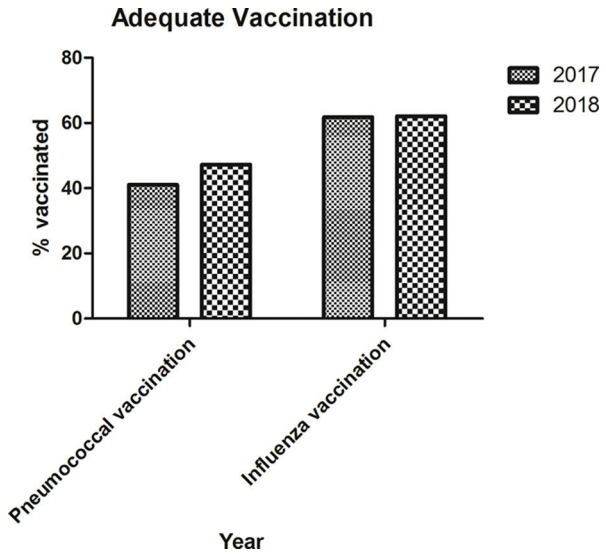
Simultaneously, we introduced staff education sessions, point-of-care paper "Arthritis and Infection Worksheets" and "Vaccination Advice Letters". In 2018, the clinic was re-assessed.

Results: 163 patients met inclusion criteria in 2017 and 262 in 2018. Patients were typical of an IA clinic (74% women, 45.4%≥60 years old, 72.7% had RA, 61.1% on cDMARDs, 53.6% on methotrexate, 46.6% on bDMARDs, 23.1% on cDMARD plus bDMARD).

In 2017, 104 (65.4%) knew of the increased infectious risk of IA. In 2018, 168 (65.6%) were aware. Awareness of infection risk with medications increased from 111 (69.8%) to 172 (66.9%).

Table 1 shows vaccination rates. PPSV23 rates increased from 41.0% to 47.2% (P value=0.29. Pearson Chi squared), and influenza from 61.8% to 62.1% (P value=0.95, Pearson Chi squared).

Table 1. Vaccination Rates



Vaccination awareness was higher for influenza (Table 2). Most patients were informed of requirements and vaccinated by general practitioners (GPs), with <5% of patients vaccinated in hospital. In 2017, the most common reason for non-vaccination was lack of awareness. This decreased post intervention. 70% of patients had smart phone access. 78% were willing to use this for vaccination reminders.

Table 2. Vaccination awareness, provision and reasons for non-compliance

	Influenza		PPSV23	
	2017	2018	2017	2018
Aware required	128 (80.0%)	212 (81.9%)	60 (38.0%)	118 (46.8%)
Aware of frequency	133 (99.3%)	219 (99.1%)	59 (75.6%)	98 (65.8%)
Source of awareness	92 (73.0%)	146 (71.2%)	49 (75.4%)	87 (70.2%)
GP	29 (23.0%)	44 (21.5%)	15 (23.1%)	27 (21.8%)
Hospital	0	12 (5.9%)	0	8 (6.5%)
Clinical Nurse Specialist	0	8 (3.9%)	0	1 (0.8%)
Public Health/Ward Nurse	6 (4.8%)	9 (4.4%)	1 (1.5%)	1 (0.8%)
Radio	5 (4.0%)	6 (2.9%)	0	0
Television				
Site of last vaccine	93 (78.8%)	149 (77.2%)	53(89.8%)	98 (90.7%)
GP	7 (5.9%)	14 (7.3%)	0	0
Work	6 (5.1%)	3 (6.7%)	0	1 (0.9%)
Pharmacy	6 (5.1%)	10 (5.2%)	1 (1.7%)	3 (2.8%)
Public Health Nurse	4 (3.4%)	5 (2.6%)	3 (5.1%)	4 (3.7%)
Hospital	2 (1.7%)	2 (1.0%)	2 (3.4%)	3 (2.8%)
Other				
Non-compliance reasons	18 (36.7%)	26 (34.2%)	69 (82.1%)	94 (76.4%)
Unaware	12 (24.5%)	18 (23.7%)	7 (8.3%)	10 (8.1%)
Fear of side effects	6 (12.2%)	10 (13.2%)	0	1 (0.8%)
Too busy	2 (4.1%)	2 (2.6%)	0 (0%)	1 (0.8%)
Cost	13 (26.5%)	22 (28.9%)	8 (9.5%)	17 (13.8%)
Other				

Conclusion: This study shows suboptimal vaccination awareness and uptake. Our interventions increased PPSV23 and influenza vaccination rates. There is debate about who is responsible for vaccinations. Guidelines advocate specialists sharing responsibility with GPs. 57% of rheumatologists considered GPs responsible (2). Perhaps, we should take a more active approach.

