SAT0388

FACTORS ASSOCIATED WITH THE PERSISTENCE OF ARTICULAR SYMPTOMS IN PATIENTS WITH CHIKUNGUNYA FEVER – CHIKBRASIL COHORT

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Background: Chikungunya Fever (CHIK) may evolve chronically with joint impairment, often disabling, which leads to a functional and quality of life impact. The CHIK outbreak in Brazil began in 2015, reaching its peak in 2016, particularly in the Northeast of the country, with 2 35 136 reported cases. Since this is the first epidemic of CHIK in Brazil, data on persistent post-acute joint disease are scarce, and this knowledge is of fundamental importance in defining the long-term impact of the disease.

Objectives: To evaluate factors associated with persistence of the joint symptoms in CHIK patients.

Methods: The CHIKBRASIL cohort is a prospective, multicenter, observational study, conducted in six research rheumatology centres from the Northeast of Brazil, and has enrolled CHIK patients with joint manifestations since April 2016.¹ Data from 207 patients followed up to December 2017 were analysed.

Results: The mean age was 54.7 years, most female (90.3%); 39.1% of the patients had a diagnosis of previous rheumatic disease (49.4% osteoarthritis). The most frequent initial clinical manifestations were arthralgia (98.1%), fever (95.6%), morning stiffness (92.3%) and arthritis (88.9%). The first evaluation with the rheumatologist occurred at a median time of 12 weeks after the onset of symptoms; at this time the median PGA of disease by the patient was 7 and by the physician was 6; the median number of painful joints was 8 and of swollen joints was 3% and 75.5% of the patients had arthritis. After a median follow-up time of 37 weeks, there was complete improvement of joint symptoms in 21.7% and 18.9% of cases reported little or no improvement. The persistence of arthralgia was reported by 76.7% and arthritis by 28.1% of the patients. A significant association was found between the persistence of arthritis and the physician's general VAS (p=0.02), number of painful (p=0.002) and swollen (p=0.001) joints, besides knees (p=0.009), proximal interphalangeal (p=0.07), metacarpophalangeal (p=0.022), elbow (p=0.026) and wrist oedema (p=0.003) at the first consultation). With regard to the persistence of joint pain, associations were found with a higher initial morning stiffness time (p=0.011), shoulder tendinopathy (p=0.019) and tarsal pain. The factors associated with no complete improvement after the follow-up period were tarsal pain (0.021) and shoulder tendinopathy.

Conclusions: In the Brazilian CHIK patients, the percentage of persistence of joint manifestations is high after 24 weeks, with a considerable number of patients maintaining arthritis, similar to other countries in Latin America.² Significant associated factors were more severe initial symptoms, polyarthritis, polyarthralgia, shoulder tendinopathy and tarsal pain.

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SAT0389

MRI PREDICTIVE FACTORS FOR POSITIVE CT-GUIDED BIOPSY IN SUSPECTED SEPTIC SPONDYLODISCITIS

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Background: Septic spondylodiscitis is an infection involving intervertebral disc and adjacent vertebral endplates that could lead to neurological complications. Magnetic resonance imaging (MRI) is the main imaging modality to suspect spondylodiscitis. However, MRI features predictive for septic spondylodiscitis are still lacking.

Objectives: To assess the MRI features associated with microbial pathogen detection by CT-guided biopsy among patients with suspected septic spondylodiscitis.

Methods: Between May 2007 and July 2017, we retrospectively analysed patients who underwent MRI and CT-guided biopsy for suspicion of septic spondylodiscitis. Baseline clinical and biological characteristics were collected. MRIs were analysed by one physician blinded to clinical data. The following MRI features were assessed when available: oedema or contrast-enhancement of intervertebral disk, adjacent vertebrae, epidural and paravertebral space, presence of abscess and paravertebral oedema size. A positive biopsy was defined by pathogen identification on culture or by direct microscopy examination.

