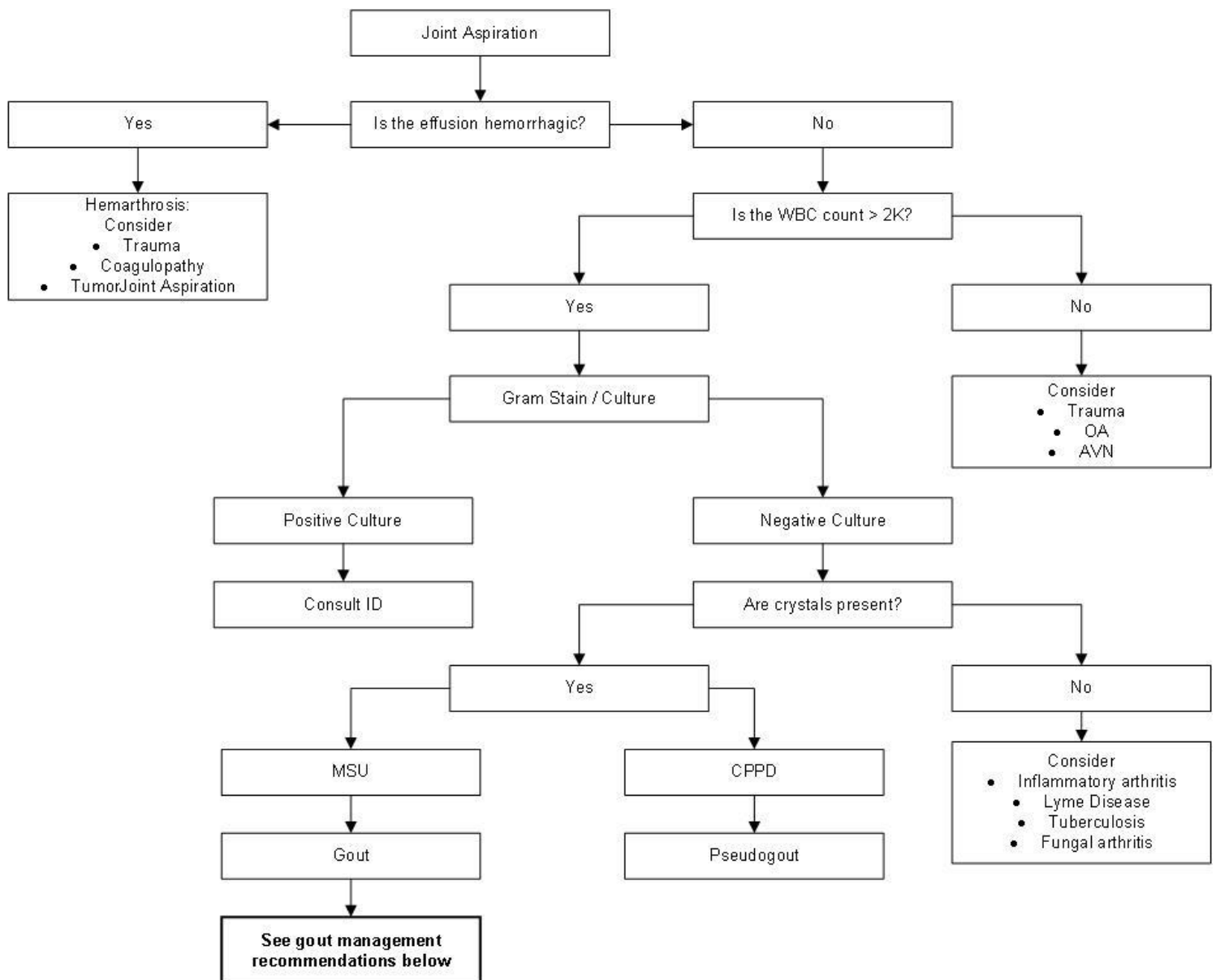


Guideline: Monoarthritis in Adults, with focus on Gout Flare Management, Inpatient

Updated: September 16, 2021

Clinical algorithm:



Clinical pathway/guideline summary

CLINICAL PATHWAY/GUIDELINE NAME: Monoarthritis in Adults, with focus on Gout Flare Management

PATIENT POPULATION AND DIAGNOSIS: Inpatient adult monoarthritis patients

APPLICABLE TO: All Spectrum Health Sites

BRIEF DESCRIPTION: This guideline is intended to summarize the approach for management of patients with monoarthritis and treatment of acute gout flare

