Methods: We collected characteristics of all patients coming for inflammatory rheumatism in our rheumatology department between April 2010 and December 2016. All of them had systematically routine examination, immunological tests, lymphocyte subsets in peripheral blood by flow cytometric analysis. We selected among this population those patients who also had PCR for *TW* for suspicion of WD, and compared the distribution of lymphocyte subsets of those with and without WD. Then, we evaluated their diagnostic value for WD using a ROC curve.

Results: Among 3494 patients with inflammatory rheumatism, 121 patients (212 visits) had a suspicion of WD and the diagnosis of WD was retained by an expert rheumatologist for 9 (7.4%) (22 visits). T cells and NK cells were not different whereas percentage of circulating memory B cells (IgD⁺CD38^{low}) was lower ($18.0\pm9.7\%$ vs $26.0\pm14.2\%$, $p=0.041$) and the ratio of activated B cells to memory B cells higher (4.4 ± 2.0 vs 2.9 ± 2.2 , $p=0.023$), in patients compared with controls. More precisely, the analysis of the frequency of peripheral blood B cells showed that IgD⁺CD27⁺ naïve B cells were higher ($66.2\pm18.2\%$ vs $54.6\pm18.4\%$, $p=0.047$) and IgD⁺CD27⁺ switched memory B cells lower ($13.3\pm5.7\%$ vs $21.4\pm11.9\%$, $p=0.023$), in patients compared with the controls. The best diagnostic value was obtained for the IgD⁺CD27⁺ naïve B cells (cut off 70.5, sensitivity 73%, specificity 80%).

Conclusions: Our study provides data on blood B cells disturbances and a first step towards understandings of immunological abnormalities in WD. These disturbances provide guidance for diagnosis and allow physiopathological hypothesis.

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SAT0404

CLINICAL CHARACTERISTICS AND OUTCOME AFTER TREATMENT OF A NATIONAL COHORT OF PCR-POSITIVE LYME ARTHRITIS

M. Scherlinger^{1,2}, A. Grillon³, J. Sibilia⁴, L. Arnaud⁴, B. Jaulhac³. ¹Rheumatology, CHU de Bordeaux; ²Immunconcept, UMR-CNRS 5164, Bordeaux; ³Centre National de Référence Borrelia; ⁴Rheumatology, CHU de Strasbourg, Strasbourg, France

Background: Lyme arthritis (LA) is a disseminated *Borrelia* infection whose prevalence is lower in Europe than in the USA, probably because of difference in *Borrelia* species ecology. Few data concerning treatment efficacy and long-term outcome of LA in Europe are available.

Objectives: The aim of our study was to describe clinical characteristics and treatment outcomes of a national cohort of patients with LA confirmed with synovial fluid PCR.

Methods: We conducted a retrospective observational study using the French Borrelia reference centre database. Patients presenting with a PCR positive for *Borrelia* DNA in their synovial fluid between 2011 and 2016 were included. PCR-positive patients were offered by their referring physician to participate to a standardised telephonic interview. Patients' medical files were also retrieved. The main objectives were to describe patient characteristics, disease presentation and outcomes after antibiotic treatment.

Results: Between 2011 and 2016, among 358 synovial fluids tested at the national reference centre, 38 were positive for *Borrelia* DNA. Among these patients, 35 were contacted (3 missing contact information). Median age was 36 years with 31% minors and 63% men. Tick exposure was reported by 88% patients whereas tick bite and erythema migrans were only reported in 40% (10/25) and 14% (3/21), respectively. The presentation was monoarticular in 91% (32/35) cases and oligoarticular in others. The knee was involved in 97% (34/35) cases and 21% presented fever. The diagnosis was often delayed with a median time from symptom onset to diagnosis of 3 months (range 1 to 112). The serology performed before or at the time of the PCR testing was IgG positive in all cases but only in IgM positive in 40%. All positive IgG serologies were also positive with Western-Blot. In the synovial fluid, the identified species of *Borrelia* were *B. burgdorferi sensu stricto*, *B. garinii* and *B. afzelii* in 54%, 29% et 17% of cases, respectively. Antibiotics prescribed were mostly doxycycline and ceftriaxone in 17 and 9 patients, respectively, sometime in combination. Follow-up data were available for 26 patients with a median follow-up time of 27 months (range 1–73). Full recovery was reported by 62% patients whereas 6 presented persistent non-inflammatory articular pain of the affected joint. One patient reported a chronic pain syndrome without objective sign of persistent infection (including a negative synovial fluid PCR). Three patients developed chronic inflammatory arthritis leading to the introduction of DMARDs.

