Drug name	Indication in liver transplant	Mechanism of action	Common/very common side effects	Contraindications
Tacrolimus	Immunosuppression post-transplant.	Calcineurin inhibitor. Binds to the FK-binding protein, inactivating calcineurin and therefore inhibiting T-cell signalling through reduced IL-2 gene transcription.	Hyperglycaemia, hyperkalaemia, tremor, headache, hypertension, renal impairment.	Hypersensitivity to tacrolimus, other macrolides or listed excipients.
Ciclosporin	Immunosuppression post-transplant.	Calcineurin inhibitor. Binds to cyclophilin cytoplasmic receptors, inactivating calcineurin and therefore inhibiting T-cell signalling through reduced IL-2 gene transcription.	Hyperlipidaemia, tremor, headache, hypertension, hirsutism, renal impairment.	Hypersensitivity to ciclosporin or listed excipients; Cannot be taken in combination with St John's Wort; Cannot be taken in combination with substrates of P-glycoprotein or organic anion-transporting polypeptides (bosentan, dabigatran, aliskiren).
Sirolimus	Immunosuppression post-transplant.	Mammalian target of rapamycin (mTOR) inhibitor. mTOR is an important kinase for cell cycle progression. Sirolimus causes inhibition of lymphocyte proliferation.	Electrolyte, full blood count, liver function test abnormalities, hyperlipidaemia hyperglycaemia, headache, hypertension, delayed healing.	Hypersensitivity to sirolimus or listed excipients.
Prednisolone / IV methylprednisolone	Immunosuppression post-transplant.	Corticosteroid – anti-inflammatory and immunosuppressive effects.	Behavioural disorders, electrolyte imbalance, fluid retention, headache, hypertension, sleep disorders.	Hypersensitivity to prednisolone or listed excipients; Systemic infections unless on anti-infectives.
Azathioprine	May be added to calcineurin inhibitor as immunosuppression post-transplant.	Antimetabolite. Inhibits inosine monophosphate dehydrogenase (IMPDH), therefore inhibiting de novo purine synthesis, which is crucial for B- and T-cell proliferation.	Anaemia, thrombocytopenia, leucopenia, bone marrow depression, pancreatitis.	Hypersensitivity to azathioprine or six-mercaptopurine; Very low/absent thiopurine methyl transferase levels.
Mycophenolate mofetil	May be added to calcineurin inhibitor as immunosuppression post-transplant.	Antimetabolite. Inhibits inosine monophosphate dehydrogenase, therefore inhibiting de novo purine synthesis, which is crucial for B- and T-cell proliferation.	Anaemia, thrombocytopenia, leucopenia, bone marrow depression, diarrhoea.	Hypersensitivity to mycophenolic acid, mycophenolate mofetil or listed excipients; Women of childbearing age who are not using highly effective contraception; Women who are breastfeeding.
Basiliximab	Immunosuppression post-transplantation can be beneficial in renal impairment as it enables lower calcineurin inhibitor doses.	IL-2 receptor (CD25) antagonist, a mouse/human chimeric monoclonal antibody against the IL-2 receptor α-chain, expressed on activated T-cells.	Infection, oedema, hypertension, constipation, nausea, anaemia, headache, electrolyte disturbance.	Hypersensitivity to basiliximab or listed excipients; Pregnancy or lactation.
Antithymocyte globulin	Immunosuppressant. Used off-licence for the treatment of rejection in liver transplant.	Infusion of rabbit-derived polyclonal antibodies against human T-cells, resulting in profound depletion of lymphocytes.	Lymphopenia, neutropenia, thrombocytopenia, anaemia, fever, infection.	Hypersensitivity to rabbit proteins or listed excipients; Active acute or chronic infections, which contraindicate additional immunosuppression.