How should we treat patients with gout?

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Clinical question
How should we treat gout?

Recommendations

- Patients with recurrent gout should be placed on urate-lowering therapy (ULT). Early treatment with ULT can prevent permanent joint damage and chronic pain, resorb gouty tophi, and do so safely, with most patients able to tolerate even decades of long-term ULT therapy.

- Gout patients' need for ULT increases with age. Gout becomes more likely as glomerular filtration rates decrease, a natural process of aging.

- ULT dosing should be increased until an average serum uric acid of < 6 mg/dL is achieved. The serum uric acid can be further decreased until a full cessation of gout activity occurs. For example, for tophaceous gout the goal uric acid drops to < 5 mg/dL.

How could this change my practice?

- More aggressive ULT therapy has been shown to reduce joint pain, suffering, and health care utilization, and can be done with little medication risk. Allopurinol—the first-line ULT agent at KPWA—is not nephrotoxic. It is true that serum levels of allopurinol are raised with decreased levels of GFR; however, since there is no standard serum level of allopurinol, the allopurinol can be safely titrated to a goal serum uric acid of < 6 mg/dL.

- In patients of Korean, Thai, Chinese, and other ethnicities (like African American), there is an increased frequency of HLA-B*5801 alleles (7.4% in Asians, 3.8% in African Americans). For these patients, the risk of allergic responses to allopurinol can be mitigated by using a lower starting dose (50 mg daily). Pre-testing has been shown to be cost-effective in Asian and African Americans and can be considered prior to starting allopurinol in these patients, but it is not mandatory.

- In patients with renal insufficiency, the risk of allergic responses to allopurinol can be mitigated by using a lower starting dose (50–75 mg daily in stage 3 CKD or worse). It is important to note that once allopurinol tolerance has been established in those with renal insufficiency, the allopurinol dose can then be increased to a goal serum uric acid of < 6 mg/dL, even if the final allopurinol dose is higher than the drug monograph's suggested dosing based on creatinine clearance. Studies have failed to show a link between chronic allopurinol dose (as opposed to starting allopurinol dose, where there is a link), kidney function, and frequency of hypersensitivity reactions. Further, it has been clearly demonstrated that following standard allopurinol dosing guidelines based upon creatinine clearance routinely leads to suboptimal serum uric acid levels and inefffectual gout control.
Why did we choose this topic?

- **Gout is the most common inflammatory arthritis you will see.** The National Health and Nutrition Examination Survey (NHANES) of 2007–2008 estimated that 3.9% of the U.S. adult population had gout, with a prevalence of 5.9% in men and 2.0% in women.

- At over 80 years of age, 12.6% of people will have gout. Incidence has increased due to changes in diet, obesity, and use of medications such as aspirin and thiazide diuretics.

Evidence summary

- In my 2018 retrospective survey of 16,003 gout patients at KPWA, gout patients who were placed on ULT had less joint pain than those who were not placed on ULT. Gout patients who stayed on ULT had fewer joint pain visits on average—1.32 visits/patient—than those were either not on ULT (1.6 visits) or inconsistent with taking ULT (3.63 visits).

- Gout patients in the survey also had less joint pain when their uric acid was decreased to < 6 mg/dL. Gout patients with an average uric acid < 6 mg/dL had only 1.62 joint pain visits/patient compared with those who had an average uric acid > 8 mg/dL (4.29 joint pain visits/patient) (p=0.002957, post hoc power analysis of 87.8%).

References


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