18 years or older who fulfilled the clinical and epidemiological Health Ministry criteria for case definition of CF were included in the study, from April to December 2016.

**Results:** From 732 patients included, 83.1% were women. The mean age was 54.1 (± 13.4) years; 92.4% lived in urban area and 58.6% had only primary education. The most common comorbidities were hypertension (43.8%), hyperlipidemia (25.3%) and diabetes mellitus (13.7%). Prior rheumatologic disease was observed in 16.4% patients, being the most frequent rheumatoid arthritis (32.5%), osteoarthritis (32.5%) and spondyloarthritis (11.7%). Arthralgia was the most frequent symptom referred by all patients; fever and fatigue were also common manifestations, being referred by 95.3% and 87.1% of patients, respectively. Arthritis occurred in 84.3%. The most frequent joint pattern involvement was polyarticular (67.8%) and the additive (84.0%). At the first appointment with the rheumatologist, 75.9% had been or were under corticosteroid use, with the average dose of 15.4 mg (±8.7) of prednisone or equivalent; was observed an median of 8 painfull joints (IQR 4–21) and arthritis was found in 73.6% patients, with an median of 2 swollen joints (IQR 0–5). The median score of patient global assessment at the time of the initial evaluation was 6 (IQR 4–8) using a 10 points visual analogue scale. After resting stiffness was referred by 86.0%, with 58.4% of these longer than 30 minutes. The most commonly prescribed medications were corticosteroids (58.3%) and hydroxychloroquine (59.1%). The serological tests for CHIKV were positive for IgM in 97.1% and for IgG in 71.7% of patients.

**Conclusions:** This is the first descriptive study of a cohort Brazilian patients with CF, with an expressive number of patients when compared to those described in the literature. Most of the features of patients in our cohort were similar to the results described in studies/cohorts published.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.4537

## SAT0558 CONCORDANCE BETWEEN CLINICAL-EPIDEMIOLOGICAL CRITERIA AND CHIKUNGUNYA FEVER SEROLOGY

C.D.L. Marques[1,1,1], C.A. Andrade[1], M.S. Luna[1], P.R. Santos[1], A.T. Dantas[1], A. Ranzolin[2], N.G. Cavalcanti[1], R.S. Gonçalves[3], L.F. da Rocha Jr[4], P.R. Melo[1], R.M. Correia[3], L.D. Valadares[5], C.A. da Fonte[5], M.L.D. Valadares[5], E. Freire[6], A.K.G. Melo[6], M.M. Medeiros[7], M.C. Bezerra[7], V.B. Marques[7], R.A. Océa[8], A.L. Duarte[1]. *[1]Internal Medicine, Universidade Federal de Pernambuco; [2]Rheumatology; [3]Internal Medicine, Instituto de Medicina Integral Prof. Fernando Figueira; [4]Rheumatology, Instituto de medicina integral professor Fernandes Figueira; [5]Rheumatology, Hospital Getulio Vargas, Recife; [6]Rheumatology, Universidade Federal da Paraíba, João Pessoa; [7]Rheumatology, Universidade Federal do Ceará, Fortaleza; [8]Rheumatology, Universidade Federal de Sergipe, Aracaju, Brazil*

**Background:** The first autochthonous reports of Chikungunya fever (CF) in Brasil was confirmed in 2014, and by December 2016, there were 263.980 probable cases of CF, 55.03% confirmed. According to recommendations of the Ministry of Health (MH) of Brazil, in an established epidemic situation, the diagnosis of CF should be made by appliyng clinical and epidemiological criteria. There is no indication for the serology for Chikungunya virus (CHIKV) in the acute phase, except in atypical cases and complicated clinical situations, which may generate doubts in clinical practice about the correct diagnosis of these patients.

**Objectives:** The objective of this study was to evaluate the concordance of the clinical and epidemiological criteria with the serology results for CHIKV in a cohort of patients with CF.

**Methods:** The multicenter cohort CHIKBRASIL from the Northeast of Brazil has enrolled CF patients with joint manifestations since April 2016, using as inclusion criteria the presence of fever and arthralgia/arthritis in a patient residing or who had visited an endemic or epidemic area within 15 days prior to the onset of symptoms. For the present study, we selected patients in which IgM and/or IgG serology was performed, regardless of the results. For the analysis of agreement with the serology, the most characteristic symptoms of CF were used individually (fever, arthritis/arthralgia or exanthema) and three models of association of symptoms were created: (1) fever and arthralgia; (2) fever and arthritis; (3) fever, arthralgia/arthritis, and exanthema. The sensitivity (SENS), specificity (SPEC), positive predictive value (PPV) and negative predictive value (NPV) of the criteria were also assessed, with the serology result considered the gold standard.

