Mycophenolate mofetil

We **cannot make a recommendation** with respect to mycophenolate mofetil/ mycophenolic acid for the treatment of AE.	**0**	100%  (15/15) Expert Consensus

mycophenolate mofetil: off-label; commonly used dosage
adults: 1-3 g per day
children: 30-50 mg/kg per day

Mechanisms of action and efficacy

Mycophenolate mofetil is a prodrug of mycophenolic acid (MPA), an inhibitor of inosine-5'-monophosphate dehydrogenase. MPA depletes guanosine nucleotides preferentially in T and B lymphocytes and inhibits their proliferation. MPA also inhibits the glycosylation and expression of adhesion molecules, and the recruitment of lymphocytes and monocytes into sites of inflammation.[1]

A recent systematic review and meta-analysis[2] including 18 studies with a total of 140 adult and paediatric patients evaluated the efficacy of off-label use of MMF in patients with AE refractory or not tolerating other first line systemic agents. There was a significant reduction in pre to post SCORAD scores by 18 points (p = .0002) with 77.6% of patients reporting partial or full remission. Relapses occurred in 8.2% of cases. The average time for initial effects was 6.8 ± 7 weeks.

Dosage: acute flare, short term, long term

- off licence
- commonly used dosage
    - adults: 1-3 g per day
    - children: 30-50 mg/kg bodyweight per day
    - typically given in two divided doses
- For patients receiving systemic treatment with MMF, we recommend additional therapy with emollients and, if necessary, topical anti-inflammatory therapy.

Safety

The most common side effects include headaches and gastrointestinal symptoms, followed by infections, especially during long-term therapy.

Haematological adverse effects include anemia, leukopenia, neutropenia and thrombocytopenia, albeit rarely.

Monitoring

- Complete blood count, renal and liver profile before therapy, then every 2 weeks for 1 month; monthly for 3 months; every 2-3 months thereafter

- Screening for chronic infections (e.g. hepatitis B-/C, HIV) according to national and local guidelines
- Pregnancy testing before and during MMF therapy if indicated

Combination with other treatments

Concomitantly to MMF, topical therapy with corticosteroids and/or calcineurin inhibitors can be applied.

Special considerations

In case series, the efficacy and safety of MMF in children have been investigated.

References

1. Allison AC. Mechanisms of action of mycophenolate mofetil. *Lupus*. 2005;14 Suppl 1:s2-8. doi:10.1191/0961203305lu2109oa
2. Phan K, Smith SD. Mycophenolate mofetil and atopic dermatitis: systematic review and meta-analysis. *J Dermatolog Treat*. Dec 2020;31(8):810-814. doi:10.1080/09546634.2019.1642996