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Guidelines Review: Management of Gout Based on British Guidelines

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Review Article

INTRODUCTION

Gout, a type of inflammatory arthritis caused by increased levels of uric acid is well known for causing severe joint pain. Flare ups occur when uric acid forms crystals that settle in a joint, often the big toe, where it causes redness, warmth and excruciating pain. One highly visible manifestation is tophi, or large bumps that form where gout crystals have accumulated.

Gout can also affect other joints, such as the knees, ankles, wrists and elbows. Over time, gout can become progressive: Flares occur more frequently, affect more joints and cause underlying damage to your bones.

Effective management is crucial to reduce acute attacks, avoid medical leave from work, prevent long-term joint damage, reduce and improve patient outcomes. However, only a third of people with gout receive urate lowering therapies, and only a third of those have their serum urate level managed effectively [1]. This guideline review summarizes the current recommendations based on British guidelines for the management of gout [2, 3].

1. Diagnosis

- **Clinical Presentation:** Consider gout in patients presenting with acute mono-arthritis, typically affecting the first metatarsophalangeal joint.
- **Diagnostic Criteria:** Diagnosis is confirmed by joint aspiration demonstrating urate crystals under polarized microscopy or by meeting clinical criteria in the absence of crystals (Joint pain, swelling, redness, warmth, presence of tophi, good response to NSAID's etc).

2. Acute Management

Non-pharmacological Treatment:

- **Rest and Elevation:** Reduces joint stress and inflammation.
- **Ice Application:** Helps alleviate pain and swelling.

Pharmacological Treatment:

- **NSAIDs (e.g., indomethacin):** First-line for pain relief and anti-inflammatory effects.
- **Colchicine:** Alternative for patients unable to tolerate NSAIDs or in combination with NSAIDs for severe attacks.
- Co-prescription of gastro-protection is recommended for patients treated with NSAIDs in accordance with National Institute for Health and Care Excellence (NICE) clinical guidelines
- **Corticosteroids:** Oral or intra-articular for patients with contraindications to NSAIDs or colchicine.

3. Long-Term Management

General measures

- **Lifestyle Modifications**: Patients are advised to make dietary changes to reduce intake of purine-rich foods and limit alcohol consumption (especially beer and spirits). Weight management and regular exercise are encouraged to reduce overall uric acid levels.
- **Fluid Intake**: Increasing fluid intake, particularly water, helps promote uric acid excretion and reduces the risk of crystal formation.

(*Examples of Purine-Rich Foods: Include organ meats (liver, kidney), seafood (anchovies, sardines, mussels), red meat and certain vegetables (asparagus, spinach, mushrooms)*

Pharmacological Treatment

- Allopurinol, starting at a low dose and titrating to achieve serum urate target (<360 μmol/L) is first line long term pharmacological treatment
- Febuxostat is an option for patients unable to tolerate or inadequate response to allopurinol.
- Prophylaxis: Consider low-dose colchicine or NSAIDs during initiation of urate-lowering therapy to prevent acute attacks.

4. Monitoring

- **Serum Urate Levels:** Regular monitoring to assess response to urate-lowering therapy and adjust doses as needed.
- **Renal Function:** Assess renal function before initiating urate lowering therapy and periodically thereafter, particularly in patients with chronic kidney disease.

5. Medications to avoid

- **Diuretics (Thiazides)** Thiazide diuretics are commonly prescribed for hypertension and heart failure but can increase serum uric acid levels by reducing renal excretion of urate. They are known to precipitate gout attacks and should be used cautiously in patients with a history of gout.
- **Low-Dose Aspirin**: While low-dose aspirin is often used for cardiovascular protection, it can also interfere with renal urate excretion and potentially increase serum urate levels, leading to gout attacks. Alternatives should be considered in patients with a history of gout or hyperuricemia.
- **Cyclosporine**: Immunosuppressive agents like cyclosporine are associated with hyperuricemia and gout flares due to their effects on renal function and uric acid metabolism. Close monitoring and alternative immunosuppressive strategies may be necessary in patients at risk for gout.
- **Niacin (Nicotinic Acid)**: Niacin, used for lipid management, can increase serum uric acid levels and precipitate gout attacks. Alternative lipid-lowering therapies should be considered in patients with a history of gout or hyperuricemia.
- **Alcohol (especially beer and spirits)**: Excessive alcohol consumption, particularly beer and spirits, is strongly associated with an increased risk of gout attacks. Patients with gout should be advised to limit alcohol intake or abstain, especially during acute flares and while initiating urate-lowering therapy.

6. Top Tips for Clinicians

- **Educate Patients:** Provide information on gout pathophysiology, triggers and the importance of adherence to medications.
- **Initiate urate lowering therapy early:** Start urate lowering therapy in patients with recurrent attacks or tophi to prevent disease progression.
- **Manage expectations:** inform patients that urate lowering therapy will be needed lifelong
- **Manage Comorbidities:** Address cardiovascular risk factors and monitor for metabolic syndrome, which often coexists with gout.
- **Patient Follow-Up:** Schedule regular follow-up to review treatment efficacy based on symptoms and serum Urate levels, monitor for adverse effects and reinforce lifestyle modifications.
- **Multidisciplinary Approach:** Whilst most cases can be treated in primary care, but in case of need collaborate with rheumatologists, dietitians, and pharmacists to optimize patient care.

7. Visual Aids and Patient Education

To enhance patient understanding and adherence, consider incorporating visual aids such as:

- **Infographics:** Illustrate gout triggers, dietary recommendations, and medication adherence tips.
- **Flowcharts:** Outline treatment algorithms for acute attacks and long-term management.
- **Joint Aspiration Image:** Show a microscopic view of urate crystals under polarized light to aid in patient education about diagnosis.

CONCLUSION

Effective management of gout requires a comprehensive approach integrating acute attack management, long-term urate lowering therapy, lifestyle modifications, and regular monitoring. Adherence to British guidelines ensures standardized care, reduces disease burden, and improves quality of life for patients with gout.

This guidelines review provides a structured approach to managing gout based on current British guidelines. For detailed patient management, consult the full guideline and consider individual patient characteristics and preferences.

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