**Results:** A total of 143 patients were evaluated, 119 (83.2%) of which were female, with a mean age of 53.89 years (± 13.5); 52.4% of the cases were in the subacute phase of the disease (15 days to 3 months) and 42.7% were in the chronic phase (over 3 months). The IgM positivity was observed in 95.1% of cases and IgG in 71.67%. The concordance rate between the IgM serology or combined positive serology (IgM or positive IgG) was over 80% for any of the symptoms/symptoms model analyzed, as well as the SENS and PPV of the symptoms/ symptoms model, which was over 95% in all situations evaluated. The concordance rate for IgG serology ranged from 51.9 to 72.1%. Model 1 presented the highest agreement with the result of positive combined serology.

**Conclusions:** During an epidemic situation, the use of clinical and epidemiological criteria shows high agreement with the serology result, regardless of the combination of symptoms presented, with high sensitivity and positive predictive value.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.6431

## SAT0559 SEPTIC ARTHRITIS IN COVENTRY IN THE UK: 5 YEAR DATA

A. Vivekanantham[1], A. Kahlon[1], M. Ali[1], A. Metcalfe[2], S. Dubey[1]. *[1]Rheumatology; [2]Orthopaedics, University Hospitals Coventry and Warwickshire, CV2 2DX, United Kingdom*

**Background:** Septic arthritis (SA) is a serious condition associated with significant morbidity and prolonged hospital stays, posing a large economic burden to healthcare systems. It affects 2–10 people per 100,000 and there has been a suggestion that the incidence is increasing due to iatrogenic causes [1]. Our local secondary centre, University Hospitals Coventry and Warwickshire NHS Trust (UHCW NHS Trust), provides care to Coventry and Rugby covering an estimated population of 550,000.

**Objectives:**

- To investigate the incidence of native joint SA in the adult population in a secondary care hospital in the UK.
- To investigate whether immunosuppression contributes significantly to the burden of SA.

**Methods:** Patients were retrospectively identified on the basis of the International Classification of Diseases (ICD)-10 coding generated following discharge from hospital for all patients between 2007–11. Exclusion criteria included paediatric patients, diabetic foot, prosthetic joint infections and those who on review were not thought to have SA. The data was analysed using Excel. Formal ethical approval was obtained via the research and development department within the UHCW NHS Trust.

**Results:** A total of 189 admissions were coded as SA. Of these, 103 were excluded (n=74 not thought to have SA on review of the notes, n=26 paediatric patients and n=3 prosthetic joints). Therefore, there were 86 adult admissions for 64 patients with SA.

The average age of these patients was 53.4 years, with the majority of them being males (n=43, 67.2%). The majority of patients had co-morbidities (n=44, 65.7%), with hypertension (n=10, 14.9%) and type 2 diabetes (n=10, 14.9%) being the most prevalent. Joint aspirates were performed on 63.2% (n=56) of admissions and blood cultures on 70.8% (n=63) of admissions. Staphylococcus aureus was the most commonly cultured microbe in both joint fluid (46.4%, n=13) and blood (42.9%, n=3). The knee was the commonest joint involved (n=31, 46.3%). Other commonly affected joints included the small joints of the hands (n=9, 13.4%) and shoulder/acromioclavicular/sternoclavicular joints (n=9, 13.4%).

Interestingly, 23 (35.9%) of the patients were immunocompromised. Of these, 4 patients had a diagnosis of rheumatoid arthritis (RA) and were on steroid treatment alone (n=2), or in combination with disease-modifying anti-rheumatic drugs (n=2). A total of 11 patients had a pre-existing rheumatological diagnosis of which RA was the most common condition (n=6). Two of these patients were not on immunosuppressants. The 5-year mortality was significant at 29.7% (n=19).

**Conclusions:** Our local data showed the incidence of SA to be approximately 3 per 100,000, which is in keeping with proposed figures. Our cohort highlighted that those with pre-existing co-morbidities or those who were immunocompromised were at greatest risk. An ageing population with multiple co-morbidities means the incidence of SA is set to rise. Greater emphasis therefore needs to be placed on improving awareness and optimising treatment.

