r2062377, AA vs. TA 35.7% 1.36 1.01;1.83 1.28 0.81;1.59 1.19 0.86;1.65 +TT

*Hazard ratio (HR)1=crude model, HR2= adjusted for age at inclusion and sex, HR3=adjusted for age at inclusion, sex, duration of RA, anti-CCP positivity, ever smoking, disease activity the first two years after RA diagnosis, and erosive disease.

Figure 1. Probability of fracture-free survival related to three SNPs in patients with RA

Abstract THU0143 – Figure 1

Conclusion: Genes related to bone metabolism may have a considerable contribution to the already high risk of low-energy fractures in RA.

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THU0144 ECHOCARDIOGRAPHIC ABNORMALITIES AMONG HISPANIC PATIENTS WITH RHEUMATOID ARTHRITIS: A CASE CONTROL STUDY

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Background: Rheumatoid arthritis (RA) is a chronic, systemic, inflammatory disease that mainly affects the synovial joints. Subjects with RA have an increased cardiovascular (CV) morbimortality (1). This increase in cardiovascular diseases (CVD) is not explained by traditional risk factors (2). Screening for CVD in RA patients is an essential part of CV risk management. Echocardiography is a simple, non-invasive approach that provides reliable markers for cardiac evaluation (3).

Objectives: To determine the prevalence of echocardiographic abnormalities in RA patients and compare them to matched controls.

Methods: Observational, cross-sectional study. RA patients aged 40 to 75 years that fulfilled the 2010 ACR/EULAR classification criteria and matched controls were included. Patients with a poor ultrasound window, history of previous atherosclerotic CVD (ischemic heart disease, cerebrovascular accident or peripheral arterial disease) and pregnancy were excluded. Transthoracic echocardiogram was performed and reviewed by 2 board-certified cardiologists. Differences were solved by consensus. Descriptive analysis was done with frequencies (%) and median (q25-q75), and comparisons with Chi-square and Mann U-Whitney's test.

Results: A total of 133 subjects were included. Baseline characteristics are shown in Table 1. Groups were well balanced, with no differences among them. Echocardiographic comparisons are shown in Table 2. Prevalence of abnormal left ventricle (LV) geometry was higher in RA patients ($p=.038$), as were mitral and tricuspid valvular dysfunction ($p<0.001$). The LV ejection fraction was lower in RA subjects ($p=.044$).

Abstract THU0144 –Table 1. Clinical characteristics.

	RA (n=85)	Control (n= 48)	P
Female, n (%)	81 (95.3)	46 (95.8)	1

Age, mean $\pm$ SD	54.4 $\pm$ 8.4	53.1 $\pm$ 6.9	0.169
T2DM, n (%)	10 (11.8)	2 (4.2)	0.210
Hypertension, n (%)	21 (24.7)	11 (22.9)	0.817
Active smoking, n (%)	7 (8.2)	5 (10.4)	0.341
Dis. duration, yr, mean $\pm$ SD	9.8 $\pm$ 8.4	-	-
BMI, Kg/m ² , mean $\pm$ SD	28.5 $\pm$ 4.8	27.9 $\pm$ 4.3	0.375
DAS 28-CRP, mean $\pm$ SD	3.1 $\pm$ 1.1	-	-

Abstract THU0144 –Table 2. Echocardiographic findings

	RA (n=85)	Control (n=48)	P
Diastolic dysfunction, n (%)	32 (37.6)	17 (35.4)	0.906
LV Geometry alterations, n (%)	27 (31.7)	6 (12.5)	0.038
LV mass index (g/m ²), median (q25 –q75)	70.1 (36.5 - 119.4)	72.9 (39.7 - 134.5)	NS
LV end diastolic diameter (cm), median (q25 –q75)	1.2 (.9 -1.9)	1.2 (.9 - 1.8)	NS
LV end systolic diameter (cm), mean $\pm$ SD	2.7 $\pm$.4	2.8 $\pm$.4	NS
Aortic valvulopathy, n (%)	16 (18.8)	3 (6.2)	0.078
Mitral valvulopathy, n (%)	47 (55.2)	8 (16.6)	0.001
Pulmonary valvulopathy, n (%)	9 (10.5)	-	0.066
Tricuspid valvulopathy, n (%)	71 (83.5)	25 (52.1)	0.000
LV Ejection Fraction (%), median (q25 –q75)	60.5 (51-76)	63.7 (54-77)	0.044

LV= Left ventricle.

