Results: The study cohort included 192.037 patients with gout, 82.6% of those were males. There was a progressive increase in the number of hospitalised patients with gout from 12 851 patients in 2005 to 23 318 in 2015; this was associated with an increase in mortality, reaching its highest value in 2015 with a 4.9% of gout hospitalised patients. The average age at death in 2015 was 79.2 years and 85.16 years in male and female respectively, an age slightly lower than in the general population. The average cost in these hospitalised patients was 4931 €, reaching a peak of 5384 € in the last year. The hospital stay reached its lowest numbers in 2015 with an average of 8.9 days per patient. These comorbidities had statistical association with an added mortality risk in cerebrovascular disease (odds ratio [OR] 1.57, 95% confidence interval [CI] 1.46–1.49), liver disease (OR 2.61 95% CI 2.34–2.9), kidney disease (OR 1.34 95% CI 1.28–1.41), dementia (OR 2.13 95% CI 1.88–2.42). On the contrary, in type 2 diabetes (OR 0.92 95% CI 0.87–0.96), we found a statistically significant lower mortality risk. Furthermore, it was found a statistically reduced mortality risk in females (OR 0.85 95% CI 0.8–0.9)

Abstract FRI0242 – Table 1. Incidence, mortality, stays and annual costs of hospitalisation for gout of the Health National System

Year	Number of patients	Mortality Number (%)	Average hospital stay (SD)/cost (SD)	Cost/year In millions €
2005	12 850	532 (4.1%)	11.00/4219	54.2
2006	13 163	479 (3.6%)	10.63/4269	56.2
2007	13 896	544 (3.9%)	10.46/4459	61.6
2008	15 292	601 (3.9%)	10.58 4838	74
2009	16 172	630 (3.9%)	10.33/4997	80.8
2010	16 803	658 (3.9%)	9.96/5205	87.5
2011	18 482	781 (4.2%)	9.62/5385	99.5
2012	19 179	897 (4.7%)	9.21/5247	100.6
2013	20 777	926 (4.5%)	9.09/5166	107.3
2014	22 105	991 (4.5%)	8,94/5080	112.3
2015	23 318	1139 (4.9%)	8,90/5384	125.5
Total	192.037	8178 (4.3%)	9,74/4999	959.5

Conclusions: In Spain we have a progressive increase in the hospital admissions for gout, higher mortality rates and higher healthcare costs. This shows the need for changes in prevention and management of gout disease.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.7554

FRI0243 ANAKINRA FOR CALCIUM PYROPHOSPHATE CRYSTAL ARTHRITIS: AN EFFICIENT, SAFE ALTERNATIVE TREATMENT

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Background: Calcium pyrophosphate (CPP) deposition is a frequent joint disease with increased prevalence in older people in whom treatment of acute CPP arthritis with conventional therapies such as colchicine, corticosteroids or non-steroidal anti-inflammatory drugs (NSAIDs) could be contraindicated or not used at an optimal dose. As recommended in gout, anakinra might represent an alternative treatment for acute arthritis. In contrast, the relevance of anakinra in acute CPP arthritis has not given much attention.

Objectives: We further aimed to analyse the efficacy and safety of anakinra in acute CPP arthritis in a large cohort.

Methods: We retrospectively included all patients receiving anakinra for acute CPP arthritis between January 2011 and 2017. Medical history data were collected including hypertension, diabetes mellitus, cardiovascular disease, history of gastroduodenal ulcer, renal impairment and concomitant treatments including anticoagulants or antiplatelet drugs. The following data were collected before and 4 days after the first anakinra injection: swollen joint count (SJC), tender joint count (TJC), pain score on a visual analogue scale (VAS, 0–100 mm) and C-reactive protein (CRP) level. A good response was defined according the evaluation of the physician or documentation in the chart of the phrase “good response” after anakinra treatment.

Results: We included 33 patients (24 women; mean age 79.2±12.8 years). Mean duration of acute arthritis 13.2±12.9 days. CPP arthritis was confirmed by the presence of CCP crystals in synovial fluid in 28/33 (84.8%) patients. For the remaining 5 patients, the diagnosis was confirmed by CPP deposition features seen on imaging. Corticosteroids, NSAIDs and colchicine were previous treatments, without significant improvement in 12 (36.4%), 7 (21.2%) and 18 (54.5%) patients, respectively. The mean dose of corticosteroids was 20.8±8.2 mg/day. Among the 33 patients, 32 had a documented visit at day 4. The number of good responders was 27 (81.8%). At day 4, patients showed decreased mean VAS

pain score (from 64.8±26.5 to 21.2±19.7 mm, p<0.0001), TJC (5.8±5.0 to 1.0 ±1.0, p<0.0001), SJC (3.9±2.7 to 0.9±1.0, p<0.0001) and CRP level (116.1 ±71.6 to 26.0±23.1 mg/L, p<0.0001). Anakinra was well tolerated. Only one patient had pneumonitis that was resolved with oral antibacterial agents.