REFERENCES

[1] Doran MF, Crowson CS, Pond GR, O'Fallon WM, Gabriel SE. Frequency of infection in patients with rheumatoid arthritis compared with controls: a population-based study. Arthritis & Rheumatism. 2002;46(9):2287-93

[2] McCarthy EM, Azeez MA, Fitzpatrick FM, Donnelly S. Knowledge, attitudes, and clinical practice of rheumatologists in vaccination of the at-risk rheumatology patient population. JCR: Journal of Clinical Rheumatology. 2012;18(5):237-41

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SAT0456

SERO-REACTIVITY TO GALACTOSE-ALPHA-1,3-GALACTOSE AND CLINICAL PRESENTATIONS OF PATIENTS SEEN IN A RHEUMATOLOGY OUTPATIENT PRACTICE

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Background: Analphylactic reactions to cetuximab, a monoclonal antibody used in cancer therapy, were recognized in 2007 as a regional complication related to recognition of a protein epitope by IgE. This protein epitope was defined as galactose-alpha-1,3-galactose (alpha-gal), which is found in non-primate mammalian tissue. Reactivity to this epitope was also found to occur after meat consumption with manifestations including anaphylaxis, urticaria, or angioedema. Further study showed that reactivity was induced by tick bites from the Lone Star tick. Similar cases of reaction to red meat have been described in Australia in 2006, and more recently in Japan and various European countries. In our Rheumatology practices where patients often raise concerns about possible tick-borne illnesses, we have observed patients presenting with symptoms related to consumption of mammalian meat, but generally less severe, and with IgE reactivity to alpha-gal.

Objectives: We have characterized the range of presenting symptoms in our alpha-gal positive patients, and their response to dietary modification.

Methods: Patients referred to this Rheumatology practice who had known exposure or risk factors for tick exposure were tested for IgE antibodies against galactose-alpha-1,3-galactose (alpha-gal) using a standardized test administered by Viacor-IBT, and also tested for typical Rheumatologic markers, as indicated by their symptoms. Alph-gal IgE levels varied from 0.38 to >100 kU/L (normal <0.35 kU/L).

Results: 147 patients were identified as positive for alpha-gal, and were recommended to avoid mammalian meat. Followup testing and evaluation was achieved in 38 patients, along with documentation of symptoms for improvement or persistence.

Clinical manifestations, laboratory findings, and reasons for referral in symptomatic alpha-gal positive patients were diverse. Dermatologic manifestations occurred in 9 including urticarial vasculitis, serpiginous urticarial rash, purpuric rash, psoriasiform rash, nummular eczema, and subcutaneous nodules.

Arthritic manifestations varied and included monoarthritis (one patient, with negative Lyme PCR of fluid), oligoarthritis in 2 patients, inflammatory polyarthritis in 10 who did not meet criteria for a diagnosis of RA, and polyarthralgia in 22. 15 patients were diagnosed with Rheumatoid Arthritis, and 13 with Spondyloarthritis.

28 patients were referred with positive ANA tests. 25 were felt to be false positive ANAs who did not meet criteria for any connective tissue disease. Anticardiolipin antibodies were present in 4 patients.

Surprisingly only 11 patients had a history of severe reaction to mammalian meat, and only one had been previously diagnosed with mammalian meat allergy

Of the 38 patients seen in followup, 10 reported symptom improvement with mammalian meat restriction.

Conclusion: Alpha-gal reactivity from tick bites is more common than Lyme disease or other tick-borne disease in our catchment area. The patients rarely recall distinct exposure to a Lone Start tick.

