strategies for preventing or delaying the occurrence of frailty, disability, and work disability in people with OA and RA.

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OP0266 **RISK OF HOSPITALIZED INFECTION IN PATIENTS WITH CHRONIC INFLAMMATORY ARTHRITIS TREATED WITH BIOLOGICAL DRUGS – A MATCHED COHORT STUDY**

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Background: Patients with rheumatoid arthritis (RA), axial spondyloarthritis (axSpA) and psoriatic arthritis (PsA) treated with biological drugs (bDMARDs) have increased risk of hospitalized infection (i.e. infection causing admission to hospital) compared to the general population. Since patients with RA, axSpA and PsA have different age distributions, and age is an important predictor for infection, we found it of interest to quantify the excess burden of hospitalized infection in patients with inflammatory arthritis treated with bDMARDs compared to the general population and to investigate whether risk depended on age and diagnosis.

Objectives: To compare the risk of hospitalized infection in bio-naïve patients with inflammatory arthritis, who started treatment with a bDMARD with that of the general population, and to explore how this risk was influenced by age and diagnosis.

Methods: Matched cohort study based on data from The Danish Rheumatology Register (DANBIO) linked with The Danish National Patient Register and The Danish National Prescription Register. Patients with a diagnosis of RA, PsA or axSpA in DANBIO initiating first bDMARD January 2006-December 2016 were included. For each patient, 10 controls from the general population, matched by age, sex, postal code and date were obtained. Infection risk in patients and matched controls were compared in analyses stratified by age and diagnosis, with Cox proportional hazards models accounting for matching. Follow-up time was 12 months irrespective of whether treatment was continued or changed during follow-up. Clinicaltrials.gov: NCT03496831.

Results: In total, 11,372 patients and 113,715 controls were included. Overall, hospitalized infection was observed during follow-up in 4.6% of patients and 1.3% of controls; hazard ratio 3.7 (95% confidence interval (CI): 3.4-4.1).

Table 1. Baseline characteristics and risk of hospitalized infection.

	RA		AxSpA		PsA	
	Patients (n=5985)	Matched cohort (n=59848)	Patients (n=2958)	Matched cohort (n=29579)	Patients (n=2429)	Matched cohort (n=24288)
Age <40	11.9%	11.9%	49.6%	49.6%	29.0%	29.0%
40-49	16.9%	16.9%	26.5%	26.5%	28.1%	28.1%
50-59	28.9%	28.9%	16.0%	16.0%	28.0%	28.0%
≥60	42.3%	42.3%	7.9%	7.9%	14.9%	14.9%
Men	25.0%	25.0%	60.9%	60.9%	45.6%	45.6%
No. of persons with hospitalized infection during 12 months of follow-up	352	880	81	292	89	262
Absolute risk of hospitalized infection during 12 months of follow-up (95% CI)	5.9% (5.3-6.5%)	1.5% (1.4-1.6%)	2.7% (2.2-3.4%)	1.0% (0.9-1.1%)	3.7% (3.0-4.5%)	1.1% (1.0-1.2%)

The absolute risk was highest in RA patients, followed by PsA, axSpA and controls (unadjusted comparison). When stratified by age, the absolute risk increased with age, but was largely similar across diagnoses (Figure). In the stratum ≥60 years, RA patients appeared to have higher risk than axSpA patients, but the subgroup of axSpA patients ≥60 years was small.

Conclusion: The risk of hospitalized infection during 12 months of follow-up was approximately four times higher in bio-naïve patients with inflammatory arthritis who started treatment with a biological drug (bDMARD) compared to matched controls from the general population. When stratified by age, the absolute risk was largely similar across the diagnoses RA, axSpA and PsA. Thus, attention to preventive strategies such as vaccination seems prudent in these patients, especially those ≥60 years of age.

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OP0267 **INACTIVATED INFLUENZA VACCINATION DOES NOT ASSOCIATE WITH DISEASE FLARES IN AUTOIMMUNE RHEUMATIC DISEASES: A SELF-CONTROLLED CASE SERIES STUDY USING DATA FROM THE CLINICAL PRACTICE RESEARCH DATALINK**

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Background: Concerns about vaccination with the seasonal flu vaccine associating with increased risk of autoimmune rheumatic disease (AIRD) activity, and anecdotal reports of the seasonal flu vaccine triggering diseases such as vasculitis are barriers to flu vaccination in this population¹⁻². This is despite reports of stable disease activity following flu vaccination provided disease modifying anti-rheumatic drug therapy is continued in the peri-vaccination period³. Previous studies generally include patients with stable disease activity, and as far as we are aware, a real world study evaluating the association between inactivated influenza vaccine (IIV) administration and AIRD activity has not been conducted.

Objectives: To examine the association between IIV administration and primary care consultation for joint pain, fatigue, rheumatoid arthritis (RA) flare, corticosteroid prescription, and incident vasculitis in people with AIRDs.

Methods: We undertook within-person comparisons using self-controlled case-series (SCCS). AIRD cases who received IIV and had an outcome of interest in the same influenza cycle, between 1st September of one year and 31st August of the next year, between 2006 and 2016 were ascertained within the Clinical Practice Research Datalink. The influenza cycle (1st September of one year to 31st December of the next year) was partitioned into five exposure periods (1-15 days pre-vaccination, and 0-14, 15-30, 31-60, and 61-90 days post-vaccination), with the remaining time period classified as non-exposed. Incidence rate ratios (IRRs) and 95% confidence intervals (CI) were calculated to compare the frequency of outcomes in different periods.

