Management of Acute Gout

If septic arthritis suspected refer urgently to Orthopaedics
Affected joints should be rested, elevated and kept cool. Consider use of ice packs and bed cages.

Start analgesic/anti-inflammatory drug therapy immediately and continue for 1-2 weeks.
- Maximum dose of fast-acting NSAID with gastro-protection if indicated (PPI with low acquisition cost). Continue for 48hrs after attack has resolved OR
- COX-2 selective inhibitor with gastro-protection if indicated (PPI with low acquisition cost). etoricoxib 120mg daily for max of 8 days (etoricoxib is non-formulary for all other indications).

If NSAIDs/COX-2 inhibitors are contraindicated consider:
- Colchicine 500 micrograms 2-4 times a day until symptoms relieved (slower to work than NSAIDs) or GI adverse effects occur. Ideally start within 24-48hrs. Also refer to current BNF.
In patients with acute gouty monoarthritis and the above treatments are contraindicated, not tolerated or ineffective, consider:
- Corticosteroid (intra-articularly, orally or intramuscularly) Opioid analgesics can be used instead of or in addition to the above treatments.

Do any of the following apply?
- Definite diagnosis of gout following second or further attacks within one year.
- Presence of tophi.
- Presence of gouty erosive disease.
- Evidence of gout interstitial renal disease.

YES - consider LONG TERM TREATMENT with uric acid lowering therapy at least one or two weeks after acute attack has resolved
(For additional prescribing notes see page 2)

Start allopurinol at 100 mg/day plus prophylactic therapy against flare with a low dose NSAID +/- PPI or colchicine 500micrograms twice a day. Continue prophylactic therapy against flare until serum uric acid level is <360micromols/L (0.36mmol/L) & is stable for a minimum of 4 weeks. There is a risk of precipitating acute attacks for approx 12 months, therefore duration of prophylactic therapy against flare is a clinical decision. Check serum uric acid levels approximately every 4 weeks and increase allopurinol dose in 100mg increments, not more frequently than every 4 weeks, until therapeutic target is reached [serum uric acid <360micromols/L (0.36mmol/L)]. Max dose is 900mg/day (in divided doses).

If allopurinol is not tolerated or is contraindicated consider febuxostat initially at a dose of 80mg daily for 2 to 4 weeks. Consider increasing to 120mg daily if needed. Prophylactic therapy against flare should be continued for 6 months. Licensed starting dose for febuxostat is 80mg daily, but starting with a lower dose such as 40mg (half of the 80mg tablet) and increasing after 2-4 weeks may reduce the incidence of gout flares. Consult Pan Mersey statement and supporting information for febuxostat.

Note: Aspirin in low doses (75-150mg/day) has insignificant effects on plasma urate but higher doses interfere with uric acid excretion and should be avoided.

Recommended NSAIDs and Licensed doses for Acute Gout
BNF® and local formulary recommended products (alphabetical order):
- Indometacin generic capsules: 50mg 3-4 times a day until attack subsides.
- Naproxen generic tablets: 750mg initially then 250mg every 8 hours until attack has passed.

Recommended Corticosteroid Doses
- Prednisolone oral 20-40mg daily for 5 days. One-off IM injection into gluteal muscle:
  - Methylprednisolone 40-120mg
  - Triamcinolone acetonide 40-80mg
One-off Intrarticular injection:
  - Methylprednisolone 10-80mg
  - Hydrocortisone acetate 12.5-25mg
  - Triamcinolone acetonide 20-40mg

Assess lifestyle factors and provide advice - PILs available on www.ukgoutsona.org
Consider drug-induced gout e.g thiazide diuretics.
Perform serum urate, renal function, glucose, FBC & lipids in all patients.
Treat underlying cardiovascular risk factors.
Serum urate should be maintained below 360micromols/L (0.36mmol/L).

Dealing with flares whilst on uric acid lowering therapy:
- Suppress pain and reduce inflammation.
- Do not interrupt uric acid lowering therapy unless there is a clinical reason (gout flare is not a clinical reason).
- Persistent gout despite uric acid levels ≤360micromols/L (0.36mmol/L) should be referred to rheumatology.

