

Five Things Every Physician should know about the Pharmacologic Management of Gout

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Submission: January 24, 2017; **Published:** February 07, 2017

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Abstract

1. Urate Lowering Therapy (ULT) is initiated alongside acute attack treatment.
2. ULT follows a treat-to-target approach.
3. Start low, go slow, but get somewhere.
4. ULT should not be interrupted.
5. Many drugs influence uricemia.

Keywords: Hyperuricemia; Gout; Urate Lowering Therapy; Pharmacology; Best Practice

Abbreviations: UTL: Urate Lowering Therapy; NSAIDs: Nonsteroidal Anti-Inflammatory Drugs; EULAR: European League Against Rheumatism

Short Communication

1. Urate Lowering Therapy (ULT) is initiated alongside acute attack treatment

Contrary to popular belief, the initiation of ULT during a gout attack does not prolong the attack [1]. However, the initiation/titration of ULT causes uricemia fluctuations, which can precipitate attacks. Thus, prophylaxis with low dose colchicine or non steroidal anti-inflammatory drugs (NSAIDs) should be continued until targeted uricemia is reached and ULT dosage is stable [2].

2. ULT follows a treat-to-target approach

ULT should be progressively increased to reach a specific target. The target, usually 360 or 300 $\mu\text{mol/L}$, is determined by the severity of the disease (see Box 1). Maintaining excessively low uric acid levels ($<180\mu\text{mol/L}$) is not recommended in the long term [2].

3. Start low, go slow, but get somewhere

Only 5-34% of patients are using $>300\text{mg}$ daily of allopurinol with as much as 72% not achieving their targets [3]. The recommended maximum allopurinol dosage, in the absence of severe renal disease [4], is up to 800mg daily. Despite this, if the target is not achieved alternative agents

should be sought out, such as febuxostat [2]. Additionally, febuxostat use was recently shown to be secure even in patients with severe chronic kidney disease [5].

4. ULT should not be interrupted

Once the targeted uricemia is reached, a new steady state is created. If ULT is stopped during an attack, the additional uricemia fluctuation will further disturb this steady state, as well as create the need to re-introduce the ULT in the future. It is necessary, however, to re-evaluate the adequacy of ULT and to optimize it as necessary [2].

5. Many drugs influence uricemia

Reviewing the patient's medication can prove useful. Aspirin, diuretics, and sildenafil can increase uricemia [6], while vitamin C, folic acid, and caffeine can decrease uricemia and the risk of recurrent gout [7]. Certain antihypertensive agents, such as calcium channel blockers and losartan, can aid in further reducing uricemia [2].

Table 1: 2016 European League against Rheumatism (EULAR) Recommendations for the Initiation of ULT and Treatment Targets (Category of evidence, Grade of recommendation) [2] (Table 1).

ULT indications [1b,A]	Serum uric acid target of under 360µmol/L [3,C]
Recurrent flares (>1/year)	All patients
Presence of tophi	
Chronic uratearthropathy	Serum uric acid target of under 300µmol/L [3,C]
Renal stones	
Young age (<40 years)	Tophi Chronic urate arthropathy Frequent attacks
Very high serum uric acid (>480µmol/L)	
Cardiovascular comorbidities (hypertension, renal impairment, ischemic heart disease, heart failure)	

Table 1: ULT: Urate Lowering Therapy.

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