MYCOPHENOLATE MOFETIL/ MYCOPHENOLIC ACID

Indications/Uses

Listed in Dosage.

Dosage/Direction for Use

Adult : PO Prophylaxis of acute renal graft rejection As mycophenolate mofetil combined with other immunosuppressants: 1 g bid. As mycophenolic acid: 720 mg bid. Doses are given within 72 hours of transplantation. Prophylaxis of cardiac graft rejection As mycophenolate mofetil combined with other immunosuppressants: 1.5 g bid started within 5 days of transplantation. IV Prophylaxis of acute renal graft rejection As mycophenolate mofetil combined with other immunosuppressants: 1 g bid via IV infusion over 2 hours started within 24 hours of transplantation. Duration of therapy: Max 14 days. Convert to oral therapy as soon as tolerated. Prophylaxis of cardiac graft rejection As mycophenolate mofetil: 1.5 g bid via IV infusion over 2 hours starting within 5 days after transplantation, convert to oral administration as soon as tolerated. Prophylaxis of hepatic transplant rejection As mycophenolate mofetil: Initial: 1 g bid infused over 2 hours started within 24 hours of transplantation. Duration of treatment: 4 days up to Max 14 days. Then, convert to oral administration at 1.5 g bid as soon as tolerated.

Dosage Details

Intravenous

Prophylaxis of acute renal graft rejection

Adult: As mycophenolate mofetil: In combination with other immunosuppressants: 1 g bid via IV infusion over 2 hours started within 24 hours of transplantation. Duration of therapy: Max 14 days. Convert to oral therapy as soon as tolerated.

Intravenous

Prophylaxis of cardiac graft rejection

Adult: As mycophenolate mofetil: 1.5 g bid via IV infusion over 2 hours starting within 5 days after transplantation, convert to oral administration as soon as tolerated.

Intravenous

Prophylaxis of hepatic transplant rejection

Adult: As mycophenolate mofetil: Initially, 1 g bid via IV infusion over 2 hours started within 24 hours of transplantation. Duration of treatment: 4 days up to Max 14 days. Then, convert to oral administration at 1.5 g bid as soon as tolerated.

Oral

Prophylaxis of acute renal graft rejection

Adult: As mycophenolate mofetil: In combination with other immunosuppressants: 1 g bid started within 72 hours of transplantation. As mycophenolic acid: 720 mg bid started within 72 hours of transplantation.

Child: As mycophenolate mofetil: ≥3 months: 600 mg/m2 bid. Max: 2 g daily. BSA 1.25-1.5 m2: 750 mg bid; ≥1.5 m2: 1 g bid. As mycophenolic acid: ≥5 years: 400 mg/m2/dose bid. (Max: 1,400 mg daily). BSA 1.19-1.58 m2: 540 mg bid; >1.58 m2: 720 mg bid.

Oral

Prophylaxis of cardiac graft rejection

Adult: As mycophenolate mofetil: In combination with other immunosuppressants: 1.5 g bid started within 5 days of transplantation.

Renal Impairment

Oral:

Prophylaxis of acute renal graft rejection

Severe chronic renal impairment (GFR <25 mL/min/1.73 m2): Avoid >1 g bid of mycophenolate mofetil.

Intravenous:

Prophylaxis of acute renal graft rejection

Severe chronic renal impairment (GFR <25 mL/min/1.73 m2): Avoid >1 g bid of mycophenolate mofetil.

Reconstitution

IV: Reconstitute vial labelled as containing 500 mg with 14 mL of 5% dextrose injection; further dilute with 70 mL of 5% dextrose inj for IV infusion. Powder for oral suspension: Add a total of 94 mL of water to a bottle in order to provide a suspension containing 200 mg/mL. Shake the bottle after addition for approx 1 minute.

Contraindications

Pregnancy, lactation. Rare hereditary deficiency of hypoxanthine-guanine phosphoribosyltransferase (HGPRT) (e.g. Kelley-Seegmiller or Lesch-Nyhan syndrome).

Special Precautions

Patient with active serious gastrointestinal disease, active peptic ulcers. Renal impairment. Children. Avoid abrupt cessation of treatment. Mycophenolate mofetil and mycophenolate sodium are not interchangeable.

