal baseline values, specialist will advise.

Adverse effects, precautions and contraindications

Gastrointestinal upset is the most common side effect (eg. nausea, vomiting, abdominal discomfort, diarrhoea or constipation). If severe or persistent, refer to specialist.
Infection. Immunosuppressants can increase susceptibility to infection. It is advisable not to commence or continue treatment with mycophenolate when patients have an established local or systemic infection. It is advisable to recommence once the infection has been treated. Precise period of discontinuation depends on the nature and severity of infection and the activity of the underlying disease.
Progressive multifocal leukoencephalopathy (PML) should be considered a differential diagnosis in patients reporting neurological symptoms on treatment with mycophenolate.
Blood disorders. Leucopenia, anaemia, thrombocytopenia, pancytopenia, pure red cell aplasia, neutropenia and leucocytosis have been reported. GPs should be alert to any unexplained bruising or bleeding.
Cancer risk. Patients receiving long-term immunosuppressive drugs are at increased risk of developing a malignancy. The most frequently occurring types are lymphoma and skin malignancy. The avoidance of excessive exposure to the sun, and the use of high factor sunscreen and protective clothing are advised. Adherence to population screening programmes is particularly important in this population.
Hyperlipidaemia has been reported.
*** Pregnancy / contraception**. Mycophenolate is a powerful teratogen and is contraindicated in pregnancy and pregnancy must be excluded by two consecutive pregnancy tests (8 to 10 days apart) immediately before starting treatment.
Women of childbearing potential should use two reliable forms of contraception simultaneously before starting, during and for six weeks after stopping mycophenolate therapy.
Sexually active men (including vasectomised men) are recommended to use condoms during and for at least 90 days after cessation of treatment. In addition, female partners of male patients treated with mycophenolate are recommended to use highly effective contraception during treatment and for a total of 90 days after the last dose of mycophenolate. Patients should be instructed to consult their doctor immediately if pregnancy occurs. **Additionally,** patients should not donate blood during therapy or for at least 6 weeks following discontinuation of mycophenolate. Men should not donate semen during therapy or for 90 days following discontinuation of mycophenolate.
Breastfeeding. Women being treated with mycophenolate mofetil should not breastfeed.
Live vaccines. Consult the Green Book and take additional advice from initiating specialist if required.

Common drug interactions

The following drugs should not be initiated by a GP unless discussed with the specialist.
Antacids & colestyramine should not be taken at the same time of day, as they will impair the absorption of mycophenolate mofetil.
Antibacterials: Rifampicin reduces mycophenolate plasma levels.

Communication

For any queries relating to this patient's treatment with mycophenolate, 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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