Table 1

VARIABLE	CASES n=49	CONTROLS n=50	P-VALUE
Age, years (mean(SD))	56.6 (10.6)	56.4 (10.6)	0.902
Sex, women, n(%)	41(75.3)	41(82.0)	0.189
Tobacco			0.117
Never smoker, n(%)	42(85.7)	46(92.0)	
Former smoker, n(%)	2(24.3)	1(10.0)	
Current smoker, n(%)	2(25.0)	2(20.0)	
Comorbidity			
BMI > 30 (obesity), n(%)	30(33.7)	23(27.5)	0.608
BMI, mean(SD)	28.2 (6.8)	27.3 (4.8)	0.266
Dyslipemia, n(%)	21(23.9)	16(18.8)	0.442
Hypertension, n(%)	25(26.5)	23(27.5)	0.868
Infectious Risk Factors			
HOMA-IR > 2.26, n(%)	25(28.1)	24(30.0)	0.786
HOMA-IR, median(IQR)	1.7 (1.02-2.3)	1.66 (1.15-2.65)	0.385
HOMA-IR, median(IQR)	38.9 (22.1-63.3)	34.39 (24.0-54.9)	0.545
QUICKI, median(IQR)	0.306 (0.29-0.31)	0.306 (0.29-0.31)	0.211

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FRI0057 INSULIN RESISTANCE IN ELDERLY ONSET RHEUMATOID ARTHRITIS AND POLYMYALGIA RHEUMATICA

Melania Martínez-Morillo, María Luisa Granada, Águeda Prior-Español, Anahy Brandy-García, Susana Holgado Pérez, María Aparicio-Espinar, Laia Gifre, Anne Riveros-Frutos, Clara Sangüesa-Gomez, Jordi Camins-Fàbregas, Ivette Casafont-Solé, Annika Nack, Alejandro Olive, Lourdes Mateo Soria. *Hospital Germans Trias i Pujol, Rheumatology, Badalona, Spain*

Background: Rheumatoid arthritis (RA) patients have a higher insulin resistance (IR) and some studies report that it is present at diagnosis. Systemic inflammation has been pointed out as the reason. However, data on polymyalgia rheumatica (PMR) are controversial.

Objectives: To analyse IR in a group of untreated patients with a recent diagnosis of RA and PMR, and to establish predictive factors related with IR.

Methods: Longitudinal observational study of patients older than 60 years, newly diagnosed with elderly-onset AR (ACR/EULAR 2010) and PMR (ACR/EULAR 2012). Comparison with healthy control group of the same age. Inclusion: consecutive and voluntary. Exclusion: patients with insulin-dependent diabetes. Follow-up time: 12 months. The clinical-epidemiological, anthropometric and analytical characteristics were collected. IR was calculated by HOMA-IR [(homeostatic model assessment of insulin resistance) = glucose (mg/dL) * insulin (mIU/L)/405] baseline and at 12 months. HOMA-IR>2.75 was considered IR (according to Spanish data). The statistical study was performed with Stata 15.1.

Results: We recruited 42 patients with RA, 18 with PMR and 18 healthy controls. None of them had received treatment with corticosteroids or with DMARD at the baseline visit. Baseline characteristics are summarized in the table.

	RA (N=42)	PMR (N=18)	P value
Epidemiological data			
Women n (%)	18 (42.9)	15 (83.3)	0.001
Age (mean ± σ)	74.4 ± 7.6	76.4 ± 5.2	0.594
Diabetes mellitus	15 (35.7)	3 (16.7)	0.140
BMI (kg/m ²)	27.7 [25.1-30.5]	26.5 [24.0-29.1]	0.393
Abdominal perimeter (cm)	100 [95-106]	94 [90-104]	0.076
Analytical data			
Glycohemoglobin%	6.1 [5.9-6.4]	5.8 [5.6-6.5]	0.107
ESR (mm/1 st hora)	49 [36-75]	52 [42-69]	0.508
CPR (mg/L)	24.4 [7.1-44.1]	22.1 [12.4-45.9]	0.670
RF positive n (%)	14 (33.3)	1 (5.6)	0.023
ACPA positive n (%)	13 (30.9)	2 (11.1)	0.104
RF and ACPA positive n (%)	17 (40.5)	3 (16.7)	0.073
Insulin resistance test			
HOMA-IR median[RIQ]	3.6 [2.1-5]	2.1 [1.6-3.4]	0.004

At baseline visit, 66.7% of patients with elderly-onset RA had IR, compared with 33.3% of controls (p=0.024) and 27.8% of PMR (p=0.006). Therefore, the prevalence of IR in patients with RA doubled that of controls and patients with PMR before starting treatment.

