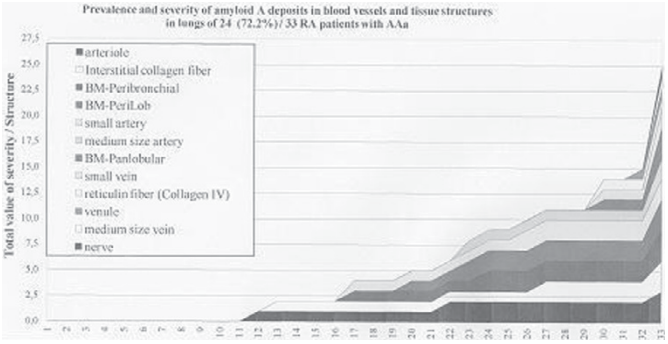
At least four tissue samples of lungs (from apical and basal regions of both lungs) were available for histologic evaluation in 33 of these 34 patients.
RA was confirmed clinically according to the criteria of the ACR.
The presence of amyloid A deposits in various structures of the lungs was determined histologically by amyloid specific Congo red staining, according to Romhányi [2].
The extent of amyloid A deposition was evaluated by semi-quantitative, visual estimation on a 0 to 3 plus scale, based on the number of involved tissue structures per light microscopic field [1]. ("0": no amyloid deposits, "1": Sporadic, minimal amyloid deposits on different tissue structures, "2": less than five, "3": five or more involved tissue structures per microscopic field at objective magnification of x20)
Results: Amyloid A deposition in the lungs was detected in 24 of 33 (72.2%) patients.
Amyloid deposition in various structures does not begin at the same time.
In the early stage of systemic amyloidosis there were histologically detectable amyloid deposits only in a few structures (arterioles, interstitial collagen fibers, peribronchial and perilobular basement membranes). In other structures (small and medium size arteries, panlobular basement membranes, small veins, collagen IV reticulin fibres, venules, medium size veins and nerves) deposits were seen only in late stages of amyloidosis (with massive involvement of the mentioned structures).

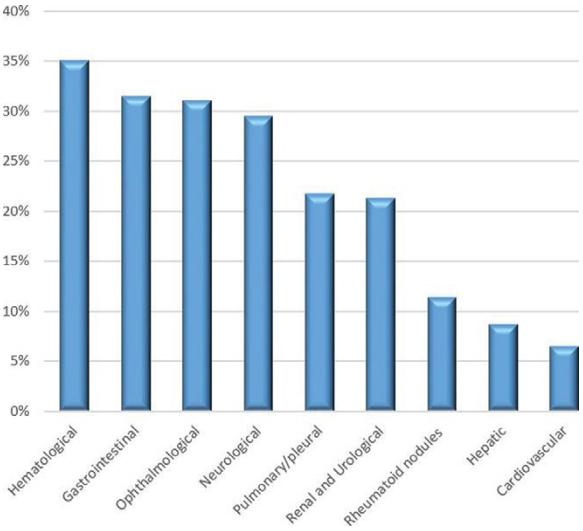


Conclusions: Amyloidosis is a progressive, cumulative process, involving in its early stage only a few structures in some organs, and increasingly more in the later stages of the disease [1]. Amyloid A deposition starts in the most frequently involved structures of the most frequently involved organ [1].
In the lungs amyloid A deposition starts in the wall of arterioles and in interstitial collagen fibers. As time progresses, basement membranes of peribronchial and peripheral regions of lobules, small and medium sizes arteries become involved. Still later panlobular deposition of basement membranes, small veins, reticulin fibers (collagen IV) of subpleural fat tissue, venules and medium size veins become involved. The involvement of nerves indicates advanced stages of amyloid deposition in the lung.
This chronology of amyloid A deposition allows an indirect assessment of the stage of amyloidosis. Based on the involvement of structures in lung biopsy specimens the pathologist may be able to estimate involvement of the other structures, even if not present in the sections. Involvement of arterioles alone (without involvement of small arteries) indicates an early stage of amyloidosis, whereas amyloid A deposits in veins or peripheral nerves suggests an advanced stage with massive involvement of other pulmonary structures.
References:
[1] Bély M, Apáthy Á: Clinical pathology of rheumatoid arthritis: Cause of death, lethal complications and associated diseases. 1–440 pp. Akadémiai Kiadó, Budapest 2012 http://www.akkrt.hu.
[2] Romhányi G (1971) Virchows Arch 354, 209–222.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.1225

