THU0175

ASSESSMENT OF INSULIN RESISTANCE IN A RHEUMATOID ARTHRITIS INCEPTION COHORT: NESTED CASE-CONTROL STUDY

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Objectives: To assess insulin resistance (IR) in patients with rheumatoid arthritis (RA) and compare it with healthy controls and to analyse the association between the accumulated inflammatory burden in patients with RA and IR

Methods: **Design:** Nested case-control study. **Population:** consecutive RA-patients (ACR/EULAR 2010 criteria), >16 years, selected from a prospective inception cohort (diagnosis of RA between 2007 and 2011). Patients with Diabetes Mellitus (according to ADA 2010 criteria) were excluded. **Controls:** sex- age and BMI -matched controls were collected from a health centre in our hospital area. **Protocol:** Cases and controls were evaluated by a rheumatologist. Clinical data of disease activity (RA patients), analytical values and oral glucose tolerance test (OGTT) were determined. **Main outcome:** IR measured by the homeostasis model for insulin resistance (HOMA-IR) (IR >2.29 μU*mmol/ml). **Secondary outcome:** RI measured by quantitative insulin sensitivity check index (QUICKI) (<0.337 μU*mmol/ml) and by the homeostatic model assessment of β-cell function (HOMA β). **Variables:** Demographic, clinical-analytical variables, Disease Activity Score of 28 joints (DAS28-ESR), Health Assessment Questionnaire (HAQ), BMI (OMS classification) and glucose and insulin before and after OGTT values. **Statistical analysis:** Descriptive and paired T-test or Chi-square test followed by Multivariate linear regression in RA patients (Dependent variable: HOMA-IR)

Results: One hundred and fifty six subjects were studied, 4 of them were excluded after OGTT (2 diabetics and their respective controls). Finally, 1522 subjects were included; 89 RA and 63 controls. The mean age of patients with RA was 56.6 (10.9%) years. Most of them were women (76.4%), with seropositive (FR 83.1% y ACPA 79.1%) and erosive (62%) RA. The mean duration of the disease was 86 (±23) months and mean DAS28 index at the cut-off date of 2.8 (±1.1). Differences between clinical characteristics and in relation to IR between cases and controls are shown in table 1. No significant differences in the proportion of subject with IR in cases and controls were observed and 28.7% of patients with RA had IR. Of the 25 patients with IR, 75% had an average of DAS28 ≥3.2. In multivariate analysis, the independent variables associated with IR in patients with RA were: Obesity (β=1.7494 [p=0.003]), diagnosis delay (β=0.034 [p=0.003]) and disease activity (β=1.045 [p=0.058]). This model would explain 23% of the variability of the IR (R²=0.23).

VARIABLE	CASES n=89	CONTROLS n=63	P- VALUE
Age, years; mean(±SD)	56.6 (10.9)	56.1 (11.0)	0.756
Sex, women; n(%)	68(76.4)	52(82.5)	0.361
Comorbidities			
BMI > 30 (obesity) n(%)	30(34.1)	17(27.4)	0.386
BMI, mean(±SD)	28.2 (5.0)	27.2 (5.0)	0.205
Dyslipemia, n(%)	20 (2.7)	11 (18.6)	0.552
Hypertension, n(%)	23 (25.5)	16(25.8)	0.996
Insulin Resistance Indexes			
HOMA-IR>2.25, n(%)	25 (28.7)	17 (27.9)	0.908
HOMA-IR, mean(±SD)	25 (28.7)	17 (27.9)	0.908
HOMA-β, mean(±SD)	2.24 (2.6)	2.05 (1.5)	0.578
QUICKI, mean(±SD)	46.7 (32.3)	45.1 (32.1)	0.848

Conclusions: We did not find an increased IR in patients with RA compared with healthy controls, which may be due to adequate treatment and good control of inflammatory activity in the most of patients with RA. Obesity, diagnostic delay and inflammatory activity (measured by mean DAS28 index since the onset of the disease), were the predictors of IR in patients with RA in our study

