AB0335 EFFECT OF TOTAL KNEE ARTHROPLASTY ON MEDICATION IN PATIENTS WITH RHEUMATOID ARTHRITIS

K. Harigane[1,2], Y. Mochida[1], K. Kumagai[2], K. Ishii[1], Y. Miyamae[1], N. Mitsugi[3], H. Choe[2], A. Nagaoka[2], Y. Inaba[2], T. Saito[2]. *[1]Center for Rheumatic Diseases, Yokohama City University Medical Center; [2]Orthopaedic Surgery, Yokohama City University; [3]Orthopaedic Surgery, Yokohama City University Medical Center, Yokohama, Japan*

Background: Several studies reported that development of phaemacological treatment for rheumatoid arthritis (RA) contributed to decreased number of orthopaedic surgery. [1–3] Surgical treatment is, however, still required in many cases, and the impact of orthopaedic surgery on disease activity remain unclear.
Objectives: This study evaluated the effect of total knee arthroplasty (TKA) with capsulosynovectomy on chenges of disease activity and medication in patients with RA.
Methods: Seventy-seven serial patients with RA (61 female and 16 male) who underwent primary TKA with more than one year of follow-up were retrospectively reviewed to assess postoperative disease activity and drug administration. The mean age at the time of surgery was 68.3 years old. The disease activity of RA was measured using Disease Activity Score in 28 Joints (DAS28). To evaluate the effects of medication on preoperative and postoperative disease activity, outcomes at before surgery and one year after surgery were separately investigated following two groups; patients who were treated with the same or reduced medication (same group) and patients who were administered with additional or altered medication (change group).
Results: Seventy-two patients (97.3%) were administered with at least one DMRDs before or after surgery. The mean dose of methotrexate (MTX) was 7.7mg/week before surgery and 8.0mg/week after surgery respectively. The number of patients who were treated with biological DMARDs was increased after surgery (17 patients vs.21 patients), however there was not significant differences. RA disease activity was significantly decreased in DAS28-CRP one year after surgery. (3.9 vs. 2.7, $p<0.01$) As for difference of the disease activity in same and change groups, DAS28-CRP was significantly decreased after surgery. (same group; 3.7 vs. 2.5, $p<0.01$, change group; 4.5 vs. 3.2, $p<0.01$) DAS28-CRP in change group was significantly higher both before and after surgery compared with those in same group. ($p<0.01$)
Conclusions: TKA with capsulosynovectomy improves disease activity after surgery in patients with RA. Based on the results, patients with higher disease activity before surgery required further medication after surgery.
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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.2416

AB0336 MAGNETIC RESONANCE IMAGING-ASSESSED SYNOVIAL AND BONE CHANGES IN HAND AND WRIST JOINTS OF RHEUMATOID ARTHRITIS PATIENTS

K.A. Lee, S.-H. Min, T.-H. Kim, S.-H. Lee, H.-R. Kim. *Internal Medicine, Konkuk University Medical Center, Seoul, Korea, Republic Of*

Background: Magnetic resonance imaging (MRI) is a sensitive and useful method for the detection of synovitis and joint destruction in rheumatoid arthritis (RA) patients. However, the patterns of MRI-detected bone erosion, bone marrow edema (BME), synovitis, and tenosynovitis have received insufficient attention.
Objectives: Therefore, this study evaluated the patterns of bone erosion, BME, synovitis, and tenosynovitis, and calculated the RA-MRI score (RAMRIS) of patients with RA at the carpal and metacarpophalangeal (MCP) joints using MRI.
Methods: MRI datasets from 43 RA patients were analyzed. All patients had undergone MRI of one wrist. In addition, 36 patients had MCP joint images taken, and 3 had also received MRI of the contralateral wrist and MCP joints. The MR images were evaluated for bone erosion, BME, and synovitis in consensus by 2 blinded readers according to the OMERACT RA-MRI score (RAMRIS). The MRI-detected tenosynovitis was evaluated based on Haavardsholm's tenosynovitis score.
Results: The capitate, lunate, triquetrum, and hamate bones were the most common sites of erosion and BME and showed the highest RAMRIS erosion and BME scores. Moreover, MRI-detected tenosynovitis was present in 78.3% of all patients with RA, and the extensor compartment 4 and flexor digitorum profundus and superficialis were frequently affected.
Conclusions: This study identified the distribution and prevalence of MRI-detected bone erosion, BME, synovitis, and tenosynovitis of the wrist and MCP joints in RA patients. The patterns of the MRI-detected abnormalities may help to select sites for the application of MRI protocols in clinical trials and practice.

