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

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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.

Disclosure of Interest: None declared

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SAT0408

SAFETY OF CONCOMITANT TREATMENT WITH DENOSUMAB AND OTHER BIOLOGICAL DRUGS

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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.

Disclosure of Interest: None declared

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SAT0409

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

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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.

Results: A total of 166 articles were obtained for the term "Aerococcus urinae" and 294 for "Aerococcus" NOT "Aerococcus urinae" (both with filter "humans") (figure 1). Of them, 15 articles (16 cases) were selected and analysed:

8 AU MSK-I cases (our case is the 9th involving a MSK-I):

- 6 cases of spondylodiscitis (66%), 1 hip abscess, 1 septic arthritis in a prosthetic hip and our case with septic oligoarthritis.
- 66% were male and 77% were 60 years or older.
- 77% presented previous urinary tract disease, 55% previous urinary tract invasive procedures and 44% prostatic disease.
- AU was isolated in 4 of 6 cases that reported blood cultures and 2 of 4 cases with reported echocardiography presented infectious endocarditis.
- AU was not isolated in any of the 5 cases that reported urine cultures.
- 100% of cases were diagnosed after 2002 and 78% after 2010; 56% of them were diagnosed by **16 s rDNA PCR or MALDI-TOF MS** while a 33% did not provide enough information on the identification method used.

4 cases of AU with bad odor urine (symptom present in our case): all were healthy paediatric boys that presented AU in urinary cultures without other associated symptoms; 100% were diagnosed after 2010 and 75% of them by **16 s rDNA PCR or MALDI-TOF MS**.

4 cases of *Aerococcus viridans* MSK-I: 2 spondylodiscitis, 1 knee arthritis and 1 case of hip septic arthritis; none was diagnosed via the methods previously described.

The analysed cases and previous reviews that report other AU invasive infections describes good response to beta-lactams and a synergistic effect with aminoglycoside. Our case was treated with intravenous Ampicillin (4 weeks) followed by oral Ciprofloxacin (7 weeks), due to a better bone penetration than oral beta-lactams.

Abstract SAT0409 – Figure 1. Flowchart.

Conclusions: – Similarly as in other invasive infections, AU **MSK-I** are more frequent in older males with previous urinary tract disease.

- The recent increased identification of AU **MSK-I** may well correlate with an increasing use of **MALDI-TOF MS** in clinical laboratories.¹

- Despite its limitations, this systematic review summarises the only data available to date on aerococcus MSK-I and also suggest the likelihood of more frequent diagnosis in the near future.

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SAT0410

CHARACTERISTICS OF ABSCESES DURING BRUCELLAR SPONDYLODISCITIS

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Background: Spondylodiscitis is a frequent and important complication of brucellosis. The occurrence of abscesses is common

Objectives: The aim of this study was to determine the characteristics of these collections and if there is an association between the diagnostic delay and their occurrence

Methods: we conducted a retrospective study of 27 patients admitted for Brucella spondylodiscitis over a period of 17 years [2000 and 2016]. Etiological diagnosis was made on a positive Wright agglutination test. All patients underwent a cross sectional imaging: spinal CT (13 cases) and/or spinal MRI (24 cases).

Results: twenty seven patients were included. Ten women and 17 men aged from 33 to 75 years. The most common symptoms were spinal pain (96,3%) and radiculargia (44,4%). The most frequently involved segments were the lumbar spine (59,3%) and the dorsal spine (18,5%). Three patients (11,1%) suffered from cervical spondylodiscitis. The physical examination showed no paravertebral swelling or neurological abnormalities. Seventeen patients had abscesses on the cross sectional imaging (63%). Epidural fluid collections were revealed in 10 cases (37%). Nine patients had psoas abscesses (33,3%) with a bilateral involvement in 3 cases (11,1%). Less frequently, a prevertebral (18,5%), peri-vertebral (18,5%) and intradiscal collections (3,7%) were detected. A statistically significant positive association was found between a longer diagnosis delay and the presence of abscess on spinal MRI (p=0.036).

Conclusions: Epidural and paravertebral abscesses during Brucellar spondylodiscitis are frequent, especially if the diagnosis is delayed. However, they are rarely associated with neurological damage and must be sought consistently on the MRI

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SAT0411

INVESTIGATIONS FOR THE DIAGNOSIS OF SEPTIC ARTHRITIS IN THE ACUTE SETTING. RESULTS FROM A SINGLE TERTIARY CENTRE OVER 5 YEARS

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Background: Septic arthritis is a rheumatologic emergency associated with significant morbidity and mortality¹. Timely and accurate diagnosis in the emergency department is essential for early medical and surgical involvement.

Objectives: To examine the predictive value of investigations used to diagnose septic arthritis in the acute setting.

Methods: A retrospective chart review was conducted on all patients referred from the emergency department to the orthopaedic surgery service with a potential diagnosis of septic arthritis between June 2010 and December 2015 at the Austin Hospital in Melbourne, Australia. Data was collected regarding demographic details, risk factors, pathology results, antibiotic prescribing, joint aspirate and theatre samples.

Results: The study included 126 patients with 132 emergency department presentations involving 141 joints. The median age of patients was 70 (IQR 52.3–79.8); 86 (68.3%) were male. The most common joints involved were the knee (49.6%) and hip (17.7%). In 88 of the 132 presentations (67%), culture of the synovial fluid was positive. 19 of these 88 (22%) culture positive presentations had no classical risk factors for septic arthritis (joint prosthesis, previous septic arthritis, immunosuppressed, previous joint disease, intravenous drug use). 12 of the 88 (13%) culture positive patients had symptoms for longer than 4 weeks on presentation in contrast to 2 of the 44 (5%) in culture negative group. There were 8 presentations with multiple joints involved. None of these presentations were in the culture positive group. There was no evidence of a relationship between WCC and culture status (p=0.56) or CRP and culture status (p=0.64), either singly or when combined. There were 94 joint aspirations performed in 132 presentations. 30 (32%) joint aspirations required ultrasound guidance. 42 (45%) joint aspirations had antibiotics administered prior to sample collection. In the culture positive presentations 25 (28.4%) did not have a joint aspirate performed prior to surgical washout. Crystals were seen in 19 (30.2%) culture positive patients. 26 (29.5%) culture positive presentations had no growth on aspirate culture but had positive theatre cultures.

Conclusions: While septic arthritis is a common emergency presentation, there are few useful non-invasive diagnostic tests. Although risk factors aid in stratifying risk, duration of symptoms and inflammatory markers are poor differentiators. Neither the presence of crystals nor the absence of growth on aspirate culture exclude septic arthritis.