FRI0033

TREND IN THE INCIDENCE OF ORTHOPAEDIC SURGERY IN PATIENTS WITH RHEUMATOID ARTHRITIS IN SPAIN. A NATIONAL OBSERVATIONAL COHORT STUDY

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Background: The need of orthopaedic surgery (OS) is a marker of disease severity in RA. During the last 20 years, the treatment in RA has changed, incorporating strategies based on "treat-to-target" and biological therapies. But, have these new strategies modified the incidence of OS in RA?

Objectives: To analyse the incidence and trend of hospital admissions for OS in patients with RA, in Spain, during the period between 1999 and 2015.

Methods: This is a national retrospective population based study. We analysed a national administrative database that includes a Minimum Basic Data Set (MBDS) of all hospital admissions of patients with RA. Period: 1999 to 2015. The OS were identified by the presence of ICD9 codes for arthrodesis, Total Hip Arthroplasty -THA-, Total Knee Arthroplasty -TKA-, Total Superior Limb Arthroplasty -TSLA. The population at risk was estimated through the population census of the National Institute of Statistics. The adjusted rates of hip fracture were calculated, by sex and age. The trend was analysed by Generalised Linear Models (GLM).

Results: Of a total of 338.343 hospital admissions, 21.088 (6,62%) were for OS. The main clinical-demographic characteristics are shown in the next table 1.

Table

	OS	THA	TKA	Arthrodesis	TSLA
N (% of total admissions)	21.088 (6.2)	8.709 (2.6)	9.006 (2.7)	1.372 (0.4)	2.230 (0.7)
Females (% of OS)	16.432 (100)	6.545 (39.83)	7.117 (43.31)	1.118 (6.8)	1.846 (11.23)
Age (SD)	65.02 (13.26)	66.57 (14.78)	65.97 (10.9)	55.90 (13.12)	59.93 (12.5)
Stay (SD)	10.97 (12.55)	13.48 (13.5)	10.73 (11.2)	6.69 (18.6)	4.54 (4.69)
In-hospital exitus	125 (0.6)	104 (1.2)	20 (0.2)	1 (0)	1 (0)

The mean age of OS increased 6 years during the study period ($p < 0.001$). The OS age-adjusted rate during the study period was 752.9/10⁵ inhab-year. The global fracture age-adjusted remained stable during the study period (IRR 1.002; IC95% 0.9–1.01). In RA patients >60 the rate increase while in RA <60 years the rate decrease (figure 1).

Conclusions: In Spain, during the period from 1999 to 2015, the global incidence rate of orthopaedic surgery in patients with RA has remained stable. In RA patients >60 years the rate increase while in RA <60 years the rate decrease. The mean age of OS increased 6 years.

Disclosure of Interest: None declared

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FRI0034

EFFICACY OF ETANERCEPT BY BODY MASS INDEX IN WOMEN AND MEN WITH RHEUMATOID ARTHRITIS: A POST HOC ANALYSIS OF THREE RANDOMISED TRIALS

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Background: In patients with rheumatoid arthritis (RA) treated with tumour necrosis factor α (TNF α) inhibitors, a higher body mass index (BMI) has been associated with lower odds of achieving disease remission.

Objectives: To evaluate the effect of BMI on response to etanercept (ETN) therapy in women and men with RA, (a) during open-label treatment and (b) following dose reduction or dosing off in patients who achieved low disease activity (LDA) or remission.

Methods: In this post hoc analysis, data were collected from three randomised trials (PRESERVE, n=834; PRIZE, n=306; T2T, n=489) in which patients with RA were assigned to an open-label treatment with ETN (50 mg) and MTX for 24–52 weeks, followed by randomised double-blind treatment with ETN (25 mg or 50 mg)+MTX, placebo +MTX, or placebo for 28–52 weeks in those who achieved LDA or remission. Data (observed cases) were analysed by BMI (<25 kg/m², ≥ 25 and <30 kg/m², or ≥ 30 kg/m²) for women and men separately, using a one-way ANCOVA model with baseline value and BMI category for continuous variables and a logistic regression model with BMI as factor for categorical variables. The parameters analysed included changes from baseline in Clinical Disease Activity Index (CDAI), 28-joint Disease Activity Score with C-reactive protein level (DAS28 CRP) or erythrocyte sedimentation rate (DAS28 ESR), and Health Assessment Questionnaire – Disability Index (HAQ-DI), as well as the percentages of patients who achieved CDAI remission (CDAI ≤ 2.8) or LDA (CDAI >2.8 and ≤ 10).