AB0291 EPIDEMIOLOGY AND COMORBIDITY OF RHEUMATOID ARTHRITIS IN UPPER EGYPT, A HOSPITAL BASED STUDY

A.M. Elsaman, A.R. Radwan, M.H. Abou Dahab, A.M. Sherif, E.M. Abu Al-Fadl.
Rheumatology, Sohag University Faculty of Medicine, Egypt, Egypt

Background: Rheumatoid arthritis (RA) is one of the commonest autoimmune diseases. It affects about 1% of the population worldwide (1). The prevalence of RA varies widely between different countries (2). Not only the prevalence of the disease which differs among different continents, races, ages and socioeconomic levels but also the disease pattern. Studies explaining the epidemiology of RA in Egypt in general and in upper-Egypt, in particular, are very limited (3).
Objectives: To estimate the comorbidity of rheumatoid arthritis and its relation to disease activity, duration, disease pattern and demographic features of RA patients in upper Egypt.
Methods: This study was carried out on 923 patients who fulfilled ACR/EULAR criteria 2010. All of them live in Sohag governorate and aged 18 years or older DAS28-ESR score, first involved joint, joint distribution, disease pattern, extra-articular comorbidities including gastrointestinal, urinary, cardiac, haematological and neurological were estimated. The activity of daily living was valued by Erlangen score (E-ADL).
Results: The mean age of the participants was 45±10.9 years, with a range (19–70). The median of the disease duration was 5 years, with a range (0.5–40 years). Most of the participants were female (691, 74.9%). Disease onset was gradual or insidious in 94.3% of cases and acute in 5.7% of them. First joint group affected were the small joints of the hands (MCPs and PIPs), recorded in 48.9% of cases, Followed by wrist joints (29.3% of cases), then knees (9%), ankles and small joints of the foot (6%) and lastly other joints collectively recorded in only 6.8%. The commonest extra-articular comorbidities were haematological, seen in 323 cases; 35%, followed by gastrointestinal in 290 cases (31.4%), then ophthalmological in 31%, entrapment syndromes in 29.4%, pulmonary in 21.7%, urological in 12.4%, rheumatoid nodules in 11.4%, liver cirrhosis in 8.7%, renal impairment in 8.5% and Cardiovascular diseases in 6.5%. The activity of daily living (E-ADL) showed that most of the cases fell in score 4 (58.2%). Regarding DMARDs treatment of the study population, Methotrexate (MTX) was used regularly by 78.3% of cases, hydroxychloroquine (HCQ) by 78.1%, followed by Leflunomide (LEF) by 26.4% and sulfasalazine (SSZ) by 13.1%. The majority of cases used combination therapy of either MTX+HCQ, MTX+SSZ, MTX+HCQ+SSZ or MTX+LEF. Regarding other drugs, 99% of cases used NSAIDs (regularly in 30.2% and on demand in 68.8%). Steroids were regularly used by 28.8% of cases.



Conclusions: The commonest comorbidities were haematological, gastrointestinal, ophthalmological and neurological ones; respectively. Erosion, deformity and Das28-ESR score have a great impact on E-ADL score.
References:
[1] Gibofsky A. Overview of epidemiology, pathophysiology, and diagnosis of rheumatoid arthritis. Am J Manag Care. 2012;18(13 Suppl):S295–302.
[2] Ferucci ED, Templin DW, Lanier AP, editors. Rheumatoid arthritis in American Indians and Alaska Natives: a review of the literature. Seminars in arthritis and rheumatism; 2005: Elsevier.
[3] El-Labban AS, Omar HAA, El-Shereif RR, Ali F, El-Mansoury TM. Pattern of young and old onset rheumatoid arthritis (YORA and EORA) among a group of Egyptian patients with rheumatoid arthritis. Clinical medicine insights Arthritis and musculoskeletal disorders. 2010;3:25.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.1440