Results: Data for 14,928 AIRD cases (69% women, 80% with RA) were included. There was no association between IIV administration and primary-care consultation for RA flare, corticosteroid prescription, and vasculitis (Table 1). Vaccination associated with reduced primary-care consultation for joint pain in the 90-day post-vaccination period (IRR (95%CI) 0.91 (0.87-0.94)), and fatigue (IRR (95%CI) 0.40 (0.22-0.71)) in the 61-90 days post vaccination (Table 1).

Abstract Table 1. Association between IIV and AIRD flare and vasculitis

Risk period	IRRs(95% CI)				
	Joint pain	Corticosteroid prescription*	Fatigue	RA flare	Vasculitis
Baseline	1.00	1.00	1.00	1.00	1.00
Upto 15 days pre vaccination	1.29 (1.20-1.39)	1.17 (0.73-1.89)	1.09 (0.67-1.79)	0.95 (0.64-1.41)	0.95 (0.38-2.33)
Post-vaccination					
0-14 days	0.84 (0.77-0.92)	1.11 (0.67-1.84)	0.62 (0.32-1.20)	0.97 (0.65-1.45)	0.41 (0.10-1.65)
15-30 days	0.94 (0.86-1.02)	1.31 (0.83-2.06)	0.90 (0.52-1.54)	1.12 (0.78-1.62)	0.95 (0.38-2.33)
31-60 days	0.93 (0.88-0.99)	1.02 (0.70-1.48)	0.87 (0.59-1.30)	1.06 (0.80-1.39)	0.76 (0.37-1.56)
61-90 days	0.90 (0.84-0.96)	0.76 (0.49-1.16)	0.40 (0.22-0.71)	0.81 (0.59-1.10)	1.14 (0.62-2.08)

*New corticosteroid prescription on the same date as consultation for either RA flare, or joint pain, or fatigue.

Conclusion: The administration of IIV was not associated with flare of the underlying AIRD and its association with reduced disease activity warrants further investigation. Nevertheless, these data add to the accumulating evidence to support seasonal influenza vaccination in people with AIRDs.

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FRIDAY, 14 JUNE 2019

HPR Abstract session II

OP0268-HPR THE PREVALENCE AND IMPACT OF FATIGUE IN PEOPLE WITH PRIMARY ANTIPHOSPHOLIPID SYNDROME: A MIXED METHODS STUDY

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Background: Primary antiphospholipid syndrome (pAPS) is a prothrombotic disorder associated with increased morbidity and mortality¹. Symptoms include fatigue but the prevalence and impact of fatigue is unknown.

Objectives: To explore the prevalence, relationships and impact of fatigue in adults with pAPS.

Methods: This mixed methods study recruited participants from one public hospital, UK. Inclusion criteria comprised: adults with ≥6 month history of pAPS (Sydney classification criteria) and sufficient written and spoken English. Exclusion criteria included: other autoimmune rheumatic/inflammatory disorders; cancer; active chronic infections, positive Antinuclear antibody, pregnancy/breast-feeding, drugs/alcohol dependency and BMI>30.

Consenting participants completed seven questionnaires to record sociodemographic characteristics, fatigue (Fatigue Severity Scale (FSS), FACIT-Fatigue subscale, (FS)), social support (Multi-Dimensional Perceived Social Support Scale (MDPSS), mood (Patient Health Questionnaire (PHQ-9), quality of life (EQ-5D-5L), sleep quality (Pittsburgh Sleep Quality Index (PSQI) and physical activity (International Physical Activity Questionnaire (IPAQMETS)). The relationship between fatigue (FSS) and predictor variables were explored using Spearman's Rho correlation coefficients and backward stepwise regression analyses.

Audio recorded, semi structured interviews were conducted with a subset of participants by two researchers with an agreed topic guide. Interviews were transcribed verbatim, anonymised, and analysed thematically with NVivo 10. The data was validated by a subsample of participants, cross-referencing the emergent codes and themes.

Results: 103 participants were recruited (87 complete datasets; mean (standard deviation) 50.3 (10.4) years, 8 men, 49 thrombotic APS). 69% of participants reported clinically relevant fatigue (FSS>3) and 62% of participants indicated severe fatigue (FSS>4). FSS was positively associated with PSQI ($r_s(67)=0.269$ $p=0.025$), PHQ9 ($r_s(83)=0.602$ $p<0.001$) and negatively associated with EQ-5D-5L ($r_s(83)=-0.505$ $p<0.001$), FS ($r_s(82)=-0.656$ $p<0.001$) and IPAQMETS ($r_s(80)=-0.243$ $p=0.028$) but not MSPSS.

The best fit model explained 62% of the variance in FSS (adjusted $R^2=0.617$, $F_{(5,62)}=22.63$, $p>0.001$) and included FS, MSPSS, PHQ9, and IPAQMETS as significant predictors. For every 1 unit increase in FS, MSPSS, IPAQMETS and PHQ9, FSS decreased by -0.087 points, -0.084 points and -9.7*10⁻⁵ MET/minutes or increased by 0.090 points respectively.

Twenty participants (10 obstetric/10 thrombotic pAPS) completed interviews (duration 20-50 minutes). Participants with obstetric pAPS were younger. Five themes were identified across both subgroups: 1. Unpredictability of fatigue 2. Impact on daily life 3. Physical activity matters 4. Individual coping strategies 5. Acknowledgement and help with fatigue from clinicians.

Conclusion: Fatigue is a common, overwhelming, unpredictable symptom of pAPS which is a challenge to manage. Social support, mood and physical activity predicted fatigue severity. Interviewees tended not to discuss fatigue with clinicians due to lack of observed response or empathy. Participants perceived physical activity as important but difficult to complete regularly. Interventions to manage fatigue and support physical activity are needed for adults with pAPS.

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