Table 1. The pre-test and post-test mean scores for all participants of gout education programme.

Question no	Question type	Areas of knowledge tested	Mean scores, n=30			p-value
			Post-test	Pre-test	Difference	
1	Application	Features of gout for diagnosis	3.47 ±0.97	3.53 ±1.11	-0.07±1.02	0.72
2	Application	Interpretation of investigation	2.73 ±0.79	2.3 ±1.12	0.433±0.73	<0.01
3	Application	Treatment of acute gout	1.97 ±0.85	2.27 ±0.74	-0.30±1.01	0.14
4	Application	Treatment of stable gout	3.47 ±1.22	3.07 ±1.05	0.40±1.52	0.16
5	Recall	Indication of urate lowering therapy	4.87 ±0.34	3.87 ±0.97	0.47±0.90	<0.01
6	Recall	Allopurinol mechanism	3.17 ±0.99	2.77 ±0.94	0.40±1.19	0.08
7	Recall	Allopurinol dose initiation	5.00 ±0.00	3.53 ±1.14	1.47±1.14	<0.01
8	Recall	Allopurinol side effects	4.97 ±0.18	4.1 ±0.89	0.87±0.9	<0.01
9	Recall	Non-pharmacological management	4.00 ±0.46	3.6 ±1.10	0.4±1.25	0.09
10	Recall	Medication which can aggravate gout	4.07 ±0.74	3.23 ±1.46	0.833±1.51	<0.01

Conclusion: Gout educational programme for primary care doctors was effective in improving recall knowledge but not in application knowledge. Some specific areas of deficiency in gout knowledge identified were features of gout and management of acute and stable gout.

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SAT0418 ASSOCIATION BETWEEN ANEMIA AND HYPERURICEMIA: KOREAN NATIONAL HEALTH AND NUTRITION SURVEY 2016

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Background: Hyperuricemia and anemia may be related in terms of sharing comorbidities such as chronic kidney disease and cardiovascular disease. However, to our knowledge, no studies have been conducted on the relationship between two conditions. For the association of gout and anemia, there was a previous cohort study showing that patients with anemia had a 2-fold higher risk of gout compared to patients without anemia. And the risk of gout was significantly higher after adjusting for serum urate levels and kidney function. However, there is a lack of data on the relationship between anemia and hyperuricemia.

Objectives: The purpose of this study was to investigate the association between hyperuricemia and anemia using data from Korean National Health and Nutrition Examination Survey (KNHANES VII; 2016), which is representative of the Korean population.

Methods: The present study included 5887 participants aged ≥ 19 years from KNHANES VII. Logistic regression was used to examine the

association between anemia and hyperuricemia. Subgroup analysis was performed to confirm whether the association between two conditions varies according to participant characteristics.

Results: In an adjusted model that corrected for body mass index, smoking, drinking, physical activity, income, and education levels, hyperuricemia was 1.4 times more than that those without anemia (HR 1.41, 95% CI 1.01–1.98). The association of anemia with hyperuricemia was not seen under 65 years of age (HR 2.68, 95% CI 1.60–4.48). In addition, this association was not clear in women, but was significant in men (HR 2.62, 95% CI 1.47–4.70). In the results of subgroup analysis according to comorbidities, the association of anemia with hyperuricemia was significant only in subgroups with chronic kidney disease, diabetes, hypertension, metabolic syndrome, and cardiovascular diseases. There was no association between anemia and hyperuricemia in obese subjects, but hyperuricemia risk was higher in non-obese subjects with anemia compared to those who did not have anemia.

Conclusion: In a Korean representative sample, the risk of hyperuricemia was higher for anemia. The association of anemia with hyperuricemia was more pronounced in subjects with older age, male population, and other comorbid conditions.

Disclosure of Interests: None declared

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SAT0419 HAS THE INTRODUCTION OF A PRIMARY CARE GOUT GUIDELINE RESULTED IN SERUM URIC ACID (SUA) TARGETS BEING ACHIEVED?

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Background: Gout is the most common inflammatory arthritis thought to affect 2.4% of the UK population. A local primary care audit in 2012 suggested suboptimal gout management. In an attempt to improve gout management we introduced a local guideline which was supported by an increase in gout education to our local primary care physicians.

Objectives: To assess the impact of a local primary care gout guideline (introduced in 2015) by comparing pre-guideline audit data (2012) to post guidelines audit data (2019). To identify if the introduction of this guideline translated into a reduction in secondary care referrals for advice on gout management.

Methods: Retrospective analysis of primary care data covering all patients with active diagnosis of gout since 2015 in a large primary care medical group (list size of 30,000 patients). This data was then compared to the results of a previous audit carried out prior to introduction of guideline (2012). As well as assessing primary care data, we carried out a secondary care audit pre and post guideline introduction.

Results: Out of a population list of 30,000 patients, 650 (2.1%) cases were coded as gout. 521 (80%) were male and 129(20%) were female. 429(66%) were on ULT. 407 (94.8%) were on Allopurinol. 21(4.8%) were on Febuxostat and only 1 patient on sulfinpyrazone.

Of those on Allopurinol, 24 (5.9%) had no documented monitoring of SUA levels. Out of the remaining 383 (94.1%), 179 (46.7%) achieved target SUA of <360, compared to 16.7% in the previous audit. 204 (53.3%) had not achieve the target SUA levels. 178 (46.4%) patients had had their SUA levels checked in the last year compared to 23.5% in the previous audit. 107 (28%) had SUA levels checked in last 3 years compared to 40% in the previous audit. SUA levels were not checked in the last 3 years in 98(25.6%) compared to 36.4% in the past.