Results: Fifty-one patients (54.9% of males, mean $\pm$ SD age of 59.2 $\pm$ 19.1 years) were analysed. Lumbar spine (n=38) was the most affected site. A total of 26 (51%) patients had a CT-guided biopsy positive for a bacterial pathogen, mainly *Mycobacterium tuberculosis* (n=7) and *Staphylococcus aureus* (n=7). Disc size reduction, more than 50% of endplate oedema, loss of intradiscal cleft and abscess were the MRI findings associated with detection of bacterial pathogen by biopsy with a frequency of 100%, 92%, 81% and 50%, respectively. Size of paravertebral oedema was statistically higher in positive CT-guided biopsy than those negative (20.5 $\pm$ 12.6 vs. 11.0 $\pm$ 9.8 mm, p=0.004). The highest specific MRI finding for bacterial pathogen detection was the presence of paravertebral abscess (80%).

Abstract SAT0389 – Table 1. Characteristics of the patients (n=51)

Male sex, n (%)	28 (54.9)
Age, mean $\pm$ SD years	59.2 $\pm$ 19.13
Symptoms duration, mean $\pm$ SD days	91.7 $\pm$ 86.58
Fever, n (%)	12 (23.5)
Altered general health status, n (%)	21 (41.2)
Back pain, n (%)	45 (88.2)
Positive blood culture, n (%)	10 (19.6)
C-reactive protein, mean $\pm$ SD mg/L	79.6 $\pm$ 79.0
Neurological complications, n (%)	13 (25.5)

Abstract SAT0389 – Table 2. MRI features according to bacterial pathogen detection by CT-biopsy

	Positive CT-biopsy (n=26)	Negative CT-biopsy (n=25)	p
Endplate oedema, n (%)	26 (100)	24 (96)	0.98
>50% of endplate oedema, n (%)	24 (92)	17 (68)	0.029
Disc oedema (n=45) n (%)	25 (96.2)	20 (80)	0.145
Loss of intradiscal cleft (n=30) n (%)	21 (80.8)	9 (36)	0.001
Epiduritis (n=30) n (%)	19 (73.1)	11 (44)	0.067
Paravertebral oedema (n=46) n (%)	23 (88.5)	23 (92)	0.317
Paravertebral infiltrate size, mean $\pm$ SD mm	20.5 $\pm$ 12.6	11.0 $\pm$ 9.8	0.004
Abscess (n=17) n (%)	13 (50)	4 (16)	0.025
Endplate erosion (n=40) n (%)	23 (88.5)	17 (68)	0.528
Disc size reduction (n=47) n (%)	26 (100)	21 (84)	0.034

Conclusions: Our study showed that loss of intradiscal cleft, abscess and a large endplate oedema were the best predictive factors for a positive CT-guided biopsy. Size of paravertebral oedema is also associated with detection of bacterial pathogen. Physician must be aware of these MRI findings to better determine which patients should have a CT-guided biopsy.

Disclosure of Interest: None declared

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SAT0390

CLINICAL SPECTRUM OF CHIKUNGUNYA EPIDEMIC-OBSERVATIONAL STUDY FROM A TERTIARY REFERRAL CENTRE IN CENTRAL INDIA

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Background: Chikungunya virus is an alphavirus, family Togaviridae. Chikungunya fever is a mosquito born disease transmitted to humans by the bite of infected *Aedes aegypti* mosquitoes. An outbreak of chikungunya virus is currently ongoing in many Asian countries since January 2005. The recent outbreak and epidemic of Chikungunya fever in our state reflect the survival capability and tenacity of mosquitoes that continues to be man's biggest foes. An Observational study was conducted to evaluate epidemiological, virological and clinical features of chikungunya fever in patients presenting with acute febrile illness in our state of madhya pradesh.

Objectives: To observe the clinical features and laboratory parameters of patients coming with Chikungunya coming to our referral setup during the three months of epidemic presenting from 1 st July to 30th September 2017.