**References:**

[1] Geirsson AJ, Statkevicius S, Vikingsson A. Septic arthritis in Iceland 1990–2002: increasing incidence due to iatrogenic infections. Ann Rheum Dis. 2008;67:638–43.

**Acknowledgements:** We would like to thank the PPMO team at UHCW NHS Trust.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.4372

## SAT0560 COEXISTENCE OF SEPTIC AND CRYSTAL-INDUCED ARTHRITIS: A DIAGNOSTIC CHALLENGE

Y. Garcia-Mira, A. Prior-Español, S. Minguez, J. Camins, M. Martínez-Morillo, S. Holgado, A. Olive, J. Cañellas, L. Gifre, L. Mateo. *H.UNIVERSITARI Germans Trias I Pujol, Badalona, Spain*

**Background:** Septic arthritis (SA) is a rheumatologic emergency as joint destruction occurs rapidly and can lead to significant morbidity and mortality. Accurate diagnosis can be particularly challenging in patients with underlying inflammatory joint disease. Crystal-induced arthritis (CA) is a risk factor for its appearance. When both conditions appear simultaneously, CA may mask diagnosis of infection and delay the antibiotic treatment.

**Objectives:** To describe the characteristics of patients with concurrent septic and CA.

**Methods:** Retrospective analysis of patients with coexistence of septic and CA attended between 1985 and 2015 in a university hospital with a reference area of 850,000 inhabitants. We collect demographic, clinical, laboratory and imaging data as well as patient medical treatment, complications and evolution records. All patients had positive bacterial culture (blood and/or joint fluid) and crystals in synovial fluid.

**Results:** A total of 123 patients with SA were identified. 20.3% (n=25) of them had concomitant CA, with mean age of 67 years (SD 14), 17 (68%) males and 8 (32%) females. Risk factors were: diabetes (24%), diuretic drugs (24%), chronic renal failure (16%) -2 of them undergoing hemodialysis and 4 kidney

transplant patients with immunosuppressive treatment. In only 2 cases there was a previous arthrocentesis. The mean diagnostic delay was 14 days (SD 13) (data available in 14 cases). The most commonly affected joint was the knee (48%), followed by the foot (20%) and the hip (12%). In 2 cases several joints were involved at the same time. In synovial fluid cytological studies, the most frequently identified crystals were: urate (60%), calcium pyrophosphate (20%) and hydroxyapatite (8%). In 32% of cases gram staining was positive, but 88% of patients had a positive joint fluid culture, with the most frequently isolated germs being methicillin-sensitive *S. aureus* (48%), methicillin-resistant *S. aureus* (MRSA) (12%) and *M. tuberculosis* (12%). 32% of patients presented positive blood cultures (12% with negative synovial fluid culture), although 48% of patients had fever at the time of diagnosis. It should be noted that 48% had radiological baseline damage. Surgical debridement was performed in 32% of patients. Evolution was successful in 56% of patients; although intercurrent complications were usual (40%). Mortality was 8% -one case due to acute pulmonary edema and the other because of septic shock.

**Conclusions:** Coexistence of infectious and CA represents a diagnostic challenge and requires a high suspicion index. It usually appears in elderly patients with comorbidities. Gout was the most prevalent CA. *S. aureus* was the most commonly causative pathogen, with a high rate of MRSA infection. If it's treated early the evolution is usually favorable, which makes synovial fluid microbiological study imperative.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.4993

## SAT0561 USEFULNESS OF POLYMERASE CHAIN REACTION FOR DIAGNOSING WHIPPLE'S DISEASE IN RHEUMATOLOGY

M. Herbette [1], J.B. Cren [2], L. Joffres [3], C. Lucas [4], E. Ricard [5], C. Salliot [6], J. Guinard [5], A. Perdriger [4], E. Solau-Gervais [3], B. Bouvard [2], A. Saraux [1] on behalf of Reseau Victor Hugo. *[1] Rheumatology, CHU Brest and Université Bretagne Occidentale, Brest; [2] Rheumatology, CHU, Angers; [3] Rheumatology, CHU, Poitiers; [4] Rheumatology, CHU, Rennes; [5] Rheumatology; [6] CHU, Orleans, France*

**Background:** No consensus exists about the combination of clinical, laboratory, and radiological findings that warrant tests for Whipple's disease.