Conclusions: Our results suggest that anakinra could be a relevant alternative for managing acute CPP arthritis, leading to rapid relief of inflammatory symptoms, with a good tolerance.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4956

FRI0244 LIFE STYLE FACTORS AND COMORBIDITIES IN GOUT PATIENTS COMPARED TO THE GENERAL POPULATION

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Background: Gout is the most common inflammatory arthritis and relatively much is known regarding its pathogenesis. It is clear that life style factors play a significant role in developing and maintaining disease.

Objectives: This study aimed to analyse lifestyle factors in prevalent gout patients by sex compared to age matched controls from the general population.

Methods: All patients above 18 years of age with an ICD 10-diagnosis of gout from Jan 2015 through Feb 2017 listed at any of twelve randomly selected primary health care centres or the rheumatology department at Sahlgrenska University hospital in the Western Sweden Health Care Region (WSHCR) were identified. They were sent a questionnaire, regarding demographics, life style factors such as smoking status, alcohol consumption, physical activity, body mass index (BMI); categorised into 4 levels in the analyses) and comorbidities such as diabetes and hypertension. All responders aged 18–84 years were matched to five control individuals, without gout, by sex and age. Control individuals were selected from a random sample of 52 348 individuals aged 16–84 years who participated in the National Public Health survey in Sweden year 2015 This survey is a national study on health, lifestyle and living conditions. Alcohol consumption was categorised as none and any with/without binge drinking behaviour. Binge drinking was (liberally) defined as consuming more than four (women) or five glasses (men) on any occasion.

Conditional logistic regression models were used to compare cases and controls with regard to lifestyle factors and comorbidities. Multivariate analyses were also performed, including BMI, smoking status, alcohol consumption, and physical activity.

Results: Of the 1589 invited gout patients, 868 responded and 79.7% were male. Non-responders were more often young men. Mean age was 69.3 (std:10.5) years for men and 71.8 (std: 9.9) years for women with gout. Male gout patients were in multivariate analyses more likely to be overweight (OR 1.67 (95% CI: 1.31–2.14)), obese (OR 2.20 (95% CI: 1.64–2.94)), have binge drink behaviour (OR 3.32 (95% CI: 2.39–4.62)), and had lower levels of physical activity compared to controls (table 1). Current smoking habits did not differ between male gout patients and controls.

Female gout patients were in multivariate analyses more likely to be overweight (OR 1.87 (95% CI: 1.05–3.33)), obese (OR 3.62 (95% CI: 1.96–6.72)), and have binge drink behaviour (OR 4.28 (95% CI: 1.92–9.53)), but not did differ with regard to current smoking habits or physical activity compared to controls. In bivariate analyses, comorbidities such as diabetes and hypertension, were significantly more common in gout patients among both sexes.

Abstract FRI0244 – Table 1. Prevalence of lifestyle factors and comorbidities between gout patients and sex-age matched healthy controls.

