Penicillamine
Shared Care Guideline

Introduction	This is a disease modifying anti-rheumatic drug, but is not immunosuppressive.
Speciality	Rheumatology
Indications	Licensed • Rheumatoid arthritis
Dose	Initial dose of 125-250mg orally once daily, increasing by 125mg every 4 weeks until remission occurs of dose of 500mg daily reached. If no response after a further 3 months consider an increase by 125mg every 4 weeks up to 750mg daily. Stop treatment if no response to dose of 750mg daily after 3 months.
Patient information	The patient will be provided with the penicillamine information leaflet produced by Arthritis Research UK (www.arthritisresearchuk.org) and the content discussed. Patients will be advised to take the full daily dose at night on an empty stomach with water. Milk, indigestion remedies, iron or zinc reduce absorption of penicillamine and should not be taken within 2 hours of taking penicillamine.
Specialist Responsibilities	**Pretreatment assessment** FBC, U&Es, urinalysis, creatinine and ESR/CRP. **Stabilising in secondary care** FBC, urinalysis and ESR/CRP every 2 weeks until dose stable for 3 months, then monthly thereafter. Patients should be asked about the presence of rash or oral ulceration at each visit. Once stable initiate shared care.
GP Responsibilities	FBC, urinalysis and ESR/CRP monthly. Patients should be asked about the presence of rash or oral ulceration at each visit.

Adverse Effect Monitoring

Adverse event	Action to be taken
WBC < 3.5 x 10^9/l	Withhold and discuss with specialist team
Neutrophils < 2.0 x 10^9/l	Withhold and discuss with specialist team
Platelets < 150 x 10^9/l	Withhold and discuss with specialist team
2+ proteinuria on > 1 occasion	Check MSU. If evidence of infection- treat. If sterile, withhold and discuss with specialist team
Rash or oral ulceration	Withhold and discuss with specialist team
Alteration of taste	Continue treatment-usually resolves spontaneously
Abnormal bruising or sore throat	Withhold, check FBC and discuss with specialist team

Please note: Any rapid fall or consistent downward trend for blood counts should prompt caution. Action may be required even if values are within normal range. If in doubt please contact specialist team.

Please refer to SPC or BNF for full details of adverse effects, contraindications, cautions and drug interactions.

Contraindications

- Known hypersensitivity to penicillamine.
- Agranulocytosis, aplastic anaemia or severe thrombocytopenia due to penicillamine.
- Moderate or severe renal impairment.
- Lupus erythematosus.

Cautions

- Renal insufficiency - modified dose may be necessary.
- Elderly - increased risk of toxicity regardless of renal function.
- Previous treatment with gold - increased risk of side effects.

Drug interactions

- Absorption of penicillamine reduced by iron, zinc and antacids.
- Absorption of digoxin reduced by penicillamine.
- Concomitant use of NSAIDs may increase risk of renal damage.

Side effects

- Mouth ulcers
- Rash, urticaria
- Alopecia
- Drug induced lupus erythematosus
- Myasthenia gravis
- Haematuria
- Breast enlargement
- Thrombocytopenia (usually reversible)
- Proteinuria (partially dose related)
- Transient oligospermia

Further Information

Fertility

- The safety of penicillamine during pregnancy and breastfeeding has not

	been established. Manufacturer advises penicillamine should not be used in these circumstances, unless considered absolutely essential. If potential benefit outweighs risk, consider dose reduction to lowest effective dose.
Communication	**Specialist to GP** Clinic letters and results to GP. **GP to Specialist** Blood results via use of patient-held record. **Contact details** Thank you for sharing the care of this patient. If you have any concerns or queries, please contact the Consultant or secretary. UHND Rheumatology Helpline: 0191 3332763 DMH Rheumatology Helpline: 01325 743881 Guideline Version 1: Date approved by APC: 4th July 2013 Date for Review: July 2016 **This information is not inclusive of all prescribing information and potential adverse effects. Please refer to the BNF or SPC for further prescribing information**