Conclusion: Patients with rheumatoid arthritis have higher prevalence of mitral and tricuspid valves dysfunction in our population, and greater left ventricular geometry alterations, compared to controls. As the left ventricular ejection fraction is a strong prognosticator for CV disease, echocardiography might be a simple non-invasive tool for cardiac risk screening in RA.

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THU0145 INCIDENCE, TREND AND FACTORS ASSOCIATED WITH OPPORTUNISTIC INFECTION (OI) IN PATIENTS WITH RHEUMATOID ARTHRITIS IN SPAIN. (TREND-AR STUDY)

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Background: The epidemiology of hospitalizations for Opportunistic Infections (OI) in patients with rheumatoid arthritis (RA) is unknown despite an increase in RA treatments that confer risk of infection.

Objectives: To analyze the incidence, trend and factors associated with hospitalizations due to OI in patients with RA, in Spain, during the period between 1999 and 2015.

Methods: Population study based on the analysis of a national administrative database that includes a Minimum Basic Data Set (MBDS) of the income of patients with RA (ICD 9 714). Period: January 1, 1999 to December 31, 2015. The following entities were included as OI: tuberculosis (tbc), nontuberculous mycobacteria, cytomegalovirus (CMV), Epstein-Barr virus (EBV), Herpes zoster (HZ), Candidiasis, Toxoplasmosis, Pneumocystosis, Cryptococcosis, Listeriosis, Nocardiosis, Aspergillosis, Coccidioidomycosis, Histoplasmosis, Blastomycosis, Strongyloides, Leishmaniasis, Cryptosporidium, Trypanosoma cruzi, JVC and other prion viruses. These diagnoses were identified by the presence in primary and secondary diagnosis of their ICD9 codes. The population at risk was estimated

through the population census of the National Institute of Statistics, with an estimated prevalence of RA of 0.5% in both sexes (0.2% in men and 0.8% in women). Crude and adjusted rates were calculated at the national level. The trend was analyzed by Generalized Linear Models (GLM) using the year variable as the analysis variable. Clinical-demographic factors associated with these infections were analyzed, using uni and multivariate logistic regression.

Results: Of the total of 338,343 hospital admissions in patients with RA during the 17 years of the study period, there were 4,097 (1.2%) admissions with opportunistic infection, 1591 (38.8%) in men and 2506 (61.2%) in women ($p < 0.001$). The infections found in order of frequency were: HZ 1295 (29.9%), Tbc 1227 (29.9%), Aspergillosis 357 (8.7%), systemic candidiasis 342 (8.3%), CMV 270 (6.5%), EBV 133 (3.2%), Pneumocystosis 122 (2.9%), Leishmaniosis 100 (2.4%), Listeriosis 98 (2.3%), Mycobacteria no tbc 85 (2%), Nocardiosis 86 (2.1%), Trypanosoma Cruzi 19 (<1%), JVC 19 (<1%), Cryptococcosis 15 (<1%), Toxoplasmosis 14 (<1%), Strongyloides 11 (<1%), Cryptosporidium 6 (<1%), Histoplasmosis 1 (<10%), blastomycosis 1 (<1%). Between 20-40 years the most frequent infections were: Tbc, EBV, CMV; Between 40-60 years: Tbc, HZ, CMV; Over 60 years old: HZ, tbc, aspergillus. The mean age was 65.54 (SD16.6). 445 (10.9%) died during admission; 217 (13.6%) in men and 228 (9.1%) in women ($p < 0.001$). The mean of the Charlson index was 1.96 (1.49), 2.21 (SD1.6) in men and 1.81 (SD1.3) in women ($p < 0.001$). The Relative Risk male: female was 2.77. The infections with the highest male/female RR were: Leishmaniosis (4.77), Listeriosis (4.1) and Aspergillosis (3.8). The infections with the highest lethality were: Pneumocystosis (31%), Candidiasis (29.8%) and Aspergillosis (27.7%). The age-adjusted rate for all OI was 146.21/100,000 inh*year, 297.05 in men and 107.37 in women. Adjusted IO rates increased from 85.47 in 1999, to 193.48 in 2015. It is estimated that this increase is of 4.96% per year. In the multivariate analysis, the factors associated with OI were: male, COPD and liver disease.