NO - reconsider diagnosis Persistent symptoms without definitive diagnosis should be referred to secondary care

Once therapeutic outcomes achieved, maintain serum uric acid levels<360 micromols/L (0.36mmol/L) and monitor levels every 6 to 12 months.
PHARMACOLOGICAL MANAGEMENT OF GOUT

SUPPORTING INFORMATION

Gout is a disorder caused by deposition of urate crystals in joints and other tissues. There are four clinical stages: (i) asymptomatic hyperuricaemia; (ii) acute gouty arthritis; (iii) intercritical gout (intervals between acute attacks); and (iv) chronic tophaceous gout.

Estimated prevalence of gout is 1.5% of the population (1,500 per 100,000). 61% of these people are eligible for urate-lowering drugs. 4

Estimated male to female ratio is 3.6 to 1

A significant proportion of the population have a high serum uric acid concentration, but comparatively few people present with clinical symptoms related to gout. 40% of people experiencing an acute attack of gout have a normal serum uric acid concentration.

A relationship with symptoms is likely above a serum uric acid concentration of 300micromol/L (0.3mmol/L).

A reduction in the serum uric acid concentration below the 'saturation point' [approx 360micromol/L (0.36mmol/L)] is necessary to avoid precipitation of uric acid crystals in tissues in the long term.

NICE estimate that 3% of people will be intolerant of allopurinol or have a contraindication.4

Allopurinol and skin rash 8
Pruritic maculopapular skin rashes may occur in up to 10% people who take allopurinol — a rash can be the first sign of a rare hypersensitivity reaction. Patients should be advised to stop allopurinol immediately and seek medical advice promptly.

When the rash has gone, if it was mild, gradually reintroduce the allopurinol. If the rash recurs, immediately discontinue the allopurinol.

Overall, adverse effects are rare but their incidence (particularly rashes) is higher in the presence of renal impairment.

Febuxostat and hypersensitivity reactions 9
Serious hypersensitivity reactions, including Stevens-Johnson syndrome and acute anaphylactoid/shock reactions have been reported, mostly during the first month of therapy.

Some patients were reported to have a prior history of hypersensitivity to allopurinol and/or renal disease. Treatment should be stopped immediately if signs/symptoms of serious hypersensitivity reactions occur since early withdrawal is associated with a better prognosis. Treatment with febuxostat must not be re-started.

Renal impairment
Allopurinol and its main metabolite have a long half-life. Doses may need to be reduced depending on the degree of renal impairment. Consult the SPC for allopurinol for further information. 9

Colchicine: Caution in renal impairment. Dose adjustments may be required. Consult the SPC for colchicine for further information. 10

Febuxostat: No dosage adjustment is necessary in patients with mild or moderate renal impairment. The efficacy and safety have not been fully evaluated in patients with severe renal impairment (creatinine clearance <30 ml/min).

Consult the febuxostat SPC for further information. 5

Hepatic impairment
Allopurinol: Dose adjustments are required in hepatic impairment. Check the SPC 8

Colchicine: Use with caution in hepatic impairment. Check the SPC. 10

Febuxostat: monitor liver function tests before and periodically during treatment as indicated. Dose adjustments may be required. Check the SPC. 5

Drug interactions
There are many significant drug-drug interactions with allopurinol, colchicine and febuxostat. Azathioprine is a particular problem. Check latest edition of the BNF and/or the SPCs for the individual products for further information.

Colchicine can cause diarrhoea which could affect the absorption of some medicines e.g warfarin.

References:
3. UK Gout Society. Patient Information Leaflets: ‘All about Gout and other health problems’; ‘All about gout and treatments’; ‘All about Gout and diet’.
5. SPC for febuxostat (Adenurica®) 80mg & 120mg tablets by A. Menarini Pharma UK S.R.L. EMC last updated 02/02/2012.
6. BNF 63, March 2012.
8. SPC for allopurinol 100mg & 300mg tablets by Accord Healthcare Ltd. EMC last updated 01/02/2012.
10. SPC for colchicine 500micromgram tablets by Wockhardt UK Ltd. EMC Last updated 05/07/2010.

Originator: Dr Salih, Consultant Rheumatologist
Warrington and Halton Hospitals NHS Foundation Trust

Version: 1.0
Review date: September 2014
(or earlier if there is significant new evidence relating to this recommendation)