Adverse Reactions

Significant: CNS depression, new or reactivation of viral infection, neutropenia, pure red cell aplasia, gastric or duodenal ulcers, gastrointestinal bleeding and/or perforation, myasthenia gravis (abrupt discontinuation of treatment).

Blood and lymphatic system disorders: Leucopenia, thrombocytopenia, anaemia, pancytopenia, leukocytosis.

Cardiac disorders: Tachycardia.

Gastrointestinal disorders: Vomiting, abdominal pain, diarrhoea, nausea, dysgeusia.

General disorders and administration site conditions: Oedema, pyrexia, chills, pain, malaise, asthenia.

Infections and infestations: Sepsis, gastrointestinal candidiasis, UTI, herpes simplex, herpes zoster.

Investigations: Increased hepatic enzymes.

Metabolism and nutrition disorders: Acidosis, gout, anorexia.

Musculoskeletal and connective tissue disorders: Arthralgia.

Neoplasms benign, malignant and unspecified: Skin cancer, benign skin neoplasm.

Nervous system disorders: Convulsion, hypertonia, tremor, somnolence, dizziness, headache, paraesthesia.

Psychiatric disorders: Agitation, confusional state, depression, anxiety, abnormal thinking, insomnia.

Respiratory, thoracic and mediastinal disorders: Pleural effusion, dyspnoea, cough.

Skin and subcutaneous tissue disorders: Skin hypertrophy, rash, acne, alopecia.

Vascular disorders: Hypertension, hypotension, vasodilation.

Potentially Fatal: Infections (e.g. progressive multifocal leukoencephalopathy, meningitis, infectious endocarditis), pulmonary fibrosis.

Pregnancy Category (US FDA)

IV/Parenteral/PO: D

Patient Counseling Information

This drug may impair physical and mental ability, if affected, do not drive or operate machinery. Do not donate blood or blood products during treatment and for at least 6 months after the last dose.

MonitoringParameters

Monitor CBC, LFT, renal function. Perform pregnancy test prior to initiation of therapy; then after 8-10 days in women of child-bearing potential, followed by repeat test during therapy. Monitor for signs and symptoms of infection, neurological symptoms, lymphoma, pure red cell aplasia, and autoimmune haemolytic anaemia.

Drug Interactions

Mycophenolate mofetil may increase plasma concentration of aciclovir. Reduced absorption with antacids, polycarbophil calcium, sevelamer, colestyramine. Reduced MPA exposure with ciclosporin,

antibiotics (e.g. aminoglycosides, cephalosporin, fluroquinolone, penicillins). Increased MPA exposure with isavuconazole, telmisartan. May reduce the efficacy of live attenuated vaccines.

Food Interaction

Food reduces MPA peak serum levels by 40% and 33% following mycophenolate mofetil and mycophenolate sodium administration, respectively.

Action

Description: Mycophenolic acid suppresses the proliferation of both T and B lymphocytes and antibody formation by inhibiting inosine monophosphate dehydrogenase, resulting in depletion of guanosine nucleotide which is necessary for de novo purine synthesis in lymphocytes.

Pharmacokinetics:

Absorption: Mycophenolate mofetil/mycophenolate Na: Rapidly and extensively absorbed from the gastrointestinal tract.

Distribution: Plasma protein binding: MPA: 97%.

Metabolism: Mycophenolate is metabolised pre-systemically into active mycophenolic acid (MPA), which undergoes enterohepatic recirculation. MPA is further metabolised via glucuronidation to inactive mycophenolic acid glucuronide.

Excretion: Mycophenolate: Via urine (as glucuronide and negligible amount of MPA); faeces (6%). Half-life of MPA: 17.9 hours (as oral mycophenolate mofetil); 16.6 hours (as IV mycophenolate mofetil); 12 hours (as mycophenolate Na).

Chemical Structure

Click on icon to see table/diagram/image

Storage

Inj: Store at 25°C. Cap/Tab/Susp: Store at 25°C. Protect from light and moisture. Reconstituted oral suspension: Store between 2-8°C. Do not freeze.

MIMS Class

Immunosuppressants

ATC Classification

L04AA06 - mycophenolic acid ; Belongs to the class of selective immunosuppressive agents. Used to induce immunosuppression.