Conclusion: In Spain, during the period 1999 to 2015, there has been an increase in the incidence rate of OI in patients with RA. We estimate an annual increase of 4.9%. Being male and having COPD or liver disease are associated with OI.

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THU0146

POOR COMPLIANCE BY RHEUMATOLOGISTS AND ORTHOPAEDISTS WITH GUIDELINES FOR THE PERIOPERATIVE MANAGEMENT OF RHEUMATOID ARTHRITIS PATIENTS UNDERGOING ARTHROPLASTY

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Background: Appropriate management can reduce the increased perioperative infection risk in RA patients(1). In 2017, American College of Rheumatology (ACR) and the American Association of Hip and Knee Surgeons released *Guidelines for the Perioperative Management of Antirheumatic Medication in Patients With Rheumatic Diseases Undergoing Elective Total Hip or Total Knee Arthroplasty*(1). Atlanto-axial subluxation at induction of general anaesthetic (GA) is another concern. Preoperative C-spine X-rays with flexion-extension views are recommended(2).

Objectives: Assess compliance with medication guidelines and C-spine imaging practices for RA patients undergoing arthroplasty under GA.

Methods: An anonymous 24 question paper-based survey was distributed at Irish Society of Rheumatology Meeting (September 2017) and Irish Institute of Trauma and Orthopaedic Surgery Curriculum Day (January 2018) examining clinician demographics, imaging and prescribing practices.

Results: 33 orthopaedists and 23 rheumatologists responded. The majority (n=46) were trainees and <40 years old (n=43). Most rheumatologists were female and orthopaedists male.

The guideline advocates cDMARD continuation perioperatively(1). Rheumatologists are more likely than orthopaedists to continue cDMARDs (Pearson Chi squared, 0.001). 8 (36%) rheumatologists continue cDMARDs, 6 (27%) stop one week preoperatively and 8 (36%) at two weeks. 1 orthopaedist never stops cDMARDs. 8 (24%) stop at one week preoperatively, 13 (39%) at 2 weeks, 5 (15%) at 4 weeks. 6 (18%) were unsure.

The guideline advocates stopping bDMARDs 1 dosing cycle preoperatively and restarting after wound healing. Depending on the agent, 2 to 4 rheumatologists never stop bDMARDs preoperatively. Responses varied by medication half-life. 18 hold etanercept for <4 weeks and 11 hold rituximab for >8 weeks. 2 orthopaedists never stop bDMARDs preoperatively.

Depending on the agent, 14-15 would stop <4 weeks prior, 10-12 were unsure, 4-8 weeks was chosen 4-5 times and >8 weeks 0-1 times.

Regarding patients on glucocorticoids for RA, the guideline advocates continuing current dosing perioperatively. 6 orthopaedists always increase steroids (13 sometimes, 9 never, 5 unsure). 7 never stop (13 sometimes, 6 always, 5 unsure). 12 rheumatologists sometimes increased steroids (8 always, 1 never, 1 not sure, 1 no answer). 14 never stop steroids (8 sometimes, one not sure).

In RA patients undergoing GA, 22 orthopaedists always perform C spine imaging prior (10 sometimes, 1 never). 11 rheumatologists always do C spine imaging prior (11 sometimes, 1 never). Orthopaedists are more likely than rheumatologists to always perform spinal imaging preoperatively (P value=0.002, Fisher's exact test).

Abstract THU0146 – Figure 1. Number of clinicians who always order C spine imaging prior to arthroplasty in RA patients undergoing GA

Conclusion: There is poor compliance with guidelines and variability and uncertainty in prescribing. Orthopaedists often discontinue sDMARDs preoperatively despite guidelines to the contrary. Orthopaedists are more likely than rheumatologists to perform preoperative C spine imaging as per recommendations.

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THU0147

FACTORS CONTRIBUTING TO DISCREPANT ESTIMATED GLOMERULAR FILTRATION VALUES MEASURED BY CREATININE AND CYSTATIN C IN PATIENTS WITH RHEUMATOID ARTHRITIS (RA)

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Background: In rheumatoid arthritis (RA) patients, it is important to evaluate renal function, because it may deteriorate due to RA itself or drug use requiring drug dose adjustment. Recently, Cystatin C (CysC) has been used as a more accurate marker of renal function than Creatinine (Cr), because it is not affected by muscle mass.¹⁾ Renal function of some RA patients is overestimated by Cr, and shows a discrepancy in the estimated glomerular filtration between Cr and CysC. However, what