Of those on febuxostat, 14 (67%) achieved target SUA levels. 7 (33%) did not achieve target SUA levels. 10 (47%) patients had their SUA levels checked in the last year. 7(33%) had their SUA levels checked within the last 3 years and 4 (20%) had not had their SUA levels checked within the last 3 years.

No patient was prescribed more than 300mg allopurinol daily by their primary care physician despite the recommended dose being up to 900mg daily.

We found a 70% reduction in the number of referrals to secondary care for gout management over the same period of time.

Conclusion: The introduction of a local primary care gout guideline and associated education appears to have improved the number of patients achieving target serum uric acid levels as well as leading to a reduction in secondary care referrals for gout.

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SAT0420 IS THERE LIFE TO GOUT TREATMENT AFTER RHEUMATOLOGY IS OUT OF THE EQUATION?

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Background: Previous studies show a low persistence rate to urate-lowering therapy (ULT), in patients diagnosed with gout, after being discharged back to primary care from Rheumatology consultations.

Objectives: To assess persistence and adherence to ULT in patients with gout, previously evaluated in specialized care, who have been discharged from Rheumatology consultations to their primary care physician.

Methods: A transverse study of patients with gout included in an inception cohort and followed in a tertiary care centre. Patients were selected according to their status of "discharge", in case they had been referred back to their primary care centre from specialized care, or "loss", in case they had stopped coming to Rheumatology consultations.

Data, including active prescription of ULT, time since suspension of ULT (if applicable), last serum uric acid (sUA) levels and time for that determination, were procured by electronic history. General data of patients and follow-up were obtained from the database of such cohort. Patients lacking data or deceased were dismissed from the study.

Results: A total of 518 patients, classified either as "discharge" or "loss", with available data accessed by electronic history, followed in specialized consultations during an average time of 52 months (36, 18-72) were studied. Average time since their last visit to Rheumatology services was 90 months (76, 36-132). 88% of them had, at least, one determination of sUA; 80% within the last 12 months, with no differences between the patients with or without active treatment. 376 patients (72.6%) out of 518 had an active prescription of ULT, 338 of them ordered by primary care and 38 by specialized care.

Patients lost during follow-up showed a lower rate of ULT prescription and a higher requirement of specialized attention after than those who were discharged from Rheumatology.

	Loss (172)	Discharge (346)	P
Follow-up (number of months)	31±34	64±49	<0.001
Time since follow-up (number of months)	113±72	80±55	<0.001
Prescription (%)	64	73	<0.001
sUA w/o prescription (mg/dl)	7.44±2.02	7.07±1.33	0.231
sUA <6 mg/dl w/o prescription (%)	18	29	0.275
sUA w/prescription (mg/dl)	6.26±2.09	5.66±1.59	0.010
sUA <6 mg/dl w/ prescription (%)	55	58	0.764
Adherence (% average TPM)	76±30	85±24	0.007
Adherence (% TPM >80%)	64	79	0.003
Need of specialized care after (%)	11	6	<0.001

Conclusion: Patients discharged from Rheumatology consultations maintain good persistence to long-term treatment with ULT, higher than those who were lost during consultation follow-up. Nevertheless, persistence and adherence in the latter group show a higher rate than the ones obtained in patients being followed by primary care, which does not exclude a beneficial influence of the previous assistance provided by Rheumatology services.

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SAT0421 LONG-TERM URATE-LOWERING THERAPY: IS IT 'ALL LIFELONG' NECESSARY?

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Background: It has been published that 13% of gout patients remain in a situation of normouricemia after the suspension of urate-lowering therapy (ULT) and, consequently, would not require lifelong treatment. Prospective and specialized follow-up in a tertiary care centre may have favored these positive outcomes, which have not been replicated afterwards.

Objectives: To assess the percentage of patients diagnosed with gout, previously followed in Rheumatology consultations, in situation of normouricemia once ULT is suspended.

Methods: A transverse study of patients with gout included in an inception cohort and followed in a tertiary care centre. Selected patients were no longer followed by specialized attention.

Data, including active prescription of ULT, time since suspension of ULT (if applicable), last serum uric acid (sUA) levels and time for that determination, were procured by electronic history. General data of patients and follow-up were obtained from the database of such cohort.

Results: One hundred and forty-two (27.4%) out of 518 patients, with available data accessed by electronic history, lacked prescription of ULT, with an average time since its interruption of 65 months (58, 28-120) and sUA average levels of 7.2±1.7 mg/dl. Nevertheless, 19.2% of these patients showed sUA levels <6 mg/dl, against 61% and 63% of patients with active ULT prescription followed by primary care and specialized care, respectively.

Considering a higher target level of uric acid in the long run and taking into account that these patients had already received treatment for an average mean of 50 months, either in patients with active ULT prescription or patients without it (p=0.35), 41.7% of patients without ULT showed sUA levels <6.8 mg/dl vs. 77% of those with an active ULT prescription (both primary and specialized care).

Patients without ULT, showing sUA levels <6 mg/dl or <6.8 mg/dl also showed lower sUA levels during previous follow-up in Rheumatology consultations than those with sUA levels out of target (4.9mg/dl vs. 5.2mg/dl, p<0.01 and 5.0mg/dl vs. 5.3mg/dl). Likewise, among patients with sUA levels <6mg/dl during follow-up, 25.3% showed sUA levels <6mg/dl vs. 0% of those with sUA levels >6mg/dl during follow-up (p<0.01).

Conclusion: Between 20% and 40% of patients without a prescription of ULT, previously followed by Rheumatology, showed sUA levels <6mg/dl and <6.8mg/dl, respectively.

Patients with sUA levels below target during follow-up show a higher rate of sUA levels in target once ULT is suspended.