Conclusions: Our study reports original data on Lyme arthritis in France. Treatment outcomes are usually good but a significant proportion of patients may develop chronic inflammatory arthritis.

Acknowledgements: All clinicians participating the study.

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SAT0405

FINDINGS OF A COHORT OF PATIENTS WITH CHIKUNGUNYA IN A COLOMBIAN POPULATION

M.A. López¹, R. Badillo^{1,2} on behalf of Association Colombian of Rheumatology, E. Rojas¹, M. Gelvez¹, Y. Santamaría¹ on behalf of Association Colombian of rheumatology. ¹Santander, Industrial University of Santander; ²Santander, Association Colombian of Rheumatology, Bucaramanga, Colombia

Background: Chikungunya virus is a Togaviridae family virus transmitted by mosquitoes, which generates febrile syndrome with joint pain. It has been widely studied for the findings of chronic inflammatory polyarthropathy similar to rheumatoid arthritis. In Colombia, an epidemic occurred between 2014 and 2015, which was studied in several cities. International meta-analyses have shown a prevalence of 32.13% in the follow-up cohorts greater than 18 months. At present, this issue has gained a new opportunity due to the appearance of new outbreaks in Italy and France, after 10 years of the first epidemic.

Objectives: To compare the clinical findings of a cohort of patients with Chikungunya in the subacute phase and the chronic phase.

Methods: Follow-up of 70 patients who attended Chikungunya in a Colombian population who were evaluated in person by a rheumatologist, initially at 40 days after the disease and after two years.

Results: The average age of the study participants was 59.88 years, being more frequent in women with 78.6% of the cases. 40% of the cases were older than 65 years, with the older adult population being a representative part of the cases. The history of osteoarthritis occurred in 11.7% of cases. There was no history of systemic lupus erythematosus.

The most frequent symptoms presented at the first visit (outbreak context) were as follows, in order: Joint pain (71.4%), morning stiffness (48.6%), Metacarpophalangeal compression test (51.2%). The most frequent symptoms in the second visit (two years after the outbreak) were: joint pain (74.2%), morning stiffness (21.4%) and metacarpophalangeal compression test (17.1%).

At the time of the second visit, the clinical findings were classified by diseases, according to the rheumatologist's assessment as follows: Post-Chikungunya polyarthropathy (17.1%), Fibromyalgia (10%), Carpal tunnel syndrome (17.1%), Osteoarthritis of knees (32.8%), osteoarthritis of distal interphalangeal (20%), painful shoulder syndrome (17.1%), tenosynovitis (18.6%), gout (1.4%), sequelae of fracture of hip (1.4%), lateral epicondylitis (1.4%). 28.5% of the cases had no diagnosis of rheumatological pathology. Of the total cases, only 24.3% (17 people) had symptoms for more than 6 weeks.

Conclusions: Chikungunya virus infection increases the prevalence of joint and extra-articular rheumatological diseases in the Colombian population evaluated.

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SAT0406

CHIKUNGUNYA VIRUS AND THE RHEUMATOLOGY: OBSERVATION OF 76 CASES DURING AN EPIDEMIC IN BRAZIL

M. C. D. F. Salgado, Y. D. F. B. Chagas, J. L. P. Vaz, F. C. Freire, V. Vigneron, A. Vaz. General Medicine, Federal University of Rio de Janeiro State, Rio de Janeiro, Brazil

Background: Chikungunya fever is caused by a virus of the family Togaviridae and the genus Alphavirus. The first epidemic occurred in Africa in 1952, transmitted by mosquitoes of the genus *Aedes*. In Brazil, the first cases were registered in 2014. Clinical manifestations include fever, polyarthralgia, joint oedema, arthritis and morning stiffness.

Diagnosis is confirmed by IgM/IgG serology for Chikungunya. The persistence of joint symptoms for a long time is an important feature of the disease.

Objectives: To evaluate the prevalence of rheumatologic manifestations in 76 patients with Chikungunya infection, during an epidemic occurred in 2016 in the city of Rio de Janeiro, Brazil.