AB0292 CLINICAL FEATURES OF RHEUMATOID ARTHRITIS AT 75 YEARS OF AGE AND OLDER IN JAPAN – COMPARISON WITH POLYMYALGIA RHEUMATICA IN THE SAME AGE GROUP

A. Aoki[1], H. Oka[1], I. Aoki[2]. *[1]Dept. of Rheumatology, Tokyo Medical University Hachioji Medical Center, Tokyo; [2]Dept. of Pathology, Kanagawa Prefectural Ashigarakami Hospital, Kanagawa, Japan*

Background: As Japan is a super-aged society, we have many chances to care for elderly patients in our hospital. Elderly-onset rheumatoid arthritis (RA) (onset age >60 years) may present similar symptoms to those of polymyalgia rheumatica (PMR). We consider that differential diagnosis of RA and PMR is more difficult in patients over 75 than those under 74 in clinical practice.
Anti-cyclic citrullinated peptide antibody (ACPA) was reported to be a helpful tool in the differential diagnosis of EORA from PMR. However, when elderly patients with negative ACPA complained of bilateral shoulder and/or girdle pain, it was difficult to differentiate PMR from RA.
Objectives: The study aimed to explore clinical features of RA and PMR at onset age 75 years. For the present investigation, we used a novel diagnostic

tool to distinguish ACPA-negative elderly RA patients from PMR patients at initial presentation.

Methods: From April 2011 to December 2016, 21 RA patients and 24 PMR patients in our hospital, whose onset age was over 75 years, were recruited for this study. PMR patients did not have any evidence of giant cell arteritis. The diagnosis of RA was made based on 2010 ACR/EULAR RA classification criteria. The diagnosis of PMR was made based on 2012 EULAR/ACR classification criteria or Bird's criteria. Data were obtained from medical records under informed consent. Statistical analysis was performed using the Mann-Whitney U-test to compare median values and Fisher's exact test to compare frequencies (IBM SPSS version 24). $P<0.05$ indicated statistical significance.

Results: RA patients (6 men and 15 women) consisted of fifteen ACPA+ (11 RF+, 4 RF–), six ACPA– (1 RF+, 5 RF–). PMR patients consisted of 12 men and 12 women. All of them were ACPA–/RF– and did not meet 2010 RA criteria. Twenty patients met 2012 PMR classification criteria, and 4 patients without bilateral shoulder pain met Bird's criteria. Clinical features and statistical results are shown in the Table. Sixty-seven percent of RA patients and 13% of PMR patients had left-right differences in joint pain.

Scoring was performed based on clinical findings. Tenderness and/or swelling joint counts among wrists, fingers, ankles, and knees = each 1 point, left-right difference =1 point, no bilateral shoulder pain =1 point, no girdle pain =1 point, no fever =1 point; the maximum score was 8. The mean score in RA patients was 4.8 (SD =1.44), whereas that in PMR patients was significantly lower at 1.5 (0.98) ($P<0.001$). Receiver operating characteristic (ROC) curve analysis was used to determine the most suitable cut-off level to find RA. A score over 3 was 100% sensitivity and 87.5% specificity. All 6 ACPA-negative RA patients showed a score over 4.

Table Clinical features in patients with rheumatoid arthritis (RA) and polymyalgia rheumatica (PMR)

			RA≧75 (n=21)	PMR≧75 (n=24)	*P*-value
Age at onset (years)		mean (SD)	81.5 (4.18)	80.5 (3.95)	0.4
Male		n (%)	6 (33)	12 (50)	0.1
Time from onset to start of treatment (months)		median (IQR)	2.0 (1.5)	1.5 (1.4)	0.09
Joint/muscle pain at onset	Bilateral shoulder	n (%)	10 (48)	20 (83)	0.03
	Girdle	n (%)	0 (0)	12 (50)	<0.001
	Wrist	n (%)	19 (91)	7 (30)	<0.001
	Finger	n (%)	4 (19)	0 (0)	0.04
	Foot	n (%)	6 (29)	0 (0)	0.007
	Knee	n (%)	13 (62)	2 (8)	<0.001
Systemic symptoms	Fever	n (%)	3 (14)	14 (58)	0.002
	Body weight loss	n (%)	6 (29)	14 (58)	0.07
Rheumatoid factor positive		n (%)	12 (57)	0	<0.001
Anti-CCP antibody positive		n (%)	15 (71)	0	<0.001
C-reactive protein (mg/dL) at onset		mean (SD)	6.1 (5.66)	8.4 (4.61)	0.1
Matrix metalloproteinase 3 (ng/mL) at onset		mean (SD)	431 (373.6)	421 (342.0)	0.9