	Males Cases(n=600) Controls OR 95% CI Adj OR 95% CI					Females Cases(n=328) Controls OR 95% CI Adj OR 95% CI				
Age	69.3(10.5)	69.3(10.5)	n/a	n/a		71.8(9.9)	71.8(9.8)	n/a	n/a	
BMI										
Mean (SD)	28.7(5.7)	26.9(4.3)	n/a	n/a		29.6(5.3)	26.3(4.8)	n/a	n/a	
Underweight, %	0	0.8	n/a	n/a		0.9	2.3	n/a	n/a	
Normalweight, %	21.0	33.3	Ref	Ref		20.7	42.4	Ref	Ref	
Overweight, %	52.1	47.8	1.75 (1.38 to 2.23)	1.67 (1.31 to 2.14)		37.1	35.7	2.07 (1.21 to 3.52)	1.87 (1.05 to 3.33)	
Obese, %	26.9	18.2	2.38 (1.81 to 3.13)	2.20 (1.64 to 2.94)		41.4	19.6	4.11 (2.40 to 7.04)	3.62 (1.96 to 6.72)	
Comorbidities, %										
Hypertension	65.4	41.1	4.69 (3.85 to 5.73)	n/a		70.2	44.2	7.36 (4.49 to 12.06)	n/a	
Diabetes	23.3	15.4	3.61 (2.58 to 4.97)	n/a		27.4	32.1	6.02 (3.98 to 9.09)	n/a	
Smoking, %										
Never	43.2	56.2	Ref	Ref		53.7	63.4	Ref	Ref	
Pass	51.4	35.2	1.94 (1.61 to 2.33)	1.75 (1.49 to 2.15)		41.3	26.7	1.68 (1.11 to 2.55)	1.77 (1.09 to 2.87)	
Current	5.5	8.6	0.82 (0.55 to 1.21)	0.69 (0.45 to 1.05)		5.0	7.9	0.75 (0.30 to 1.86)	1.04 (0.40 to 2.74)	
Alcohol, %										
Never	12.4	13.0	Ref	Ref		27.4	22.8	Ref	Ref	
Yes, without binge drinking	58.7	76.0	0.90 (0.67 to 1.20)	0.88 (0.64 to 1.22)		58.9	74.3	0.65 (0.41 to 1.03)	0.70 (0.41 to 1.19)	
Yes, with binge drinking	28.9	11.0	3.32 (2.39 to 4.62)	3.04 (2.11 to 4.40)		13.7	2.9	4.28 (1.92 to 9.53)	3.86 (1.54 to 9.74)	
Physical activity, %										
≥ 5 hours	22.4	31.6	Ref	Ref		20.0	23.0	Ref	Ref	
1–5 hours	22.0	27.8	1.13 (0.87 to 1.47)	1.34 (0.85 to 1.92)		20.8	29.4	0.82 (0.45 to 1.49)	0.81 (0.40 to 1.62)	
1–3 hours	30.9	30.1	1.46 (1.14 to 1.86)	1.48 (1.13 to 1.94)		27.5	34.0	0.93 (0.53 to 1.63)	0.96 (0.50 to 1.85)	
Max 1 hour	24.7	18.5	2.06 (1.58 to 2.70)	1.97 (1.46 to 2.67)		31.7	20.6	1.62 (0.92 to 2.86)	1.44 (0.72 to 2.82)	

* Adjusted for age, sex, BMI, body mass index, OR, odds ratio. Results are presented in number and percentages, unless otherwise indicated.

Conclusions: Compared to the general population, patients with gout were often obese (in particular women) and had higher occurrence of binge drinking behaviour (in particular men). The lower level of physical activity (men) and normal frequency of smoking among gout patients may be a consequence of the high comorbidity rates.

Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.6489

FRI0245 PREDICTORS FOR CLINICALLY DIAGNOSED GOUT – 30 YEARS FOLLOW-UP IN THE MALMÖ PREVENTIVE PROJECT COHORT, SWEDEN

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Background: Gout is the most common form of inflammatory arthritis worldwide. Hyperuricemia is a crucial risk factor. The relative importance of other risk factors is slightly more controversial.

Objectives: Our aim was to identify predictors for clinical gout cohort from a population survey, the Malmö Preventive Project (MPP) – a large-scale screening and case finding program in Malmö, Sweden.

Methods: A total of 33 346 individuals (67% men, mean age 46 years, mean follow-up 28 years) were screened 1974–1992. The survey included: A Questionnaire (alcohol consumption, smoking); A Physical Examination and Laboratory tests. The Malmö modification of Michigan alcoholism screenings test (Mm-MAST) was used to identify alcohol risk consumption (Mm-MAST score ≥ 2). Subjects were followed to date of first gout diagnosis, death, migration from area, or December 2014. All gout diagnoses given at visits to physicians in primary or specialised care were identified by linking MPP cohort to regional Skåne Healthcare Register and to National Patient Register. Possible risk factors/markers at baseline associated with incident gout were analysed using Cox-regression models.

Results: In total, 1275 individuals (3.8%); 1014 men (4.5%) and 261 women (2.4%) were diagnosed with gout. In both sexes, baseline s-UA >405 (age-adjusted) was the strongest factor associated with incident gout. Higher age, higher BMI, higher s-triglycerides, hypertension and smoking were also associated with gout in both sexes. Mm-MAST score ≥ 2 was associated with gout only in men while higher ESR was associated with gout only in women (table 1).

Conclusions: In this large cohort of middle-age individuals, hyperuricemia, higher age, hypertriglyceridemia and higher BMI were associated with incident gout in both sexes. Alcohol risk consumption predicted gout only in men. Higher ESR, as a possible marker of chronic inflammation, was a significant predictor only in women.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2987

FRI0246 INVESTIGATING THE EFFECT OF SERUM URATE LEVELS ON GOUT FLARE RATES IN A LARGE-SCALE U.S. ADMINISTRATIVE CLAIMS DATABASE

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Background: Reducing patients' serum urate (sUA) levels has long been the focus of gout treatments. Current evidence suggests that sUA levels ≥ 6.0 mg/dL significantly increase a subject's risk of an acute gout attack or "flare."