**Objectives:** The primary aim of this multicentre retrospective study was to determine when patients evaluated for rheumatological symptoms should undergo *T. whipplei* PCR testing. Secondary aims were to describe the clinical patterns and treatments used, to determine the diagnostic yield of PCR testing, and to assess whether centres with higher numbers of tests also had a larger number of Whipple's disease diagnoses.

**Methods:** In a retrospective observational study done in five hospitals, we assessed the clinical and radiological signs that prompted *T. whipplei* PCR testing between 2010 and 2014, the proportion of patients diagnosed with Whipple's disease, the number of tests performed and the number of diagnoses according to the number of tests, the patterns of Whipple's disease, and the treatments used.

**Results:** At least one PCR test was performed in each of 267 patients. Rheumatic signs were peripheral arthralgia (n=239, 89%), peripheral arthritis (n=173, 65%), and inflammatory back pain (n=85, 32%). The main extra-articular signs were constitutional symptoms (n=111, 41.8%), diarrhoea (n=70, 26.5%), fever (n=53, 20%), lymphadenopathy (n=14, 5.3%), and neurological signs (n=11, 4.2%). Whipple's disease was diagnosed in 13 patients (4.9%). The main samples tested and the more frequently positive tests in the centres with diagnoses of Whipple's disease were saliva and stool. In the centres with no diagnoses of Whipple's disease, arthritis was less common, whereas constitutional symptoms, fever, and lymphadenopathy were more common. 11 patients with Whipple's disease had CRP elevation. The annual incidence ranged across centres from 0 to 3.6/100000 inhabitants. The patients group with Whipple's disease had a higher proportion of males, older age, and greater frequency of arthritis.

**Conclusions:** Males aged 40–75 years with unexplained intermittent seronegative peripheral polyarthritis, including those without constitutional symptoms, should have *T. whipplei* PCR tests on saliva, stool and, if possible, joint fluid.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.5852

## SAT0562 CHIKUNGUNYA FEVER IN PATIENTS WITH PRIOR RHEUMATIC DISEASES: IS IT MORE SEVERE?

A.T. Dantas [1], M.S. Luna [1], P.R. Santos [1], C.A. Andrade [1], C.D.L. Marques [1], A. Ranzolin [2], N.G. Cavalcanti [1], R.S. Gonçalves [3], L.F. Rocha Junior [2], H.D. Lima [2], P.R. Melo [3], L.D. Valadares [4], C.A. da Fonte [4], M.L.D. Valadares [4], E. Freire [5], A.K.G. Melo [5], M.M. Medeiros [6], M.C. Bezerra [6], V.B. Marques [6], R.A. Océa [7], A.L. Duarte [1]. *[1] Internal Medicine, Universidade Federal de Pernambuco; [2] Rheumatology; [3] Internal Medicine, Instituto de Medicina Integral Prof. Fernando Figueira; [4] Rheumatology, Hospital Getulio Vargas, Recife; [5] Rheumatology, Universidade Federal da Paraíba, João Pessoa; [6] Rheumatology, Universidade Federal do Ceará, Fortaleza; [7] Rheumatology, Universidade Federal de Sergipe, Aracaju, Brazil*

**Background:** Chikungunya fever (CF) is an infectious disease caused by a RNA virus and its transmission occurs by the inoculation of the virus by the female bite of *Aedes aegypti* mosquito. In Brazil, where the vetor is endemic, the virus rapidly disseminated and there was an epidemic, specially in the Northeast region of the country with 263.980 notified cases in 2016. It is known that CF may have a chronic course with articular symptons, however there is not consistent data in the medical literature on CF evolution in patients with prior rheumatic diseases.

**Objectives:** To assess whether there is any difference in the characteristics of articular manifestations of CF in patients with prior inflammatory rheumatic diseases (IRD), non-inflammatory rheumatic diseases (NIRD) and controls (patients with no diagnosed prior rheumatic diseases).

**Methods:** Cross-sectional study using a database from CHIKBRASIL cohort. Patients enrolled had clinical and epidemiological characteristics of CF and were classified in three groups: IRD (rheumatoid arthritis, axial spondyloarthritis and systemic lupus erythematosus), NIRD (fibromyalgia and osteoarthritis) and controls (no prior rheumatic diseases).