SD, standard deviation; IQR, interquantile range; CCP, cyclic citrullinated peptide

Conclusions: Pease et al studied RA at onset 60 years and over and PMR, and reported that arthritis of wrists and fingers was suggestive of RA[1]. However, in our study, small joint swelling was rare in RA patients 75 years and older. The scoring system we made might be useful for the differential diagnosis of ACPA-negative RA and PMR in elderly patients 75 years and older.

References:

[1] Pease CT, et al. Diagnosing late onset rheumatoid arthritis, polymyalgia rheumatica, and temporal arteritis in patients presenting with polymyalgic symptoms. A prospective longterm evaluation. J Rheumatol 32: 1043–1046, 2005.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.2016

AB0293 METABOLIC SYNDROME AND INSULIN RESISTANCE IN ADULT EGYPTIAN FEMALES WITH RHEUMATOID ARTHRITIS

A.A.-R. Youssef[1,1], N.O. Neseem[1], M.A.-B. Omar[2], O.M. El-Siri[1].
[1]Rheumatology & Rehabilitation; [2]Clinical Pathology, Mansoura University, Mansoura, Egypt

Background: Patients with Rheumatoid Arthritis (RA) have an increased risk for cardiovascular disease (CVD) due to higher prevalence of traditional risk factors (1), Insulin resistance (IR) is implicated in inflammatory diseases such as RA (2). The prevalence of Met.Syn and IR in Egyptian female RA patients has not been studied before.

Objectives: To find out the prevalence of Met.Syn and IR in a cohort of Egyptian females with RA and in controls and to study the associated risk factors

Methods: 60 female RA patients and 30 healthy females matched for age were included according to the ACR/EULAR 2010 classification criteria. Disease activity was assessed using DAS- 28. IR using HOMA- index (HOMA- IR) (3) Met.Syn was defined according to the updated third report of the National Cholesterol Education Program's Adult Treatment Panel (NCEP-ATP III) criteria (4).

Results: Prevalence of Met.Syn in female RA patients is significantly (sig.) higher (56.7%) than that of controls (33.3%, P=0.04). IR is prevalent in RA patients (63.4%), Patients with Met.Syn exhibited sig. higher serum levels of TG ($P<0.001$,) FBG (P=0.02), CRP (P=0.02), Fasting insulin (P=0.01) and IR (P=0.03) than those without. Median CRP (24) and mean DAS- 28 (5.6±1.5) in RA patients with increased IR are sig. higher than those of RA Patients with normal IR (6.5, $P<0.01$) & (4.7±1.5 $P<0.04$) respectively. Significant positive correlation was found between DAS-28 and IR (Rs =0.3, P=0.03). Using logistic regression, high systolic blood presser (OR =1.2, 95% CI: 1.02 – 1.39, P=0.03) and elevated CRP (OR =1.07, 95% CI: 1.01 – 1.14, P=0.04) have shown to be the significant independent predictors for the development of Met.Syn

Conclusions: Met.Syn. and IR are prevalent in female Egyptian RA patients adding to the CV risk of the disease and both are related to increased disease activity. Rheumatologists should pay an attention to control RA disease activity in addition to screen patients for components of the Met.Syn and introduce appropriate treatment strategies. Further studies are warranted to get more conclusive results.

References:

[1] Gremese, E., & Ferraccioli, G. (2011). The metabolic syndrome: the crossroads between rheumatoid arthritis and cardiovascular risk. Autoimmunity Reviews, 10(10), 582–589.