OVERSIGHT TEAM LEADER(S): Barakat Thabet, MD

OWNING EXPERT IMPROVEMENT TEAM (EIT): Rheumatology

MANAGING CLINICAL PRACTICE COUNCIL (CPC): Specialty Health

CPC APPROVAL DATE: September 2021

OTHER TEAM(S) IMPACTED: Infectious Disease

IMPLEMENTATION DATE:

LAST REVISED: September 16, 2021

FOR MORE INFORMATION, CONTACT: Barakat Thabet, MD

Clinical pathways clinical approach

DEFINITIONS:

- **Gout:** Crystal deposition disease caused by super saturation and precipitation of monosodium urate crystals in tissues, resulting in inflammation and tissue damage.
- **Gout flare:** Sudden onset, intensely painful, swelling joints (most often in the big toe or other part of the foot.)
- **MSU:** monosodium urate

TREATMENT AND MANAGEMENT:

Recommendation	PICO question	Certainty of evidence
For patients experiencing a gout flare, we strongly recommend using oral colchicine, NSAIDs, or glucocorticoids (oral, intraarticular, or intramuscular) as appropriate first-line therapy for gout flares over IL-1 inhibitors or ACTH (the choice of colchicine, NSAIDs, or glucocorticoids should be made based on patient factors and preferences). When colchicine is the chosen agent, we strongly recommend low-dose colchicine over high-dose colchicine given its similar efficacy and fewer adverse effects.	32	High
For patients experiencing a gout flare for whom other antiinflammatory therapies are poorly tolerated or contraindicated, we conditionally recommend using IL-1 inhibition over no therapy (beyond supportive/ analgesic treatment).	33	Moderate
For patients who may receive NPO, we strongly recommend glucocorticoids (intramuscular, intravenous, or intraarticular) over IL-1 inhibitors or ACTH.	32	High
For patients experiencing a gout flare, we conditionally recommend using topical ice as an adjuvant treatment over no adjuvant treatment.	31	Low

Strongly recommend Conditionally recommend Strongly recommend against Conditionally recommend against

* PICO = population, intervention, comparator, outcomes; NSAIDs = nonsteroidal antiinflammatory drugs; IL-1 = interleukin-1; ACTH = adrenocorticotrophic hormone; NPO = nothing by mouth (nulla per os).

† High quality of evidence from network meta-analyses supporting canakinumab, which has superior mean pain score reduction and mean day-2 joint tenderness reduction. However, the Voting Panel raised concern that the comparator was weak (triamcinolone 40 mg) and that cost issues significantly favor other agents.

Medication Dosages/Contraindication:

Colchicine (Gout treatment, acute flares)

Dosage:

- **Day 1: Oral:** 1.2 mg at the first sign of flare, followed by 0.6 mg after 1 hour (ACP [Qaseem 2017]; EULAR [Richette 2017]; Terkeltaub 2010) **or** 0.6 mg 3 times daily on the first day of flare; maximum total dose: 1.8 mg/day on day 1 (Gaffo 2021). Initiate as soon as possible, ideally within 12 to 24 hours of flare onset (EULAR [Richette 2017]; Terkeltaub 2010); consider alternative agents if >36 hours since flare onset (ACR [Khanna 2012]; Gaffo 2021). **Note:** In patients who were already receiving prophylactic colchicine at the time of their flare, some experts give the higher 1.8 mg/day dosing regimen on day 1 of the flare, in place of the usual prophylactic dose (Gaffo 2021).
- **Day 2 and thereafter: Oral:** 0.6 mg once or twice daily until flare resolves (ACP [Qaseem 2017]; ACR [FitzGerald 2020]; EULAR [Richette 2017]). Some experts continue for 2 to 3 days after flare resolves (Gaffo 2021). Note: In patients who were already receiving prophylaxis at the time of

their flare, some experts give 0.6 mg twice daily (total dose: 1.2 mg/day) from day 2 until ~48 hours after flare resolution, and then resume the previous prophylactic dose (Gaffo 2021).

Contraindications:

- Tablet (eg, Colcryst): Concomitant use of a P-glycoprotein (P-gp) inhibitor or strong CYP3A4 inhibitor in presence of renal or hepatic impairment.
- Gloperba, Mitigare: Concomitant use of drugs that inhibit both P-gp and CYP3A4 in presence of renal or hepatic impairment; patients with both renal and hepatic impairment.
- For patient with **Cr Cl mL/minute of less than 30:**
 - Consider alternate therapy (preferred). If alternate therapy is not available/tolerated, the following adjustment is recommended:
 - 1.2 mg at the first sign of flare, followed in 1 hour with a single dose of 0.6 mg; repeat treatment should not occur for at least 14 days.
 - Alternatively, some experts recommend a single dose of 0.3 mg at the first sign of flare only; repeat treatment should not occur for at least 3 to 7 days (Gaffo 2021).