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Acknowledgements: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.1507

AB0337 BIOLOGIC THERAPY IN SEVERE PERIPHERAL ULCERATIVE KERATITIS (PUK). MULTICENTER STUDY OF 27 PATIENTS

L. Domínguez-Casas[1], V. Calvo-Río[1], O. Maíz[2], A. Blanco[2], E. Beltrán[3], L. Martínez-Costa[4], M. Alvarez del Buergo[5], E. Rubio-Romero[6], D. Díaz-Valle[7], R. López-González[8], A. García Aparicio[9], A. Juan Mas[10], N. Palmou[1], M. González-Gay[1], R. Blanco[1]. *[1]HUMV, Santander; [2]H, Donostia; [3]H; [4]H Peset, Valencia; [5]H; [6]H Río Carrión, Palencia; [7]H San Carlos, Madrid; [8]C Hospitalario, Zamora; [9]H, Toledo; [10]H S Llàtzer, P Mallorca, Spain*

Background: Peripheric Ulcerative Keratitis (PUK) is a severe inflammation that may lead to ocular perforation. PUK may be primary or associated with systemic conditions. Treatment is based on corticosteroids and conventional systemic immunosuppressive drugs.
Objectives: To evaluate biologic therapy in cases with severe and refractory PUK.
Methods: Multicenter study from 9 hospitals. Patients presented inadequate response or intolerance to conventional therapy with corticosteroids and at least 1 systemic traditional immunosuppressive drug.
The main outcome measures were visual acuity, signs of inflammation, progression to corneal thinning, central keratolysis and ocular perforation. Comparisons were made between baseline and 1st week, 1st month, 6th month and 1st year. Statistical analysis was performed using the software STATISTICA (StatSoft). Results were expressed as mean±SD for variables with a normal distribution, or as median [IQR] when they were not normally distributed. The comparison of continuous variables was performed using the Wilcoxon test and categorical variables with chi-square test.
Results: We studied 27 patients/35 affected eyes (7 men/20 women), mean age, 57.2±16.3 years (range 28–89). PUK was primary in 1 case whereas in the 26 remaining cases, the underlying diseases were Rheumatoid Arthritis (RA) (n=19), Psoriasic Arthritis (n=2), RA+Felty syndrome+common variable immunodeficiency (n=1), Behçet Disease (n=1), Type I diabetes mellitus (n=1), granulomatous polyangiitis (n=1) and microscopic polyangiitis (n=1). They received the following topical therapy: corticosteroids (n=18), antibiotics (n=17), lubricants (n=18), autologous serum (n=11), topical cyclosporin 2% (n=11) and topical tacrolimus 0.03% (n=1). Besides oral corticosteroids and before the onset of the biologic therapy they had received iv pulses of methylprednisolone (n=8), methotrexate (16), oral doxycycline (9), azathioprine (3) and ascorbic acid (2). Moreover, 10 patients required surgery: amniotic membrane (n=7), penetrating keratoplasty (n=4), conjunctival resection (n=3), tissue adhesives (n=2), conjunctival flap (n=1) and lamellar keratoplasty (n=1).
Anti-TNFα drugs were the most common biologic agents used in these cases (n=19): Adalimumab (ADA) (n=10; 37%), Infliximab (IFX) (n=8; 29.6%) and etanercept (n=1; 3.7%). In the remaining 8 cases the biologic agents were rituximab (n=7; 25.9%) and tocilizumab (n=1; 3.7%). The main outcome measures are summarized in the Table.
After a mean follow-up of 23.7±20 months, all objective outcomes had improved with a reduction of the median prednisone dose from 33.7 [17.5–52.5] mg at baseline to 0 [0–2.5] mg (p=0.028). The main observed adverse effects were supraventricular tachycardia (n=1) and pulmonary Tuberculosis (n=1).