After 12 months of evolution and treatment, patients with RA and IR decreased from 66.7% to 51.2%, not being statistically significant (p=0.179). On the other hand, the percentage of patients with PMR and

IR remained the same (27.8%). The differences in IR between RA and PMR at 12 months remained statistically significant (p=0.048).

Given the results we decided to analyze the predictive factors related with IR only in the 42 patients with RA. In the univariate logistic regression analysis, the predictors of presenting IR were the BMI, the abdominal perimeter and the scapular girdle involvement. Specifically for BMI, for each of 2 kg/m² the probability of having IR was 1.24 times higher (OR=1.24, IC95%: 1.12-1.37). Patients with scapular girdle involvement had a 6-fold increased risk of developing IR (OR = 6.0, 95% CI: 1.3-26.6). And for every 5 centimetres of abdominal perimeter the risk increased almost 4 times more (OR=3.9, 95% CI: 2.9-5.1). In the multivariate analysis, the only independent factor to increase the IR was the abdominal perimeter (aOR = 1.23, IC95%: 1.07-1.41).

Conclusion: Patients with elderly-onset RA have a higher IR than the general population. High IR in RA is present at diagnosis. IR in AR is not exclusively mediated by systemic inflammation, since patients with PMR do not have this increase. The predictors of presenting IR in late onset AR were BMI, scapular girdle involvement and abdominal perimeter. Only the abdominal perimeter was shown as an independent factor.

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FRI0058 RHEUMATOID ARTHRITIS IS AN INDEPENDENT RISK FACTOR FOR DEVELOPING INFLUENZA REQUIRING HOSPITAL INPATIENT ADMISSION, COMPARABLE TO OLDER AGE AND GREATER THAN SMOKING, IN A LARGE, SINGLE-CENTRE COHORT

Bonnie Liu¹, Christopher McMaster¹, David Liew^{1,2}, Russell Buchanan^{1,2}. ¹Austin Health, Rheumatology, Melbourne, Australia; ²University of Melbourne, Medicine, Melbourne, Australia

Background: RA patients are known to be at increased risk of serious infection(1), particularly for respiratory infections such as influenza which are known to be associated with increased morbidity and mortality(2). Currently RA patients do not have enhanced access to high-dose influenza vaccination in our jurisdiction, despite the reported benefit in RA(3) and enhanced access for patients older than 65 years old. The magnitude of the risk from RA compared to smoking or age greater than 65 years old remains incompletely understood.

Objectives: To examine the association of RA, smoking, and age greater than 65 years old with hospital inpatient admissions for influenza.

Methods: We examined general medical inpatient admissions in a large tertiary hospital between January 2012 and December 2018. Major confounders (smoking status, age and gender) were selected based on causal inference analysis using a directed acyclic graph. Natural language processing and ICD-10 codes were used to determine the diagnosis of rheumatoid arthritis, smoking status and influenza diagnosis. These variables were used in a multivariable logistic regression analysis. The strength of association was assessed using adjusted odds ratios and associated 95% confidence intervals.

Results: We assessed 19,010 patients with at least one general medical inpatient admission during the study period, of which 495 had at least one admission primarily for influenza (Table 1). Within this cohort, there were 3791 patients identified as active smokers and 731 with a history of RA. In the multivariable model, patients with a history of RA were more likely to have at least one admission for influenza (OR 1.65 [1.12 - 2.36]). This risk was comparable to that experienced by patients older than 65 years old in an unadjusted analysis (OR 1.62 [1.29 - 2.04]) and stronger than that experienced by smokers in an unadjusted analysis (OR 1.38 [1.12 - 1.69]).

Conclusion: RA patients are at independent risk of influenza leading to a hospital inpatient admission, with a magnitude comparable to that of patients aged over 65 years old and greater than that of smokers. Funding authorities should consider making influenza vaccination available for RA patients in a comparable way to that available to patients aged over 65 years old.

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