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Disclosure of Interest: S. Manrique-Ariza Grant/research support from: Rheumatology Spanish Society, N. Mena-Vázquez: None declared, I. Ureña-Garnica: None declared, S. Abad-Sánchez: None declared, L. Ginel: None declared, C. Fuego-Varela: None declared, M. Rojas-Gimenez: None declared, L. Cano-García: None declared, F. Jimenez-Núñez: None declared, G. Diaz-Cordoves: None declared, M. Ordoñez-Cañizares: None declared, C. Romero-Barco: None declared, R. Caparrós: None declared, M. Irigoyen: None declared, A. Fernandez-Nebro: None declared

DOI: 10.1136/annrheumdis-2018-eular.3868

THU0176

THE EFFECT OF METHOTREXATE ON GASTROINTESTINAL SYMPTOMS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Methotrexate (MTX) can cause gastrointestinal (GI) symptom in patients with rheumatoid arthritis (RA); however, it is uncertain how much dose of MTX affects GI symptoms. RA patients may receive various drugs besides MTX. NSAIDs are known to be a risk factor for GI disorders, and folic acid has been reported to reduce GI side effects of MTX. Moreover, obesity is a risk factor for reflux. Therefore, it is necessary to evaluate comprehensively the causes of GI symptoms in RA patients.

Objectives: To compare prevalence of GI symptoms for the patients with RA treated with low and high dose MTX, and investigate factors associated with GI symptoms.

Methods: A total of 529 patients with RA treated with MTX were included in this cross-sectional study. GI Symptom Rating Scale (GSRS) was used to evaluate GI symptoms. The GSRS has five subscales (Reflux, Abdominal pain, Indigestion, Diarrhoea and Constipation) and a seven-point graded Likert-type scale. Symptomatic was defined as a score of ≥2 on GSRS subscale. Patients were divided into two categories according to their MTX dosage: low dose (≤8 mg/week) and high dose (>8 mg/week). Prevalence was compared by two groups with the chi-square test, and factors associated with GI symptoms were assessed with multivariate logistic regression analysis.

Results: Patient characteristics are shown in table 1. Of all patients, 313 (59%) received low dose MTX at a mean (SD) dose of 6.2 (1.7) mg/week, whereas 216 (41%) received high dose MTX at a mean (SD) dose of 11.8 (1.8) mg/week. Relative to patients receiving low dose MTX, those receiving high dose MTX had a higher prevalence of reflux (24% vs 32%, p=0.047) and abdominal pain (18% vs 28%, p=0.008) (figure 1). Multivariate analysis revealed that higher dose MTX was independently associated reflux (OR: 1.62, 95% CI: 1.07–2.43) and abdominal pain (OR: 1.70, 95% CI: 1.12–2.59) (table 2). The odds ratio of reflux or abdominal pain in patients receiving high dose MTX was similar to that in patient receiving NSAIDs.

Abstract THU0176 – Table 1. Demographic and clinical characteristics of patients

	MTX≤8 mg/w (n=313)	MTX>8 mg/w (n=216)	P value
Age, years	64±12	60±15	<0.001
Gender, female, n (%)	258 (82)	170 (79)	0.312
Body mass index	22±3	22±3	0.604
Disease duration, years	14±11	11±9	<0.001
MTX dose, mg/week	6.2±1.7	11.8±1.8	<0.001
DAS28-CRP	1.95±0.82	2.24±0.99	<0.001
Folic acid, n (%)	264 (84)	201 (93)	0.003
csDMARD other than MTX, n (%)	32 (10)	50 (23)	<0.001
bDMARD, n (%)	108 (35)	44 (20)	<0.001
Glucocorticoid, n (%)	66 (21)	59 (27)	0.118
NSAID, n (%)	95 (30)	84 (39)	0.050
Proton pump inhibitor, n (%)	49 (16)	47 (22)	0.085

Abstract THU0176 – Table 2. Factors associated with score of ≥2 on GSRS subscales

Reflux	OR (95% CI)	Abdominal pain	OR (95% CI)
Female	1.94 (1.11–3.39)	MTX≤8 mg/week (ref.)	1.00
NSAID	1.71 (1.13–2.68)	MTX>8 mg/week	1.70 (1.12–2.59)
MTX≤8 mg/week (ref.)	1.00	NSAID	1.67 (1.09–2.55)
MTX>8 mg/week	1.62 (1.07–2.43)		
Body mass index*	1.12 (1.06–1.19)		
Disease duration, year*	1.02 (1.01–1.04)		

* Odds ratio for 1-unit increase in each item.