Methods: We included all patients (n=325) presenting to us from age 16 years with acute history (<7 days) of fever with joints pain. They were assessed for demographic characteristics, pattern of joints involvement, systemic manifestations, lab parameters, and chikungunya virus positivity. All these parameters were observed according to age and sex and both clinical as well as laboratory markers were studied. We excluded 29 patients, twenty one had past history of inflammatory joint pain and rest had positive virology for dengue virus.

Results: We included 325 patients in which Males (M) were 140 and Females (F) were 185, F:M ratio of 1:0.75). The distribution of patients according to age was quite similar across all age groups. Small joints involvement in total of 287 patients (M:40.4%, F:59.6%), axial involvement in 219 patients (M:36.1% and F:67.6%), knee joint involvement in 285 patients (M:41.1% and F:58.9%), ankle pain in 285 patients (M:42.8% and F:57.2%), early morning stiffness was seen in 308 patients (M:44.8% and F:55.19%), eyes involvement in 53 patients (M:35.8% and F:64.2%), Neurological manifestations in 134 patients (M:43.3% and F:56.7%), stomatitis and oral ulcers in 85 patients (M:45.9% and F:54.1%), retrobulbar pain occurred in 73 patients (M:45.2% and F:54.8%), rashes were seen in 47 patients (M:59.6% and F:40.4%). Forty two patients (12.9%) had history of Diabetes (F:73% and M:26%) and 31 patients (9.5%) were hypothyroid with female predominant (100%). Urea and creatinine was also raised (n=18). Rheumatoid factor was positive in 19 patients (M:42.1% and F:57.9%). IgM Chikungunya was positive in 202 patients (M:46.04% and F:53.96%), and out of those 65 patients in which it was negative, we did RT-PCR in 18 patients due to unaffordability being a major factor and we found that RT-PCR came out positive in 15 patients. The mean ESR in males was 41.76±19.98, in females it was 53.66±24.66, mean CRP in males was 29.84±19.61 and in females it was 40.74±25.94.

Conclusions: We conclude that Chikungunya is a multisystem disease affecting both genders. In our setup, we observed it affected females more and seropositivity for chikungunya was seen in around half of the patients presenting with signs and symptoms. PCR test is more reliable for confirmation. Skin rashes with neurological symptoms, severe pain causing disability and dependence on others for personal care were main complaints. No mortality was reported in our study.

Disclosure of Interest: None declared

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SAT0391 MUSCULOSKELETAL MANIFESTATIONS OF CHIKUNGUNYA FEVER IN ELDERLY PATIENTS – CHIKBRASIL COHORT

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Background: Elderly patients with Chikungunya virus (CHIKV) infection may exhibit atypical and more severe clinical manifestations in the acute phase,¹ but little is known about these patients progress in the chronic phase of the disease.

Objectives: To describe the chronic clinical course of CHIKV infection in Brazilian elderly patients.

Methods: The CHIKBRASIL is a prospective, multicenter, observational cohort, conducted in six research rheumatology centres from the Northeast of Brazil, and has enrolled CHIK patients with joint manifestations since April 2016.² Data from 353 patients followed up to December 2017 were analysed, divided into two groups: the elderly (age ≥60 years) and not elderly.

Results: Of the 353 cases, 124 were elderly (35.1%), mean age was 67.1 years (±5.6), 81.5% women. Patients in the elderly group had a higher frequency of comorbidities, such as systemic arterial hypertension (p<0.0001), diabetes mellitus (p<0.001) and hyperlipidemia (p=0.0003). The median time of disease was 26 weeks, most of them were in the chronic phase of the disease (61.3%). With respect to initial clinical manifestations, no significant differences were observed between the groups, except for fatigue, which occurred more often in the non-elderly group (p=0.036). In general, the elderly group presented a lower frequency of absence at work (0.000), lower limb oedema (0.006) and less prescription of methotrexate (p=0.048). In addition, it was also observed that older patients had a lower mean of the number of painful joints (10.2±1.7), but without statistical difference (p=0.0655). After a median follow-up time of 27.5 weeks, the number of patients who presented complete improvement was higher in the non-elderly group (p=0.07), but without differences between the number of tender and swollen joints, persistence of arthralgia or arthritis in the two groups. No association was observed between the presence of comorbidities and the clinical evolution of the patients.

