FRI0697 FRENCH NATIONWIDE SURVEY OF CHRONIC PAIN PERCEPTION IN 1739 PATIENTS WITH CHRONIC INFLAMMATORY RHEUMATISM

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Background: Pain is a major symptom in chronic inflammatory rheumatism. Pain intensity doesn't always correlate with disease activity and it can persist even when RA seems in clinical and biological remission. Little is known about the patients' perception of their treatment efficacy on pain, of pain influence in their life and their expectations for pain management. A French patients association (AFPric) conducted a national survey to explore patient's point of view on pain in their rheumatism.
Objectives: Describe in patients with chronic inflammatory rheumatism, their perception of treatment efficacy on pain, the impact of pain in their life and their expectations on pain care, in a nationwide survey.
Methods: A nationwide survey with a 20-item questionnaire was conducted. The questions were developed by patients and rheumatologists in focus groups. Questionnaires were e-mailed to every member of the association (9065 members). Answers were collected until the 17th July 2016. Answers were anonymous.
Results: One thousand thirty nine patients (response rate 19.2%) answered the questionnaire with 1510 women (86.8%), mean age was 59 years [18–85 years]. For more than half (58%) of the patients, their rheumatism had more than 10 years of evolution. Rheumatoid arthritis was the main rheumatism with 1377 patients (87%). Among the 1194 patients (76%) under conventional DMARDs 46.4% considered the cDMARDs efficacy on pain was between 70 and 100%, on the other hand for 17.7% of the patients, cDMARDs efficacy on pain was less than 30%. Among the 744 patients (47.6%) receiving a biological DMARD, 66.2% considered bDMARDs efficacy on pain was between 70 and 100% and 10% considered it was 30% or less. Among the 658 patients (42.3%) receiving oral corticosteroids, 56.6% considered corticosteroids' efficacy on pain between 70 and 100% and 12% considered it was less than 30%. Patients were asked to rate the weight of pain among their symptoms, for 38% of the patients pain represents 70 to 100% of the symptoms of their rheumatism, for 31.7% it represents 40 to 60% and for 30.3% 30% or less. The mean weight is 51.55% Almost half of the patients (46.8%) consider that their pain is underestimated by health professionals. For 37.2% of the patients, their current treatments are not appropriate for their current pain intensity. Finally 528 (35.7%) patients are not satisfied with pain management offered by health professionals, 90% of them think that pain management is too standardized and 80% think that functional impact of chronic pain is not taken in consideration. Among the expectations, 95% of the patients wish a tailored pain management by their rheumatologist, 82.9% wish to participate to support groups with health professionals specialized in pain care.
Conclusions: This nationwide survey on pain among chronic inflammatory rheumatism patients shows that even in the biological DMARDs era, pain is the main concerning symptom for the patients. It is striking in this large cohort that almost half of the patients consider their pain insufficiently taken care of.
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FRI0698 PREVOTELLA AND ALLOPREVOTELLA SPECIES CHARACTERIZE THE ORAL MICROBIOME OF EARLY RHEUMATOID ARTHRITIS