[2] Goodwin, P. J., Ennis, M., Bahl, M., Fantus, I. G., Pritchard, K. I., Trudeau, M. E., ... & Hood, N. (2009). High insulin levels in newly diagnosed breast cancer patients reflect underlying insulin resistance and are associated with components of the insulin resistance syndrome. Breast Cancer Research and Treatment, 114(3), 517–525.

[3] Reilly, M. P., Wolfe, M. L., Rhodes, T., Girman, C., Mehta, N., & Rader, D. J. (2004). Measures of insulin resistance add incremental value to the clinical diagnosis of metabolic syndrome in association with coronary atherosclerosis. Circulation, 110(7), 803–809.

[4] Grundy, S. M., Cleeman, J. I., Daniels, S. R., Donato, K. A., Eckel, R. H., Franklin, B. A., ... & Spertus, J. A. (2005). Diagnosis and management of the metabolic syndrome an American Heart Association/National Heart, Lung, and Blood Institute scientific statement. Circulation, 112(17), 2735–2752.

Acknowledgements: We acknowledge the efforts received by all staff members of departments of Rheumatology and clinical pathology at Mansoura University Hospital, Egypt.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1320

AB0294 PREGNANCY IN RHEUMATOID ARTHRITIS – A ROMANIAN COHORT

A. Bobirca[1], F. Bobirca[2], I. Ancuta[1], C. Mihai[1], C. Tataru[1], C. Comsa[1], M. Bojinca[1], M. Micu[3], A. Musetescu[4], C. Ancuta[5], V. Stoica[1]. *[1]Internal Medicine and Rheumatology; [2]General Surgery, Cantacuzino Hospital, Carol Davila University of Medicine and Pharmacy, Bucharest; [3]Division of Rheumatology, Department of Rehabilitation II, Clinical Rehabilitation Hospital, Cluj-Napoca; [4]Rheumatology Department, University of Medicine and Pharmacy, Craiova; [5]Clinical Hospital of Rehabilitation, "Grigore T. Popa" University of Medicine and Pharmacy, Iasi, Romania*

Background: Planning a pregnancy in rheumatoid arthritis (RA) meets several issues, mostly concerning potential drug toxicity and disease flares

Objectives: The purpose of this study is to evaluate pregnancy planning, RA activity during pregnancy and postpartum, pregnancy and fetal outcomes in a Romanian cohort of female patients diagnosed with RA.

Methods: This is an observational, ambispective study, including 58 RA Caucasian females with obstetric history after the onset of RA (20 females - prospective, 38 - retrospective). The cases were obtained from several Clinics of Rheumatology from Romania

Results: The mean age at inclusion was 37.1 years, age at RA diagnosis 3.9 years and mean age at conception 32.2 years. We recorded a total number of 96 pregnancies: 48 deliveries at term, 4 premature births, 15 elective abortions, 24 spontaneous abortions, and 5 ongoing. 34/96 (35.4%) had at least one unplanned pregnancy, while being on treatment.

Concerning the exposure to synthetic DMARDs during the pregnancy: 6 patients received Leflunomide and 4 received Methotrexate during the first trimester, the pregnancy outcomes being: 3 spontaneous and 3 elective abortions, 3 normal birth (1- Cholestiramine wash-out), 1 premature twin pregnancy.

Regarding biologic DMARDs: 5 were exposed to Etanercept - 3 less than 3 weeks, (2 normal births and one elective abortion- due to Methotrexate use), 2 treated in second trimester: 1 only in the 15th and 16th weeks due to relapse - normal birth, and the other one until week 20, pregnancy still ongoing.

One patient was treated with Certolizumab until week 12, the pregnancy is ongoing, and one with Adalimumab until week 4, the fetus had intrauterine growth restriction, premature birth.

6 patients treated with Rituximab were included, last infusions were: 4 weeks before conception (1- spontaneous abortion and 1 normal birth), 48 weeks (2 normal births and 1 premature), and one at 4 weeks after conception - normal birth.

In 4 cases the patients stopped the biological DMARD before conception: Etanercept 6 months and 2 years, Adalimu-mab,6 months with normal outcome, and for Tocilizumab 9 months (growth restriction)

81.25% of our patients were in Remission or Low Disease Activity (by DAS28CRP) at conception and generally this status was maintained, excepting several situations.