Case study

58 year old Chinese man admitted with polyarticular flare of gout. Found to have tophi and renal impairment.

Has had multiple admissions in the last few years to medicine and orthopaedics for gout attacks on a background of gout for the last 10-15 years.

Usually seeks treatment from GPs during attacks - received cocktails of NSAIDs, dexamethasone, prednisolone and colchicine with IM injections. Has more than 1 attack each month. Has never been started on allopurinol.

Unable to keep job because of frequent absenteeism and poor function. Lost his HDB flat. Wife and child left him. Does odd jobs for a previous employer who lets him sleep in the office at night.
Topics we will cover today

• What should we be achieving?
• How well are we treating our patients with gout?
• Why the gap?
  Disease factors
  Patient factors
  Physician factors
• What can we do to bridge this gap?

EULAR guidelines for the management of gout

• Patient education and lifestyle advice are core aspects of management
• Urate lowering therapy is indicated in patients with recurrent attacks, arthropathy, tophi or radiographic changes in gout
• The therapeutic goal... is achieved by maintaining SUA <360umol/L
• Prophylaxis against acute attacks during first months of urate lowering therapy

Ann Rheum Dis 2006;65:1312-1324
How well are we treating our patients with gout?

• 20% of patients with tophaceous gout and 33% of patients with recurrent attacks were on allopurinol.
• 23% of patients on allopurinol had SUA >360umol/L
• 25% received prophylaxis during initiation of allopurinol
• 64% still on thiazide diuretics

NUH Rheumatology
- 25% <360 umol/L at the end of 1 year

TTSH Rheumatology Gout Clinic

Serum uric acid levels at last visit

Why the gap?

• Common condition
• Pathophysiology well understood
• Known to affect cardiovascular risk and mortality
• Effective treatment available
• Published guidelines
What are the possible reasons?

Disease factors  Patient factors  Physician factors

Patient: lack of understanding of gout as a chronic disease

- Causes only intermittent symptoms (initially)
- Not seen as detrimental to health
- Perception that medication is only required during attacks
- Impression that the only necessary intervention to prevent attacks is dietary control

Ann Rheum Dis 2012; 71:1490
Patient: masculinity and stigma

Patient: Non-adherence to treatment

- Only 30-60% of patients on allopurinol are still on it 1 year later

- Risk factors for non-adherence
  - younger age
  - fewer co-morbidities
  - male patients
  - good perceived health status

- Possible reasons
  - lack of understanding
  - thought they were cured
  - too many tablets
  - fear of side effects
  - frustration at attacks during initiation of therapy

<table>
<thead>
<tr>
<th>Number of patients</th>
<th>MPR &gt; 80%</th>
<th>Author</th>
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<tbody>
<tr>
<td>9715</td>
<td>36.8</td>
<td>Briesacher et al.</td>
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<tr>
<td>5597</td>
<td>18</td>
<td>Riedel et al.</td>
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<td>2405</td>
<td>26</td>
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<td>10,073</td>
<td>44</td>
<td>Halpern et al.</td>
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<td>9823</td>
<td>36</td>
<td>Solomon et al.</td>
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Physician: lack of understanding of gout as a chronic disease

- Many physicians view gout as an acute condition
- Inertia to start urate lowering therapy
- Share patient's mindset that gout is due to over-indulgence

Physician: Fear of allopurinol

HSA would like to alert healthcare professionals on a series of local suspected adverse drug reaction (ADR) reports of death associated with the use of allopurinol locally. Allopurinol, a widely prescribed xanthine oxidase inhibitor used in the treatment of hyperuricaemia, is known to cause serious skin reactions such as Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) that lead to significant morbidity and mortality.

Recent death reports associated with half of them included reactions such as SJS, TEN, AHS and erythema multiforme. Allopurinol hypersensitivity syndrome (AHS) is a life threatening hypersensitivity reaction to allopurinol and is accompanied by symptoms such as fever, rash, leukocytosis, eosinophilia, hepatitis...
Physician: Under-dosing of allopurinol

- In patients without renal impairment
  - audits in primary and tertiary settings have shown that high percentages of patients on allopurinol do not achieve target SUA
  - Maximum dose of allopurinol 800mg/day

- In patients with renal impairment
  - Traditional teaching to cap allopurinol dose according to renal function --> patients do not reach target SUA
  - Use of allopurinol above these “renal doses” has been shown to be effective and safe

In renal impairment: start low and increase by 50-100mg/month

Physician: Perceived lack of options in allopurinol allergy or ADR

- Allopurinol desensitization in patients with mild eruptions
- Adjunct treatment with drugs that have uricosuric properties
  - losartan
  - fenofibrate

- Exogenous purines
- Dietary restriction
- Endogenous purines
- Xanthine oxidase inhibitors
- Body urate pool
- Recombinant uricase
- Renal tubules
- Renal insufficiency or failure
- Uricosuric agents
- Allopurinol
- Febuxostat
- Pegloticase
- Probenecid
- Benzbromarone
Physician: Lack of education of patient

- Physicians tend to assume that patients have better understanding than they actually do
- Short consultation times hamper good explanations

It’s one of the easiest and most satisfying diseases to treat
The meds didn’t help and made me worse

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Physician: more education needed

Survey amongst EULAR attendees
What is the optimum SUA level?

- Lack of awareness of available guidelines
- Need to use prophylaxis during initiation of urate lowering therapy
- Not to stop allopurinol during attacks
- Need to review other medications and co-morbidities
Physician: Rheumatologists’ perception

How do we bridge the gap?

- Greater public awareness
- Greater education amongst the medical community, starting from undergraduate level
- Define our targets - both medically speaking and as quality indicator
- Dissemination of guidelines
- Multi-disciplinary approach - patient education with nurse clinician, dietician, written handouts
- Triage of patients to be seen by specialists: multiple co-morbidities, genuine ADR or allergy to allopurinol, true treatment failures
Conclusion

Useful reading


• Schumacher HR, Chen LX. Practical management of gout. Cleveland Clinic J of Med 2008; 75: S22

• Zhang et al. EULAR evidence based recommendations for gout. Ann Rheum Dis 2006; 65: 1312