**Results:** A total of 150 patients were enrolled. There were 55 patients with IRD, 40 patients with NIRD and 55 controls, paired by age and sex. There were no differences in acute phase symptoms in the groups. There a was more frequent occurrence of arthritis in patients with IRD compared to NIRD (p=0.001) and to controls (p=0.002). In 89.1% of the patients with IRD there was an underlying disease exacerbation and 74% described an expressive worsening of symptoms compared to the period prior to infection. Patients with IRD had an increase in the current dose of corticosteroids (median 10mg, IQR 10–20) compared to previous dose used (median 6mg, IQR 5–10) after the onset of CF (p=0.0007). Importantly, there was more methotrexate prescription (23.5%) in IRD group, compared to NIRD group (0, p-0.001) and to controls (3.7%, p=0.003).

**Conclusions:** Patients with IRD and CF presented significantly more arthritis compared to NIRD or to controls. CF seems to induce underlying rheumatologic disease exacerbation in patients with inflammatory disease and a more aggressive therapeutic approach might be necessary in this group of patients.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.6560

## SAT0563 EVALUATION OF ROLE OF SLEEP DISTURBANCE, DEPRESSION, OBESITY, AND PHYSICAL INACTIVITY IN FATIGUE IN CHIKUNGUNYA ARTHRITIS

M. Bhama. *Orthopedics, Sardar Patel Medical College, Bikaner, India*

**Background:** Chikungunya virus (CHIKV) is a mosquito-borne alphavirus that circulates predominantly in tropical and subtropical regions, potentially affecting over 1 billion people.

**Objectives:** Fatigue is a major concern in individuals where CHIKV results severe chronic arthralgia and/or arthritis lasting months to years. However, in order to treat fatigue adequately, its sources need to be identified.

**Methods:** All participants had physician-diagnosed CHIKV arthralgia. Data regarding self-reported sleep quality, depression, physical activity, disease activity, muscle strength, functional limitations, and body composition were collected during a single home visit (number of participants=117). Information on demographics, medications, alcohol intake and smoking was collected. The Fatigue Severity Inventory (FSI; measuring average fatigue over the past 7 days) was used as the primary outcome. Analyses were conducted to evaluate bivariate relationships with fatigue and correlations among risk factors. Multivariate analyses identified independent predictors of fatigue.

**Results:** The mean age was 48±16 years, the mean disease duration was 7±6 years, and 71% (M:33, F:84) of subjects were female. The mean FSI rating was 4.1±2.0 (range 0–10). In multivariate analyses, self-reported disease activity, poor sleep, depression, and obesity were independently associated with fatigue. Physical inactivity was correlated with poor sleep, depression, and obesity. Mediation analyses indicated that physical inactivity had an indirect association with fatigue, mediated by poor sleep, depression, and obesity.

**Conclusions:** This cross-sectional study suggests that fatigue may not be solely a result of CHIKV arthralgia, but may result from a constellation of factors that includes CHIKV arthralgia disease activity or pain, but also includes inactivity, depression, obesity, and poor sleep. The results suggest need of various interventions to improve fatigue in individuals with CHIKV arthritis, including increasing physical activity or addressing depression or obesity.

**References:**

[1] Thiberville S.D., Moyen N., Dupuis-Maguiraga L., Nougairede A., Gould E.A., Roques P., de Lamballerie X. Chikungunya fever: epidemiology, clinical syndrome, pathogenesis and therapy. Antiviral Res. 2013;99(3):345–370.

[2] Vijayan V, Sukumaran S. Chikungunya Virus Disease: An Emerging Challenge for the Rheumatologist. J Clin Rheumatol. 2016 Jun;22(4):203–11.

[3] Stebbings S, Herbison P, Doyle T, Treharne GJ, Highton J. A comparison of fatigue correlates in rheumatoid arthritis and osteoarthritis: disparity in associations with disability, anxiety, and sleep disturbance. Rheumatology (Oxford)2010;49:361–7.

[4] Whitehead L. The measurement of fatigue in chronic illness: a systematic review of unidimensional and multidimensional fatigue measures. J Pain Symptom Manage2009;37:107–28.

**Disclosure of Interest:** M. Bhama Consultant for: Orthopedics Consultant

**DOI:** 10.1136/annrheumdis-2017-eular.6670