Conclusions: Despite the risk of a more severe evolution at the onset of CHIKV infection, elderly patients present a similar clinical course to the non-elderly in the chronic phase, apparently with less severity. However, such group is a high-risk

population with an important number of comorbidities. In all stages of the disease, especially in the acute phase, strict clinical supervision is recommended regarding the use of drugs and increased risk of complications.

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SAT0392 THE RELEVANCE OF SERUM PROCALCITONIN QUANTIFICATION FOR DIFFERENTIAL DIAGNOSIS OF INFECTIONS AND RHEUMATIC DISEASES

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Background: Assessment of procalcitonin (PCT) serum levels is of great interest in current rheumatology practice, due to clinical and laboratory similarity of acute systemic rheumatic diseases (RDs) and acute infectious process, and because of low diagnostic yield of conventional ESR, CRP and WBC in active RDs.

Objectives: To evaluate the relevance of PCT as a specific marker of generalised and local infections in patients with RDs.

Methods: Medical records of 134 in-hospital patients (mean age 40.6±19.5) admitted to VA Nasonova Research Institute of Rheumatology for examination and treatment were analysed in this retrospective study. Serum PCT concentration was measured using quantitative electrochemiluminescence method, Cobas E 411 analyzer (Roche, Switzerland). The infectious process was diagnosed in 75 pts, generalised – in 4, and local – in 71. Based on the severity of fever and intoxication local infections were divided into mild – 41 cases, and severe – 30 cases.

Results: The PCT level reached >2.0 ng/mL in 3 of 4 cases in generalised infection. In population with severe local infections (n=30) the PCT concentration exceeded the threshold and amounted to 0.60 ng/mL [0.19; 1.84], while in pts with mild infection (n=41) it was 0.13 ng/mL [0.08; 0.25] (table 1). PCT levels positively correlated with ESR, CRP, white blood cell count, and SLE activity according to SLEDAI index in this retrospective study. Maximal PCT levels were found in adult-onset Still's disease (ASD) pts with high activity of rheumatic process without underlying infection – 0.26 [0.10; 0.61] ng/mL. The test's sensitivity and specificity in generalised/severe local infections group (n=34) were 60% and 82.5%, respectively, with a threshold value of 0.4 ng/mL.

Abstract SAT0392 – Table 1. PCT values in different groups of patients, n (%)

PCT level, ng/mL	Generalised infection (n=4)	Local infection		No infection	
		Severe (n=30)	Mild (n=41)	Still's disease (n=6)	Totally (n=59)
≤ 0,05	-	1 (1,33)	4 (9,76)	-	12 (20,34)
0,05–0,1	-	2 (6,67)	13 (31,71)	1 (16,67)	19 (32,20)
0,1–0,25	-	5 (16,67)	13 (31,71)	2 (33,33)	16 (27,12)
0,25–0,5	1 (25)	6 (20,0)	6 (14,63)	1 (16,67)	6 (10,17)
0,5–2,0	0	11 (36,67)	5 (12,20)	2 (33,33)	6 (10,17)
2,0–10,0	1 (25)	3 (10,0)	-	-	-
>10,0	2 (50)	2 (6,67)	-	-	-
Me [25–ii; 75–ii percentiles]	5,30 ^{1,63} ; 9,06*	0,60 [0,19; 1,84] [†]	0,13 [0,08; 0,25] [‡]	0,26 [0,10; 0,61] [†]	0,09 [0,06; 0,19] [†]

p < 0,05.

Conclusions: PCT quantification is a sensitive and specific method for differential diagnosis of serious bacterial infections in patients with different activity of systemic RD. ASD seems to be the exception, as it was associated with PCT increase in the absence any infection. Further studies are needed to determine PCT thresholds for different RDs.

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