Objectives: To investigate the effects of sUA levels on gout flare rates (GFLR) over a 5 year period in a large-scale US commercial claims database.

Methods: Truven MarketScan administrative claims data from 2010 to 2015 were used for this analysis. The study population was patients with gout whose index gout diagnosis was defined as first gout diagnosis. Index sUA date (IsD) was defined as the sUA result closest to, but not preceding, a subject's index gout diagnosis. Patients were included if they had continuous health plan enrollment during the year prior to and after their IsD. Patients without an sUA result after their index gout diagnosis were excluded. Three sUA comparison groups were created based on mean sUA values calculated from sUA measurements at IsD through follow-up. Person-time was defined as time between IsD to the end of continuous enrollment or to the end of the study period, whichever came first. Gout flares were determined via a published algorithm Halpern 2009 combining health care visits and prescriptions by using ICD9/10, HCPCS, and NDC codes. Subjects' annual GFLR were calculated as their number of flares per person-time. Mean GFLR were calculated for each sUA comparison group. A generalised linear model was developed to investigate the effect of sUA levels on GFLR after adjusting for demographics and regions.

Results: 15 140 subjects were included in the analysis. Most subjects were male (78%) and from the south (47%) with a mean age of 52 years. Mean sUA was 6.9 mg/dL (min=1.4, max=17.5) where 58% of patients had sUA between 6.0 and 9.0 mg/dL. Subjects were followed for 2.1 years on average. sUA ≥ 6.0 and <9.0 mg/dL (Group 2), and sUA ≥ 9.0 mg/dL (Group 3) were both associated with increased gout flare rates compared to sUA <6.0 mg/dL (Group 1). Group 3 had 1.540 times of the annual flare rate of Group 1. Male sex and increasing age were associated with increased GFLR. North central, south, and west US regions were all positively associated with GFLR in relation to the northeast (table 1).

Abstract FRI0245 – Table 1

MEN (n=22433) where 1014 had incident gout	Baseline variables	s-UA>405 μmol/L (yes,%)	Mean (SD)	Frequency (yes,%)	HR (95% CI)* (age adjusted) 5.4 (4.8–6.2)	HR (95% CI) (multivariate analysis**) 4.1 (3.4–4.9)
	Age (years)		43.7 (6.6)		1.4 (1.3–1.5)	1.4 (1.2–1.5)
	Body mass index (kg/m ²)		24.7 (3.3)		1.4 (1.4–1.5)	1.3 (1.2–1.4)
	e-GFR (ml/min)		79.1 (10.5)		0.9 (0.8–0.9)	0.9 (0.8–1.0)
	s-triglycerides (mmol/L)		1.5 (1.1)		1.1 (1.1–1.2)	1.1 (1.0–1.1)
	ESR mm/hour		5.9 (5.7)		1.0 (0.9–1.1)	1.0 (0.9–1.1)
	Hypertension (yes,%)			16.4%	1.7 (1.5–2.0)	1.3 (1.1–1.5)
	CVD at baseline (yes/no)			2.1%	1.7 (1.1–2.8)	1.4 (0.9–2.3)
	Smoking (yes/no)			49.2%	1.1 (1.0–1.3)	1.3 (1.1–1.6)
Mm-MAST≥ 2 (yes,%)			30.8%	1.5 (1.3–1.7)	1.3 (1.1–1.5)	
WOMEN (n=10902) in where 261 had incident gout				1.5%	12.5 (8.6–18.1)	5.9 (2.2–15.9)
	s-UA >405 μ mol/L (yes,%)				1.7 (1.5–2.1)	1.3 (1.1–1.6)
	Age (years)		49.7 (7.4)			
	BMI (kg/m ²)		24.4 (4.2)		1.6 (1.5–1.8)	1.6 (1.6–2.0)
	eGFR (ml/min)		75.6 (10.9)		0.8 (0.7–0.9)	0.8 (0.6–1.0)
	s-triglycerides (mmol/L)		1.1 (0.6)		1.3 (1.2–1.4)	1.2 (1.0–1.5)
	ESR (mm/hour)		9.6 (7.7)		1.3 (1.2–1.4)	1.2 (1.0–1.5)
	Hypertension (yes,%)			22%	2.0 (1.6–2.0)	1.1 (0.6–1.9)
	CVD at baseline (yes,%)			3.4%	2.1 (1.3–3.6)	3.0 (0.7–12.3)
	Smoking (yes,%)			34.9%	1.2 (0.9–1.5)	1.7 (1.0–2.8)
	Mm-MAST ≥ 2 (yes,%)			2.8%	1.3 (0.6–2.6)	1.2 (0.6–2.4)

*HR is calculated per 1 SD or for dichotomous covariates (yes vs. no)