NSAIDs (e.g. Naproxen)

Dosage:

- *Immediate release:* Initial: 500 mg twice daily within 24 to 48 hours of flare onset; reduce dose as symptoms improve; discontinue 2 to 3 days after resolution of clinical signs. Usual duration: 5 to 7 days (ACR [FitzGerald 2020]; Gaffo 2021; Janssens 2008; Roddy 2020).
- *Extended release:* Initial: 1 to 1.5 g once, followed by 1 g once daily; initiate within 24 to 48 hours of flare onset; reduce dose as symptoms improve; discontinue 2 to 3 days after resolution of clinical signs. Usual duration: 5 to 7 days (ACR [FitzGerald 2020]; Gaffo 2021; manufacturer's labeling).

Contraindications:

- Hypersensitivity to naproxen (eg, anaphylactic reactions, serious skin reactions) use in the setting of coronary artery bypass graft (CABG) surgery, active gastric, duodenal, or peptic ulcers; active GI bleeding; cerebrovascular bleeding or other bleeding disorders; active GI inflammatory disease; severe liver impairment or active liver disease; severe renal impairment (CrCl <30 mL/minute) or deteriorating renal disease; severe uncontrolled heart failure.

Corticosteroids (Oral prednisone, intraarticular, intramuscular or IV)

Dosage

- *Prednisone:* 30 to 40 mg/day given orally once daily or in 2 divided doses until symptom improvement (usually 2 to 5 days), then taper gradually as tolerated (typically over 7 to 10 days); a slower taper (eg, over 14 to 21 days) may be required, particularly in patients with multiple recent flares (ACP [Qaseem 2017]; ACR [Khanna 2012]; EULAR [Richette 2017]; Gaffo 2021)
- *Intraarticular* (e.g Methylprednisolone) for:
 - Large joint (eg, knee): 40 mg as a single dose (Gaffo 2021; manufacturer's labeling).
 - Medium joint (eg, wrist, ankle, elbow): 30 mg as a single dose (Gaffo 2021; manufacturer's labeling).
 - Small joint (eg, toe, finger): 10 mg as a single dose (Gaffo 2021; manufacturer's labeling).
- *IM* (e.g Methylprednisolone): Initial: 40 to 60 mg as a single dose; may repeat once or twice at ≥48-hour intervals if benefit fades or there is no flare resolution (Gaffo 2021).

- IV (e.g Methylprednisolone): Initial: 20 mg twice daily until clinical improvement (usually 2 to 5 days), then reduce each dose by 50% until tapered; maintain a dose of ≥ 4 mg (or oral equivalent) twice daily for at least 5 days (ACR [Khanna 2012]; Gaffo 2021).

Contraindications:

- Hypersensitivity to prednisone or any component of the formulation;
- *Active infection, GI bleed.*

Anakinra (IL 1 inhibitor)

Dosage:

- **SUBQ:** 100 mg once daily until symptom improvement; usual duration: 3 to 5 days (EULAR [Richette 2017]; Ghosh 2013; Ottaviani 2013; So 2007).

Contraindications

- Hypersensitivity , active infection.

Pricing

- **US Solution Prefilled Syringe** (Kineret Subcutaneous)
- 100 mg/0.67 mL (per 0.67 mL): \$194.57

Patient Education and Lifestyle Modifications:

- Every person with gout should receive advice regarding lifestyle: weight loss if appropriate and avoidance of alcohol (especially beer and spirits) and sugar-sweetened drinks, heavy meals and excessive intake of meat and seafood. Low-fat dairy products should be encouraged. Regular exercise should be advised.
- Every person with gout should be systematically screened for associated comorbidities and cardiovascular risk factors, including renal impairment, coronary heart disease, heart failure, stroke, peripheral arterial disease, obesity, hyperlipidemia, hypertension, diabetes and smoking, which should be addressed as an integral part of the management of gout.

References:

1. FitzGerald JD, Dalbeth N, Mikuls T, et al. 2020 American College of Rheumatology guideline for the management of gout. *Arthritis Care & Research.* 2020;72(6):744-760.