Evaluation of Gout Management with Urate-Lowering Therapy in a Kidney Clinic

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Background

- Gout is common in chronic kidney disease (CKD) patients and significantly impacts quality of life
- Urate-lowering therapy (ULT) is recommended for patients with \geq 2 gout attacks per year
- The most widely used urate-lowering agent is allopurinol
- Febuxostat is a reasonable but more costly alternative for patier with an allopurinol allergy or intolerance
- The usual serum uric acid (SUA) target is < 360 µmol/L</p>
- Patients enrolled in the Vancouver General Hospital Kidney Care Clinic (VGH KCC) have primarily stage 3-5 CKD
 - Stages 3, 4, and 5 refer to estimated glomerular filtration rates (eGFRs) of 30-59,15-29 and <15 mL/min/1.73 m², respectively
- Gout management for KCC patients typically occurs in primary card
- KCC providers have observed that many patients receive suboptim ULT, possibly as a result of safety concerns about allopurinol in CK
 - KCC patients commonly continue to have frequent gout attacks due to inadequate allopurinol dosing
 - Febuxostat is at times prescribed in KCC patients without a know allopurinol allergy or intolerance
- KCC pharmacists and nephrologists may intervene to optimize UL
- ULT-related medication changes may be implemented during K0 visits or recommended to the patient's GP

Objectives

Primary:

- Among patients enrolled in the VGH KCC:
- Evaluate gout management with ULT in the overall population and across CKD stages 3-5 by assessing urate-lowering agent doses used and the achievement of SUA < 360 µmol/L
- Determine the proportion of febuxostat users who do not have a documented allopurinol allergy or intolerance

Secondary:

Among VGH KCC pharmacists and nephrologists:

- Describe ULT-related interventions
- Evaluate GPs' uptake of ULT-related recommendations

Methods

Part 1 (primary objectives): Cross-sectional study using PROMIS

- Inclusion criteria: Patients enrolled in the VGH KCC for \geq 1 year;
- current medication list includes allopurinol or febuxostat Exclusion criterion: Most recent SUA level was drawn prior to the lateral documented allopurinol or febuxostat dose change

Part 2 (secondary objectives): Retrospective chart review of 100 patients randomly selected from Part 1

- Additional exclusion criterion: Documented indication for allopurinol or febuxostat is not gout
- Assumptions when evaluating GPs' uptake of ULT-related recommendations:
- ULT changes made between KCC visits were done by GPs
- GPs had the opportunity to implement ULT-related
- recommendations between KCC visits

Analysis: Descriptive statistics; Mann-Whitney U test



	Results						
	Table 1: Part 1 and 2 – Patient charact	eristics		Figure 2: Part 1 – Allopurinol allergy or in	ntolerance in febux	ostat users	
		Part 1 (N = 230)	Part 2 (N = 100)				
	Age (years), mean ± SD	74 ± 12	73 ± 13	N = 27 febuxostat users	5% 🗌 Allopu	urinol allerov	
	Male, n (%)	152 (66)	68 (68)			rinol intolerance*	
nts	Ethnicity, n (%)						
	Caucasian	88 (38)	35 (35)	85%	intoler	rance	
	Asian Reducing as index (kg/m ²), mean + CD	135 (59)	59 (59)				
	Body mass index (kg/m ²), mean \pm SD	28 ± 5 25 ± 11	28 ± 5	*None of the febuxostat users have a documented allo	opurinol intolerance		
	Comorbidities n (%)			Table 3: Part 2 – UI T-related intervention	2 – III T-related interventions by KCC providers		
	Hypertension	NA	93 (93)	III T-related Intervention	By pharmacist	By pepbrologist	
	Diabetes	NA	52 (52)	Start allonurinol	12		
e	Dyslipidemia	NA	43 (43)		8	19	
nal	Cardiovascular disease*	NA 400 (47)	32 (32)	Decrease allonurinol dose	3	3	
	I hiazide and/or loop diuretic, n (%)	109 (47)	46 (46)	Discontinue allopurinol (and all ULT)	0	2	
	Allopurinol, n (%) Most recent SLIA (umol/L) mean + SD	203 (88)	89 (89) 353 + 98	Start febuxostat	0	5	
wn	Febuxostat n (%)	27 (12)	11 (11)	Increase febuxostat dose	1	1	
	Most recent SUA (µmol/L), mean ± SD	259 ± 99	267 ± 88	Decrease febuxostat dose	1	2	
Т	*Includes coronary artery disease, ischemic cerebro	ovascular disease, and/or peripheral arte	ery disease	Discontinue febuxostat (and all ULT)	0	1	
CC	NA = Not available			Change allopurinol to febuxostat	0	0	
	Figure 1: Part 1 – Percentage of allopur	rinol and febuyostat users with	most recent	Change febuxostat to allopurinol	2	0	
	SUA < 360 µmol/L, stratified b	y CKD stage ($N = 230$)		Total*	27 [†]	63 §	
		statusers Allonurinol and febu	wostat users combined	*40 of 100 patients received \geq 1 ULT-related intervention	on		
			INUSIAL USEIS CUITIDITIEU	[†] 24 recommended to nephrologist, 3 recommended to §36 implemented by perbrologist, 27 recommended to	GP CP		
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