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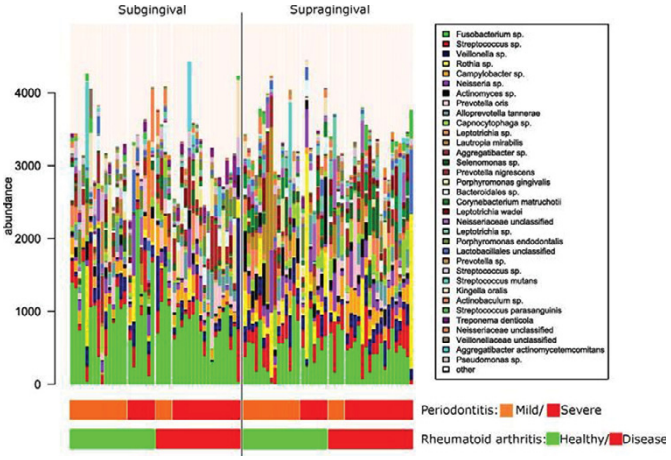
Background: We previously showed that in this early rheumatoid arthritis (ERA) cohort with a mean disease duration of <6 months, a clinically significant loss of clinical attachment loss as surrogate of alveolar bone loss is detectable compared with a matched healthy control cohort (1). Evidence is accumulating that distinct pathogens residing in reservoirs such as the oral cavity, the lung or the gut may play a role in driving the pathogenesis of RA (2–3).
Objectives: To characterize the oral microbiome associated with ERA.
Methods: 16S amplicon sequencing was used to analyze 88 samples of the supragingival and subgingival microbiome of 22 patients with ERA and 22 matched healthy controls. Oral and periodontal status, clinical activity of ERA and periodontitis, and socio-demographic parameters were used as explanatory variables in the next generation DNA sequencing analysis.
Results: Overall, a total of 4.702.161 16S RNA high-quality sequences were yielded. Using a distance-based similarity of >97% for species-level operational taxonomic unit (OTU) assignment, a total of 1054 OTUs were identified (Fig 1). The oral microbiota was equally rich and diverse in ERA and control group. Subgingivally, *Prevotella oris, Prevotella oralis, Prevotella nigrescens, Alloprevotella rava* and *Alloprevotella tannerae* were associated with early RA independent of severity of periodontitis.



Conclusions: Prevotella and Alloprevotella species were enriched in patients with early RA independent of severity of periodontitis. Further studies are needed to test a causal relationship of these species with onset and/or disease progression of RA.
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FRI0699 DETERMINANTS OF 12-MONTHS PERSISTENCE IN ANKYLOSING SPONDYLITIS PATIENTS INITIATING SUBCUTANEOUS TNF-ALPHA INHIBITORS

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Background: Biotherapies such as subcutaneous tumour necrosis factor-alpha inhibitors (SC-TNFis) have transformed the management of inflammatory joint diseases such as ankylosing spondylitis (AS). The assessment of SC- TNFis persistence and its determinants is needed.
Objectives: The objective of this study was to describe treatment persistence in real-world settings, and identify the determinants of persistence among AS patients initiating treatment with an SC-TNFi.
Methods: The French national health insurance scheme database lists all outpatient and inpatient healthcare consumption for individuals covered by the general health insurance scheme. Using French claims data, AS was diagnosed using Long Term Disease status and hospital admission, based on ICD-10 codes. Patients were then identified through prescription filled for adalimumab (ADA), etanercept (ETA), certolizumab pegol (CZP) and golimumab (GLM) between 2012/07/01 and 2013/12/31. A patient was considered as non-persistent in the event of a prolonged interruption of the therapy lasting 91 days or more. Persistence was estimated with Kaplan Meier analysis. Determinants of persistence in the 12 months before initiation were identified using Cox models.
Results: A total of 9,098 patients with AS were identified. In the descriptive analyses of the 12 months persistence, differences were observed for AS patients, with raw/non-adjusted persistence rates of 33.2% for CZP, 49.3% for ETA, 52.4% for ADA and 54.5% for GLM. Results of the Cox model are presented, including hazard ratio for biotherapy, adjusted on sex, age, socio-economic status, and criteria on disease severity. The variables biotherapy, socio-economic status and hospital admission for IRMD did not meet the proportionality hypothesis of risks,

and were corrected by the addition of a variable integrating the interaction with time.