	Basal	1 week	1 month	6 months	1 year
Visual acuity, mean±SD	0.54±0.37	0.55±0.35	0.58±0.33	0.67±0.3*	0.69±0.27*
Peripheral thinning #	85.7	80*	57.1*	40*	34.3*
Central keratolysis #*	17.1	8.6*	0*	8.6*	5.7*
Ocular perforation #	11.4	14.3*	0*	0*	2.8*
Scleritis #	34.3	22.8*	8.6*	0*	0*
Episcleritis #	22.8	11.4*	5.7*	2.8*	2.8*
Uveitis #	14.3	14.3	8.6*	2.8*	2.8*

Data expressed as % of the active eyes
*$p < 0.05$ compared with basal data

Conclusions: In our series, biological therapy, especially IFX and ADA, is effective and relatively safe in patients with PUK refractory to standard systemic treatment.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.3576

AB0338 HEADS-UP! SARCOIDOSIS AND RHEUMATOID ARTHRITIS CO-EXIST

L. Zickuhr, R. Hajj-Ali. *Rheumatology, Cleveland Clinic Foundation, Cleveland, United States*

Background: Sarcoidosis and rheumatoid arthritis (RA) uncommonly co-occur. How dual diagnosis affects these patients' clinical phenotype is unknown.
Objectives: To characterize the clinical and laboratory phenotype and to increase awareness of the coexistence of sarcoidosis and RA.
Methods: We searched PubMed from 1980–2016 for relevant articles using key words "sarcoidosis" and "rheumatoid arthritis," excluding cases with tumor necrosis factor inhibitors. We found 12 cases, omitted 5 lacking clinical detail, and added 2 from our experience at the Cleveland Clinic. Clinical features, laboratory and imaging findings were reviewed and summarized.
Results: Females comprised 7/9 cases (77%). Our cases are the first to describe men with dual diagnosis. Of the 8 cases reporting ethnicity, 4 (50%) were white. The mean age at time of diagnosis was 35.3 years for RA and 51.0 years for sarcoidosis. In 5/9 cases (55%), RA preceded sarcoidosis. RA affected the hands in 8/9 patients (88.9%). Of the 8 cases reporting symptoms of sarcoidosis, 5 (62.5%) had dyspnea. All cases (100%) had elevated rheumatoid factor (RF) and, when checked, anti-citrullinated peptide (anti-CCP) antibodies. Angiotensin converting enzyme (ACE) was elevated in 6/9 patients (66.6%). Of the 5 patients with joint imaging, 4 (80%) had inflammatory changes. All sarcoidosis (100%) was biopsy-proven. One case (11.1%) demonstrated concomitant pulmonary RA and sarcoidosis.
Conclusions: Sarcoidosis and RA coexist in seropositive patients, most commonly in women in their fourth through sixth decades of life. RA preceded sarcoidosis about half the time. Hand arthritis and dyspnea were the most common symptoms for RA and sarcoidosis, respectively. Awareness of this dual diagnosis may help identify RA and sarcoidosis earlier and prevent treatment delay.
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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.5401

AB0339 COMORBIDITIES AND RISK FACTORS OF CARDIOVASCULAR DISEASES IN RHEUMATOID ARTHRITIS PATIENTS

L.V. Khimion[1], I.V. Klymas[1], I.M. Naishtetik[2]. *[1]Department of Family Medicine, Shupyk National Medical Academy of Postgraduate Education; [2]Kyiv Regional Clinical Hospital, Kyiv, Ukraine*

Background: It is well known, that atherosclerosis associated cardiovascular diseases in many cases determine the life expectancy in RA patients. At the same time, risk factors which promote the development of premature atherosclerosis, including comorbidities, remain uncertain.
Objectives: to analyze comorbid conditions in RA patients under age of 50 years and assess their impact on the vascular wall (evaluated by ultrasound investigation of the carotid arteries).
Methods: The study was conducted at the Department of Family Medicine, Shupyk NMAPE at the Kyiv Regional Clinical Hospital. The study included 126 RA patients, aged from 18 to 49 years (women - 102 (81%), men - 24 (19%), average age 43.82±8.8 years, who provided written consent to participate in research. As a control group 30 persons without any autoimmune diseases (women - 25 (83.3%) men - 5 (16.7%), average age 42.4±8.6 years) were examined.
All RA patients and control group underwent comprehensive clinical, laboratory and instrumental examination to identify comorbid conditions including evaluation of atherogenesis by use of ultrasound examination of the carotid arteries with intima-media thickness (IMT) measurement and atherosclerosis plagues (AP) assessment.
Results: The frequency of identified comorbid conditions and diseases in RA patients and control group are presented in Table 1.
The average number of comorbid diseases/conditions per RA patient significantly exceeded its number in controls (4.13 and 1.67 respectively, $p<0.05$); most frequently among RA patients was determined: dyslipidemia (60.32%), nonalcoholic fatty liver disease (61.11%), chronic cholecystitis (36.51%), cholesterosis of the gallbladder (30.16%), hypertension (37.30%), autoimmune thyroiditis (27.77%), spinal osteoarthritis (33.33%).

