Visual summary

Managing patients taking DMARDs

Symptoms of inflammatory arthritis are often controlled in the long term using DMARDs (disease modifying anti-rheumatic drugs). These are usually initiated by rheumatologists, with patients commonly taking two or sometimes three DMARDs simultaneously. This graphic shows information about four of the most frequently prescribed DMARDs, including recommended monitoring and other conditions that could interfere with treatment.

	MTX Methotrexate	LEF Leflunomide	SSP Sulphasalazine	HCQ Hydroxychloroquine
ABSOLUTE CONTRAINDICATION	Pregnancy and breastfeeding eGFR <30 Patients taking trimethoprim		Allergy to sulphonamide Allergy to aspirin Previous Stevens-Johnson syndrome	Pre-existing maculopathy
MAIN CAUTIONS	Severe liver disease Severe pre-existing lung disease eGFR 30-60			
MOST COMMON ADVERSE EFFECTS	Nausea and gastrointestinal symptoms Oral ulceration	Diarrhoea Hypertension – this is treated conventionally Weight loss	Neuropsychological symptoms Symptoms usually settle if patient can persevere with treatment Skin reactions (occasionally severe)	
POSSIBLE COMPLICATIONS	Bone marrow suppression and/or acute liver toxicity in early months of treatment Pneumonitis (acute onset of shortness of breath) Acute renal problems cause accumulation and toxicity Liver disease/cirrhosis	Peripheral neuropathy	Reduced sperm count	Bulls eye retinopathy – this can cause severe, progressive and permanent visual change/loss
MONITORING	**Standard blood tests** Every 2 weeks → Every month → Every 3 months Until on stable dose for 6 weeks; For 3 months For combined MTX + LEF, continue monthly tests long term Review respiratory symptoms and signs in patients with severe pre-existing lung disease Blood pressure and weight		For SSP, no blood tests required after 12 months	Baseline ophthalmology review and annually after 5 years
MODE OF ADMINISTRATION	Oral or subcutaneous	Oral	Oral	Oral
USUAL DOSE	10-25 mg once weekly	10-20 mg daily	2-3 g daily, enteric coated formulation	200-400 mg daily Max 6.5 mg/lean kg/day
OTHER INFORMATION	NSAIDS not contraindicated unless eGFR low Folic acid 5 mg 1-6x weekly co-prescribed Patients on antibiotics for serious infections advised to stop MTX, LEF, and SSP for duration of antibiotics Live vaccines contraindicated except shingles Seek specialist advice for patients planning to have children Women Men	Very long half-life so discuss urgently with rheumatology if pregnancy planned or if severe complications develop	May colour urine, tears and contact lenses orange	Can exacerbate psoriasis

Abnormal blood results

When to contact the rheumatology department

MAJOR/COMMON

WCC <3.5 or Neutrophils <1.6 x 109/L

Risk of infection

URGENT ACTION

Neutrophils <1.0:
Same day discussion

Febrile and/or neutrophils <0.5:
Urgent clinical assessment

OTHER CONSIDERATIONS

Take account of downward trend as well as absolute values

Platelets <140 x 109/L

Risk of bleeding

URGENT ACTION

Platelets <50:
Same day discussion

Bleeding and/or platelets <20:
Urgent clinical assessment

OTHER CONSIDERATIONS

Take account of downward trend as well as absolute values

ALT or AST > 100u/L (Normal range <40u/L)

Risk of liver damage

URGENT ACTION

Urgent assessment if other evidence of liver disease (e.g. jaundice, ascites).

NB Non DMARD causes of liver disease more likely if an acute change after treatment for several months

OTHER CONSIDERATIONS

ALT/AST 40-100:

1. Do not stop DMARD therapy
2. Review alcohol/ weight/other risk factors for raised ALT
3. Consider discussion with rheumatology if persistent >2 months

Creatinine>30% over baseline or fall in eGFR to <60ml/min/1.73 m2

Accumulates in renal impairment with increased risk of bone marrow toxicity

Particular risk with: MTX

URGENT ACTION

eGFR<30:
Stop methotrexate and discuss urgently

OTHER CONSIDERATIONS

Take account of downward trend as well as absolute values

Avoid NSAIDs in renal impairment

MINOR/RARE

Unexplained eosinophilia >0.5 x 109/L

Risk of severe skin reaction

Particular risk with: SSP

URGENT ACTION

Co-existent skin or mucosal rash, systemically unwell:
Urgent clinical assessment

MCV >105 f/L

Risk of co-existent folate/ B12/thyroid deficiency or high alcohol intake

OTHER CONSIDERATIONS

Unlikely to be of significance in isolation. Raised MCV occurs in most patients on methotrexate or sulfasalazine

Fall in serum albumin <30g/L

May be marker of liver damage

URGENT ACTION

Consider further investigation of the liver if persistent without alternative explanation

OTHER CONSIDERATIONS

Many causes, including active inflammatory disease need to be considered

ALT - alanine aminotransferase
AST - aspartate aminotransferase
DMARD - disease modifying anti-rheumatic drug
MCV - mean corpuscular volume
WCC - white cell count
eGFR - estimated glomerular filtration rate