BNSSG Joint Formulary DMARD Monitoring Advice Guidance

D-PENICILLAMINE for use in rheumatic diseases

Background
This sheet provides guidance on monitoring of d-penicillamine in primary care. These recommendations have primarily been taken from current BSR guidance on DMARD monitoring. Some rheumatology departments may have slight variations in their monitoring practices. For the full shared care protocol and responsibilities for primary care refer to www.bnssgformulary.nhs.uk/Shared-Care-Protocols

Treatment schedule
A typical dose regimen is 125-250mg d-penicillamine daily, increasing by 125mg each month to a maximum dose of 500mg daily given as a single morning dosage. If there is no response after a further three months, dose may be increased to 750mg per day. This should be continued as long as clinically indicated unless there is a serious side effect or the drug becomes ineffective.

Cautions and special recommendations
Cautions

- Renal impairment or concomitant nephrotoxic drugs including gold (Caution if eGFR<50. If eGFR 20-50: avoid if possible or reduce dose. 125mg for first 12 weeks. Increase by same amount every 12 weeks; eGFR<20: avoid as nephrotoxic)

Contra-indications

- SLE
- Moderate to severe renal impairment (see above)
- Pregnancy and lactation

Side-effects
Nausea may occur but is usually manageable by taking the medication before bed. Loss of taste, gastrointestinal upset and rash may occur during early treatment and are usually transient or reversible. More serious complications include proteinuria and haematological toxicity (agranulocytosis, thrombocytopaenia), nephrotic syndrome and induction of autoimmune syndromes such as SLE, myasthenia and polymyositis.

Drug interactions
D-penicillamine may increase the risk of agranulocytosis when prescribed with clozapine. It may reduce the levels of digoxin. Antacids and iron reduce absorption of d-penicillamine and should not be taken at the same time of day.

Monitoring

Pre-treatment assessment: FBC, renal function and urine dipstick for protein. This will be done by the rheumatology department.

Monitoring: FBC and urinalysis should then be checked every 2 weeks until dose stable for 3 months and then monthly. Patients should be asked about the presence of rash or oral ulceration at each visit.

Actions to be taken: D-penicillamine should be WITHHELD if any of the following occur. Please repeat monitoring bloods in 1 week and if still low then discuss with the rheumatology team. Falling trends may also prompt discussion.

- Neutrophils <1.5 $x10^9$/L
- Platelets <100 $x10^9$/L
- 2+ proteinuria Check MSU: if infection present, treat. If sterile and 2+ proteinuria persists withhold and discuss
- Rash or oral ulceration
- Severe sore throat, abnormal bruising: immediate FBC and withhold until the result of FBC is available.

Rheumatology Departments' contact details

Trust / Hospital	Contact	Telephone / Fax	On call service	Availability
University Hospitals Bristol Foundation Trust, Bristol Royal Infirmary	Rheumatology Telephone Advice Line	T: 0117 3424881 F: 0117 3423841	Registrar pager: 07623972925	**Mon – Thu 9am to 5pm** **Fri 9am to 1pm**
North Bristol Trust, Southmead Hospital	Consultant secretary as per clinic letter OR Rheumatology Telephone Advice Line	T: 0117 4140600 F: 0117 4140570 For clinicians only T: 07894800989	T: 07894800989 Sat/Sun 9am-noon (GP service for existing NBT rheum patients only)	**Mon – Fri 9am to 5pm**
Weston Area Health Trust, Weston General Hospital	Rheumatology Telephone Advice Line	T:01934 881075 F: 01934 647025	01934 636363 Bleep 279	**Mon – Fri 9am to 5pm**