Results: In the open label periods of all three studies, there was no significant BMI effect on treatment response to ETN in male patients, except for CDAI remission at a single visit in PRIZE (figure 1). In open-label periods of the PRIZE and T2T trials, a significantly smaller decrease in DAS28 CRP and DAS28 ESR in women with BMI ≥ 30 kg/m², compared with the other two BMI categories, was observed at most visits. In addition, in PRIZE trial (but not in PRESERVE or T2T), women, but not men, with BMI ≥ 30 kg/m² had a significantly smaller decrease in CDAI and HAQ-DI scores and lower rates of CDAI LDA at most visits, compared with their counterparts with BMI <30 kg/m². For CDA remission, there was evidence of the effect of BMI ≥ 30 kg/m² in women in both PRIZE and PRESERVE (figure 1). Overall, these nominally significant differences between women with BMI ≥ 30 kg/m² and <30 kg/m² were transient: most of them diminished or were no longer significant toward the end of the open-label periods. In randomised, double-blind periods, there were no discernible trends attributable to BMI category in either women or men.

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Abstract FRI0034 – Figure 1

Conclusions: Results of this post hoc analysis suggest that, in men with RA, there was no impact of BMI on ETN efficacy. In women, there was evidence of a transient negative impact of BMI ≥ 30 kg/m² on ETN efficacy in open-label periods, but it diminished by the end of the induction period and was not consistent across trials. There was no evidence of BMI effect in men or women during the double-blind periods.

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FRI0035 DISEASE REMISSION IS MORE COMMON BUT LESS STRINGENT IN ANTI-CITRULLINATED PROTEIN ANTIBODY-POSITIVE PATIENTS WITH EARLY RHEUMATOID ARTHRITIS TREATED WITH CONVENTIONAL SYNTHETIC DISEASE MODIFYING DRUGS

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Background: Early diagnosis and goal-steered treatment strategies allow the achievement of disease remission in a significant proportion of patients with early rheumatoid arthritis (RA). Autoantibodies such as anti-citrullinated protein autoantibodies (ACPA) identify a subset of patients with a common pathogenetic background and more severe course of the disease. However, whether autoantibodies also impact the response to conventional synthetic disease modifying anti-rheumatic drugs (csDMARDs) remains object of debate.

Objectives: To investigate the frequency and the characteristics of disease remission in relation to the autoantibody status in patients with early RA treated with csDMARDs.

Methods: The study population consisted of 578 early RA patients (<12 months of symptoms) consecutively recruited at our Early Arthritis Clinic, treatment-naïve at inclusion and prospectively followed-up at regular intervals upon initiation of therapy with methotrexate (MTX) aimed at the achievement of low disease activity (28-joints disease activity score [DAS28] ≤ 3.2). ACPA and rheumatoid factor (RF) were centrally determined on baseline sera. The frequency of remission according to the DAS28 (<2.6) and to the simplified disease activity index (SDAI ≤ 3.3) over the first 12 months stratified by the autoantibody status was assessed by Cox regression. The following characteristics were further analysed: time to remission, swollen and tender joint count, and acute phase reactants at remission.