Table 1. Determinants of 12-month non-persistence (Cox model)

	Hazard Ratio	IC 95%		P-value
SC-TNFis				
GLM	1.000	–	–	–
CZP	2.707	2.139	3.426	**<0.0001**
ETA	1.915	1.665	2.203	**<0.0001**
ADA	1.418	1.286	1.565	**<0.0001**
Sex				
Male	1.000	–	–	–
Female	1.377	1.300	1.458	**<0.0001**
Age	0.995	0.993	0.997	**<0.0001**
Deprived socio-economic status: Yes vs No	1.543	1.288	1.849	**<0.0001**
Number of comorbid conditions (per additional condition)	1.150	1.113	1.187	**<0.0001**
Biotherapy line (per additional line)	1.176	1.124	1.231	**<0.0001**
DMARD dispensation: Yes vs No	0.943	0.875	1.015	0.1182
Sulfasalazine dispensation: Yes vs No	0.996	0.915	1.084	0.9257
Long term oral steroids: Yes vs No	0.915	0.806	1.039	0.1719
Hospital admission for IRMD	0.883	0.792	0.984	**0.0249**
Visits to rheumatologist				
0	1.000	–	–	–
1–4	0.925	0.800	1.070	0.2959
>4	0.958	0.829	1.108	0.5645
Interaction with time				
Interaction biotherapy * time	1.001	1.001	1.001	**<0.0001**
Interaction socio-economic status * time	0.999	0.998	1.000	0.0132
Interaction hospital admission for IRMD * time	1.001	1.000	1.001	0.0335

Conclusions: Non-persistent patients were more likely female, with deprived socio-economic status, multiple comorbid conditions, and multiple line of biotherapy. Age, hospital admission for IRMD and treatment with GLM (compared to CZP, ETA and ADA) decreased the risk of non-persistence. Further analyses are needed to assess the impact of non-persistence.

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FRI0700 PHYSICAL ACTIVITY DECREASED SIGNIFICANTLY BUT MODERATELY DURING WEEKS WHERE PATIENTS REPORTED FLARES: A 3-MONTH STUDY OF 170 RHEUMATOID ARTHRITIS (RA) OR AXIAL SPONDYLOARTHRITIS (AXSPA) PATIENTS WEARING AN ACTIVITY TRACKER

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Background: RA and axSpA natural history comprises periods of low disease activity and flares. There is much interest in the concept of flares. Studies have indicated flares may alter patient quality of life, however, there are few data linking flares to quantifiable outcomes.

Objectives: The objective was to assess longitudinally the association between patient-reported flares and physical activity assessed objectively using an activity tracker.

Methods: This prospective multi-center observational study (ActConnect) included patients with definite RA (ACR/EULAR criteria) or axSpA (ASAS criteria) owning a smartphone. Physical activity was assessed continuously over 3 months by the number of steps using an activity tracker, and flares were self-assessed weekly using a specific flare question ("has your disease flared up during the last 7 days?")[1] with a categorical response according to: no flare, 1 to 3 days flare, or >3 days flare. The relationship between flares and physical activity for each week (time point) was assessed by linear mixed models adjusted on rheumatic disease, sex, age, obesity, biologics and employment status.

Results: 170/178 patients (91 RA and 79 axSpA patients; 1553 time points) were analyzed: mean age 45.5±12.4 years, mean disease duration 10.3±8.7 years; 60 (35.3%) were males and 90 (52.9%) received biologics. Disease was well-controlled (mean DAS28: 2.3±1.2; mean BASDAI: 3.3±2.1). Physical activity was moderate (mean steps/day, 7067±2770). Flares were frequent (25.5% of the questionnaires); most (76.8%) were of short duration. Flares, in particular >3 days flares, were independently associated with less weekly physical activity (p=0.02–0.03), leading to a relative decrease of physical activity of 12–21% and an absolute decrease ranging from 836 to 1462 steps/day (Table 1).

Conclusions: Flares were frequent in these low-disease patients, though most flares were of short duration. Flares were related to a moderate decrease in physical activity, confirming objectively the functional impact of patient-reported flares.

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FRI0701 DOES PARITY INFLUENCE JOINT DAMAGE PROGRESSION IN WOMEN WITH RHEUMATOID ARTHRITIS?