Table 1. The frequency of comorbidities in RA patients and control group

Diseases and conditions	RA (n=126)		Control (n=30)	
	n	%	n	%
Coronary heart disease	12	9.52*	0	0
Arterial hypertension	47	37.30*	0	0
Neurocirculatory asthenia	2	1.58*	1	3.3
Dyslipidemia	76	60.32*	2	6.67
Peptic ulcer	6	4.76*	1	3.30
Chronic gastritis	29	23.00	3	10.0
Chronic pancreatitis	19	15.08	5	16.67
Nonalcohol fatty liver disease	77	61.11*	2	6.67
Cholesterosis of the gallbladder	38	30.16*	1	3.33
Chronic cholecystitis	46	36.51*	3	10.00
Gall stones	8	8.25*	0	0
Diabetes mellitus type 2	3	2.38*	0	0
Diffuse goiter	5	3.97*	0	0
Autoimmune thyroiditis	35	27.77*	1	3.33
Chronic obstructive pulmonary disease	5	3.97	4	13.33
Osteoarthritis of the spine	42	33.33	9	30.00
Chronic kidney disease	5	3.97	1	3.33
Abdominal obesity	21	16.67	4	13.33

*The difference between groups is significant, $p<0.05$.

Results of the carotid ultrasonography and assessment of atherosclerosis surrogate markers (IMT, AP) showed higher severity of atherosclerotic process in patients with RA compared to controls; the most important risk factors for increasing IMT and atherosclerotic plaques in carotid arteries were dyslipidemia, autoimmune thyroiditis with hypothyroidism and nonalcoholic fatty liver disease.
Conclusions: Patients with RA have a higher frequency of comorbid conditions and diseases than controls without RA; some of comorbidities have significant influence on atherogenesis; RA patients require a multidisciplinary and holistic approach for effective management of their health related problems.
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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.3027

AB0340 CLINICAL EFFICACY OF STATINS IN PATIENTS WITH RHEUMATOID ARTHRITIS

L. Mikulets, T. Ilashchuk. *Department of Propedeutics of Internal Diseases, Higher State Educational Establishment of Ukraine "Bukovinian State Medical University", Chernivtsi, Ukraine*

Background: Cardiovascular disease (CVD) is a major cause of mortality in patients with rheumatoid arthritis (RA). In the literature there are conflicting data on the use of statins in patients with RA, indicating a lack of attention to the issue of prevention of CVD in this category of patients.
Objectives: The aim of the study was to improve the efficiency of the treatment of rheumatoid arthritis by including to the basic treatment rosuvastatin.
Methods: The study included 43 patients with RA. A survey conducted by the protocol patients (DAS28 index, visual analog scale (VAS), morning stiffness). The study of lipid metabolism included: determining the level of total cholesterol (total cholesterol), HDL cholesterol (HDL) and low density (LDL), atherogenic index (AI), triglycerides (TG). Total cardiovascular risk assessment was performed using a table SCORE. Surveyed patients divided into groups: primary (n=20) (basic therapy and rosuvastatin, 10 mg 1 time per day) and comparison (n=23) (basic therapy that included methotrexate, non-steroidal anti-inflammatory drugs, glucocorticoids in medium therapeutic doses).
Results: As a result of the treatment found that patients with a primary and group comparison, there was a positive dynamics of clinical indicators of inflammatory activity (DAS28, VAS, morning stiffness). In the study group experienced a significant decrease ($p<0.05$) at the same time as in the comparison group had a tendency to decrease. Noted a reduction parameters: CRP ($\Delta_1$37% main group and the comparison group $\Delta_2$21%), ESR ($\Delta_1$39% and $\Delta_2$26% respectively). Also noted the changes in the lipid profile. Significantly decreased in the study group performance total cholesterol ($\Delta_1$31% versus $\Delta_2$15%), LDL cholesterol ($\Delta_1$19% against $\Delta_2$8%) and AI ($\Delta_1$29% and $\Delta_2$16% respectively).
Conclusions: Inclusion in the complex therapy of patients with RA statins contributes to a significant reduction in total cholesterol, LDL cholesterol, and positively affects the activity of the process, reducing the levels of acute phase proteins. Additional indications for the purpose of statins have high activity process and late onset. The use of statins in RA, given their lipid-lowering and anti-inflammatory effects, may be an effective means for the successful prevention of cardiovascular complications.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.5983