Methods: To evaluate the prevalence of rheumatologic manifestations in 76 patients with Chikungunya infection, during an epidemic occurred in 2016 in the city of Rio de Janeiro, Brazil.

Results: Females were the most prevalent: 65 patients (85.5%); male sex: 11 (14.5%). The mean age of the patients was 57.17 years. The youngest at age 24 and the oldest 87 years old. The time between the onset of symptoms and the first consultation with a rheumatologist ranged from 11 days to the highest period of 40 weeks. Among articular symptoms, polyarthralgia occurred with higher prevalence (39 patients, 51.31%), affecting wrists, ankles, shoulders, knees and hands. Twenty six patients had arthritis (34.21%), Tendinopathy in 27 regions, being more common in shoulders, ankles and wrists and including De Quervain. Paresis occurred in 7 patients, prevailing carpal tunnel syndrome and one patient presented dactylitis. Symptoms persisted for months in all patients.

Conclusions: Chikungunya is an endemic disease in Brazil, with severe joint manifestations and chronic symptoms. Often there is delay in starting treatment with rheumatologist, resulting in worsening of the clinical picture.

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SAT0407

MYCOBACTERIAL INFECTIONS IN A RHEUMATOLOGY UNIT OF A TERTIARY HOSPITAL

M. Espinosa Malpartida¹, C. Ramos Giráldez¹, C. Merino Argumániz¹, O. Rusinovich², M. García Moreno³, C. Barbadillo Mateos¹, J. Campos Esteban¹, H. Godoy Tundidor¹, J. Sanz Sanz¹, C.M. Isasi², M. Jiménez Palop², J.L. Andreu Sánchez¹, L.F. Villa². ¹Rheumatology; ²H. U. Puerta de Hierro Majadahonda, Madrid, Spain; ³Microbiology, H. U. Puerta de Hierro Majadahonda, Madrid, Spain

Background: Many treatments for rheumatic diseases, especially the new ones such as anti-TNF or anti-IL6 therapies, are known to increase the risk of tuberculosis (TB) and nontuberculous mycobacterial (NTM) infections.

Objectives: To determine the incidence of mycobacterial infections in patients of the rheumatology unit in our hospital.

Methods: We retrospectively reviewed the results of microbiological studies for the detection of mycobacteria requested for patients of the Rheumatology service in our hospital from January 1, 2008 to October 1, 2017. We reviewed the clinical histories of the patients in whom a positive result was obtained. Different clinical and microbiological parameters were collected: age, gender, type of sample, isolated germ, infection location, antimicrobial treatment, main basal disease and immunosuppressive treatment received at the time of sampling.

Results: We reviewed 719 samples from 311 patients. The 28 samples that were positive for mycobacteria corresponded to 16 patients (50% males, with a mean age of 58.6 years). *M. avium complex* (MAC) was isolated in 10 patients, *M. tuberculosis complex* (MTB) in 4 patients and *M. goodii* in two cases. Seven clinical infections occurred (5% of the total studied patients), 4 due to MTB and 3 to MAC. The predominant involvement was pulmonary (5 patients, one of them also with spondylodiscitis); one patient had infectious oligoarthritis with cutaneous involvement and another patient lymph node involvement. Six of the 7 patients with mycobacterial infection were receiving chronic treatment with prednisone (or equivalent dose of corticosteroids) >5 mg/day (85.71%). In two of them adalimumab was associated, and methotrexate in other two.

Conclusions: The incidence of mycobacterial infections in patients with rheumatic diseases has increased, coupled with prolonged corticosteroid therapy – sometimes at high doses – and biological therapies. In our unit, an incidence of mycobacterial infections of 5% has been observed in the last 10 years. Most of the patients with clinical infection were under treatment with prednisone (or equivalent dose of corticosteroids) >5 mg/day. We conclude that the need for chronic corticosteroid therapy should be balanced carefully in each patient, trying to reduce the dose and/or suspend it as soon as possible.

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SAT0408

SAFETY OF CONCOMITANT TREATMENT WITH DENOSUMAB AND OTHER BIOLOGICAL DRUGS

M. Garijo Bufort¹, M. Guerra González², C. Moriano Morales¹, C. Iñiguez Ubiaga¹, A. Crespo Golmar¹, I. González Fernández¹, A. López Robles¹, E. Díez Álvarez¹, C. Álvarez Castro¹, M. Martín Martínez¹, M.E. Vallejo Pascual³, T. Pérez Sandoval¹. ¹Rheumatology Department of the University Health Care Complex of León; ²Hospital Pharmacy of the University Health Care Complex of León; ³University of León, León, Spain

Background: Denosumab (DB) is a monoclonal antibody to RANK ligand that, like all biological drugs, can be associated with an increased risk of infections. However, there are few studies concerning the risk of infection in these patients treated concomitantly with DB and other biologic drugs.