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Background: Disease activity and severity of rheumatoid arthritis (RA) appear to be worse in women than in men [1]. The role of parity on disease activity is controversial, since pregnancy is characterized by a lower disease activity, but the postpartum period by an increase in activity [2]. Radiographic joint damage progression represents the cumulative effect of disease activity and allows us to study the long term effect of parity.

Objectives: To study the impact of parity on radiographic progression in women with RA.

Methods: This is an observational cohort study of RA patients included in the Swiss Clinical Quality Management in Rheumatoid Arthritis (SCQM-RA). Patients enrolled are followed-up yearly and have x-rays assessments at regular intervals. Information about female hormonal factors, such as pregnancies, breastfeeding, menstrual cycles and hormonal treatment were retrospectively retrieved using a questionnaire. For this analysis we included women with at least two x-rays and full information on reproductive factors. The primary outcome was the rate of radiographic progression (Ratingen erosion score) and the secondary outcome was functional disability progression (Health Assessment Questionnaire-Disability Index (HAQ-DI)). We compared the rate of progression between parous and nulliparous women using a multilevel regression model for longitudinal data,

Table 1. Characteristics of women SCQM

General and disease characteristics	Parous n=438	Nulliparous n=288
Age, years, median(IQR)	49 (40-57)*	45 (34-57)
Body mass index, kg/m², median(IQR)	24 (22-28)*	23 (21-27)
Ever smoking, n(%)	281 (64)	163 (57)
Alcohol consumption, n(%)	144 (33)	88 (31)
Disease duration, years, median(IQR)	0.4 (0.1-4.5)	0.4 (0.1-4.7)
ACPA positive, n(%)	294 (67)	201 (70)
Rheumatoid factor, n(%)	295 (67)*	217 (75)
DAS 28, median(IQR)	3.8 (2.8-5.0)	4.0 (2.9-5.1)
HAQ-DI, median(IQR)	0.8 (0.3-1.3)	0.6 (0.3-1.3)
Erosion score, %, median (IQR)	2.0 (0.5-4.9)	1.1 (0.1-4.7)
DMARD treatment, n(%)	332 (77)	223 (77)
Biologic treatment, n(%)	48 (11)	37 (13)
Glucocorticoid use, n(%)	120 (27)	72 (25)
Number of pregnancies, median (IQR)	2 (1-3)	-
Ever breastfeeding, n(%)	303(69)	-

*p-value <0.05, T-student or Kruskal-Wallis test for continuous variables and Chi-squared or Fisher's exact test for categorical variables. ACPA: anticitrullinated protein antibodies; DAS 28: 28-joint Disease Activity Score ESR; HAQ-DI: Health Assessment Questionnaire–Disability Index; DMARD: disease-modifying antirheumatic drugs.

Abstract FRI0700 – Table 1. Physical activity according to flare status in 170 RA and axSpA patients

	No flare (N=1157 assessments)	Flare (N=396 assessments)	p†	Flare ≤3 days (N=304 assessments)	p‡	Flare >3 days (N=92 assessments)	p‡
Number of steps per day	7197 (±2810)	6688 (±2618)	**0.03**	6792 (±2597)	0.17	6347 (±2670)	**0.02**
Range of absolute reduction of steps per day in flare	–	500–3504[a]	–	931–2794[b]	–	836–1462[c]	–
Range of relative reduction of steps per day in flare (%)	–	6.9–48.7[a]	–	13.5–40.6[b]	–	12.2–21.3[c]	–

The mean physical activity levels according to flare status are indicative data from pooled assessments. Results are expressed in mean (±standard deviation). †Linear mixed model with flare yes/no as the explanatory variable. ‡Linear mixed model with no/<3 days/>3 days flares as the explanatory variable. [a]Range considering flare duration from 1 to 7 days. [b]Range considering flare duration from 1 to 3 days. [c]Range considering flare duration from 4 to 7 days.