Results: 533/578 (92.2%) patients completed a follow-up of at least 12 months. Patients fulfilled the 2010 classification criteria for RA (81% also fulfilled the 1987 criteria) and had short disease duration at inclusion (median [IQR] 15.6 [9.4–27.8] weeks). Collectively, 53.9% and 44% of the patients achieved DAS28 and SDAI remission, respectively, at least once over the first 12 months of treatment. After adjusting for age, gender, symptoms' duration, baseline disease activity, MTX starting dose and prednisone co-medication, ACPA positivity was associated with slightly increased hazards of achieving both DAS28 (HR [95% CI] 1.24 [1.01–1.63]) and SDAI remission (HR [95% CI] 1.36 [1.01–1.85]) (figure 1A, B). However, irrespective of the remission criterion, ACPA-positive patients had higher numbers of residual swollen joints while being in remission, particularly in association with high levels of RF (>3 ULN) (figure 1C, D). Furthermore, remission was delayed in RF-high ACPA-positive patients compared to RF-low (figure 1E, F). Other features such as joint tenderness and acute phase reactants did not show significant differences among different serological subgroups.

Abstract FRI0035 – Figure 1

Conclusions: Early diagnosis and initial treatment with MTX result in high remission percentages in RA patients regardless of autoantibody positivity. However, remission appears less stringent in ACPA-positive patients, particularly when RF is also high. These findings indicate that current treatment approaches may be insufficient at effectively suppressing joint inflammation in autoantibody-positive patients.

Disclosure of Interest: None declared

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FRI0036 SUSTAINED REMISSION RELATED FACTORS IN PATIENTS WITH RHEUMATOID ARTHRITIS: IS IT POSSIBLE TO PREDICT SUSTAINED REMISSION?

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Background: The management of RA have been changed during past decades and sustained remission (SR) is the ultimate goal to halt joint damage and prevent the accrual of disability. Factors predicting SR are essential to individualise treatment and recognise patients that have an opportunity to taper medications in daily practice.

Objectives: To determine baseline predictors of sustained remission and comparison of its predictability by different remission criteria.

Methods: A total of 428 consecutive patients with RA visiting our outpatient clinic routinely between September 2012–2013 were evaluated. Seventy seven of these patients satisfying the DAS28 remission (<2.6) within the time frame were enrolled and followed-up prospectively for 62.2±9.9 months. Of these fulfilling the DAS28 remission ≥ 6 months (sustained remission) and shorter (non-sustained remission: N-SR) were compared in terms of baseline demographic and clinical data and the presence of anxiety, depression, fibromyalgia and fatigue to determine possible predictors of SR. At enrollment, first and fifth years, the DAS28, SDAI and Boolean remission rates of patients were determined and compared with regard to DAS28 remission visit counts throughout the follow-up. We also assessed the difference between the SDAI and Boolean remission rates at initial, first and fifth years' visits.

Results: Of these 77 patients, 63 were in SR and 14 were in N-SR. Lower baseline DAS28 and HAQ scores ($p=0.045$; $p=0.026$, respectively) and anti-CCP positivity ($p=0.035$) were positive predictors of SR. Although the presence of anxiety, depression, fibromyalgia and fatigue were lower in SR group, there was no statistical significance.

DAS28 remission visit counts of patients in Boolean ($n=32$) and DAS28 ($n=77$) remission at enrollment (5.7 ± 3.2 vs 5.4 ± 3.1 ; $p=0.995$) were not different. Similarly, no difference was found between patients in SDAI ($n=38$) and DAS28 remission (5.6 ± 3.3 vs 5.4 ± 3.1 ; $p=0.769$). Patients meeting the DAS28 criteria ($n=77$, 100%) reduced 64% ($n=50$) at first and 42.6% ($n=29$) at fifth years. Patients satisfying SDAI and Boolean criteria were 49%, 44% vs 32.4% ($n=22$) and 41%, 28% vs 20.6% ($n=14$), respectively.

If the duration of SR is considered as 6 months, the remission rates of SDAI were not different between patients at inclusion and fifth years but Boolean remission rates differed significantly and if it is accepted as ≥ 12 months, the SDAI and Boolean remission rates were not different than at fifth year visit.

Conclusions: Low DAS28 and HAQ score at baseline and anti-CCP positivity were positive predictors of SR. Although the presence of anxiety, depression, fibromyalgia and fatigue were lower in SR group, there was no statistical significance. Compared to the DAS28, remission determined by the Boolean and especially SDAI criteria continued consistently in long term.

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