Objectives: This study aims at determining whether the treatment with biological drugs and DB combined is associated with an increased risk of adverse effects in patients with autoimmune diseases.

Methods: Retrospective observational study of patients treated with DB combined with other biological drugs at the Hospital of León between 2010–2017. For proper patient selection, the data obtained from the medical prescription program of primary care and the data from the registry of outpatients and walk-in patients of hospital pharmacy were cross-referenced.

To determine the increased risk, a control group of patients treated both with bisphosphonates (BF) and with biological agents was selected.

The data collected in both groups were: age, sex, diagnosis, comorbidities and other prescribed drugs. Infection, tumour or other adverse effects appeared three months, six months, one year and two years after starting the concomitant treatment. When performing the statistical analysis, it was analysed the time elapsed until the first adverse effect appeared.

Results: A total n of 28 patients was registered. 16 were treated with BF and biological agents, and 12 were treated with DB and other biological drugs. The prevalence of women was higher in both groups (87.5% BF, 91.7% DB). The mean age at the beginning of the concomitant treatment was similar, being 69.1±8.5 years in the BF group and 69.7±7.1 years in the DB group. All patients treated with DB were diagnosed with RA. Regarding the comorbidities, it seems that those patients treated with DB had fewer CVRF than those treated with BF (68.8% HBP in BF versus 50% in DB, 37.5% dyslipidaemia in BF versus 33.3% in DB). The biological drugs prescribed to be used concomitantly with DB were: 49.7% anti-TNFα, 33.3% rituximab, 8.3% abatacept and 8.3% tocilizumab.

In addition, there were no significant differences regarding the application time of the concomitant treatment with biological agents in the BF (35.7±26.7 months) and DB (58.6±43.7 months) groups; being in both groups similar. By comparing both groups, it is observed that those patients treated concomitantly with DB and other biological drugs, have more infections and these appear earlier in time than in patients treated with BF and biological agents (p<0.005). Only one patient in the DB group had a tumour of pulmonary nature as an adverse effect.

There were no differences in the appearance of adverse effects in patients with other comorbidities or concomitant treatments.

Conclusions: It seems that the treatment of DB combined with other biological drugs is associated with a greater number of adverse effects, mainly caused by infections, and having an earlier appearance.

More studies and a larger sample would be necessary to confirm this association and to be able to prove the relationship between comorbidities and the use of other concomitant drugs with the appearance of adverse effects.

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SAT0409

AEROCOCCUS URINAE: FIRST REPORT OF SEPTIC OLIGOARTHRITIS AND SYSTEMATIC REVIEW OF AN EMERGING GERM IN MUSCULOSKELETAL INFECTIONS

M. Greco¹, Í. Rúa-Figueroa¹, S. Ghiglione², E. Santana Medina³, J.C. Quevedo Abeledo¹, C. Rodríguez-Lozano¹, I. Altabás¹. ¹Rheumatology Department, Hospital Universitario de Gran Canaria Dr. Negrín; ²Radiology Department, Complejo Hospitalario Universitario Insular Materno Infantil; ³Radiology Department, Hospital Universitario de Gran Canaria Dr. Negrín, Las Palmas, Spain

Background: Aerococcus are bacteria not generally included in lists of musculoskeletal infections (MSK-I). They have been misidentified using standard techniques and can be detected by the sequencing of 16S rRNA (16S rDNA-PCR). Matrix-assisted laser desorption/ionisation time-of-flight mass spectrometry (MALDI-TOF MS) has shown to be reliable.¹

Objectives: To describe and analyse all documented cases of musculoskeletal infections caused by Aerococcus urinae and other Aerococcus sp.

Methods: In the framework of the study of a 63-years-old man with septic oligoarthritis caused by Aerococcus urinae (AU) (isolated in 2 synovial fluid samples), a systematic review was conducted to analyse all documented cases of aerococcal MSK-I (until December 2017); other manifestations of interest present in our case were also considered.