Manifestations are protean, and do not correlate with alpha-gal IgE level. Some patients are shown to improve with restriction of dietary mammalian meat. Somewhat surprisingly, other patients prefer to tolerate intermittent mild symptoms to maintain current dietary patterns.

In areas where Lone Star ticks are present, and in patients with risk factors for tick exposure, alpha gal IgE reactivity should be considered and tested for as part of a "tick panel" in patients who present with symptoms of potential rheumatologic diseases.

REFERENCES

[1] Chung C, Mirakhur B, etal. 2008. NEJM 358:1109. Cetuximab-Induced Anaphylaxis and IgE Specific for Galactose-α-1,3-Galactose

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SAT0457 PATTERNS AND CONSEQUENCES OF POST-CHIKUNGUNYA ARTHRITIS – A LONGITUDINAL STUDY IN A TERTIARY CARE HOSPITAL IN BANGLADESH

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Background: Chikungunya fever (CF), is a viral illness, characterized by 3–7 days of high fever, headache, rash, myalgia, and severe arthralgias/arthritis, the hallmark of the disease.[1] There is evidence that links Chikungunya infection (CHIKV) with development of unspecific Post-Viral Arthritis, Rheumatoid Arthritis, Seronegative Spondylitis and other non-inflammatory musculoskeletal complaints like persistent arthralgia.[2]
Objectives: To identify the clinical patterns and consequences of Post-Chikungunya arthritis.
Methods: This longitudinal study was carried out during a major out-break of CHIKV infection in Dhaka, Bangladesh, among 142 patients (CHIKV IgM and/or IgG positive) who were followed-up for the next one year. Their clinical, laboratory, radiographic and ultrasonographic features were evaluated. Functional status was assessed by validated Bengali version of Health Assessment Questionnaire (HAQ).
Results: The mean age of the patient's was 43.12 ±10.94 where 50.7% were male and 81.7% were urban resident. At presentation (D1),95.1% patients were Chikungunya IgM positive where as 20.4% were IgG positive. Polyarthritis was noted among 69.7% patients. Symmetrical joint involvement and joint swelling were present in 84.5% in 47.2% patients respectively. The mean HAQ score was 1.34±0.72. After 3 months (D90) follow up, 40.8% patients reported Chronic Chikungunya arthritis where 6.9% had Rheumatoid Arthritis, 3.4% had Spondyloarthropathy and 89.6% were Undifferentiated arthritis. Among the Chronic Chikungunya arthritis patients, 5.2% were Anti-CCP positive, 1.7% were Rheumatoid factor positive, 3.4% were HLA-B27 positive and 3.4% had X-Ray findings of bilateral Sacroiliitis. Patients were treated with NSAID (100.0%) and steroid (10.0%) initially. Chronic arthritis was treated with Sulfasalazine (12.0%), Methotrexate (7.0%) and *Tofacitinib* (3.4%).
Conclusion: This study demonstrated that chronic arthritis was a frequent complication of acute Chikungunya infection where majority had undifferentiated arthritis.

REFERENCES

[1] Brighton SW, Prozesky OW, de la Harpe AL (1983) Chikungunya virus infection — a retrospective study of 107 cases. S Afr Med J 63,313-5.
[2] Yaseen HM, Simon F, Deparis X, Marimoutou C (2014) Identification of initial severity determinants to predict arthritis after chikungunya infection in a cohort of French gendarmes. BMC musculoskeletal disorders 15,249.

Table 1. Clinical presentation of the patients at onset (n=142)

Characteristics of joint involvement at onset	n (%)
Monoarthritis	7(4.9)
Oligoarthritis	36(25.4)
Polyarthritis 99(69.7)	
Symmetrical joint involvement	120(84.5)
Joint swelling	67(47.2)
Morning stiffness	116(81.7)
Skin involvement	90(63.4)
Erythematous rash 24(16.9)	
Erythematous rash and itching	66(46.5)
Myalgia 46(32.4)	
Ultra-sonographic findings	(n=**32**)
Tenosynovitis	22(68.8)
Synovial hypertrophy	11(34.4)
Tendinitis	8(25.0)
Median nerve involvement (CTS)	4(12.5)
Joint effusion	3(9.4)

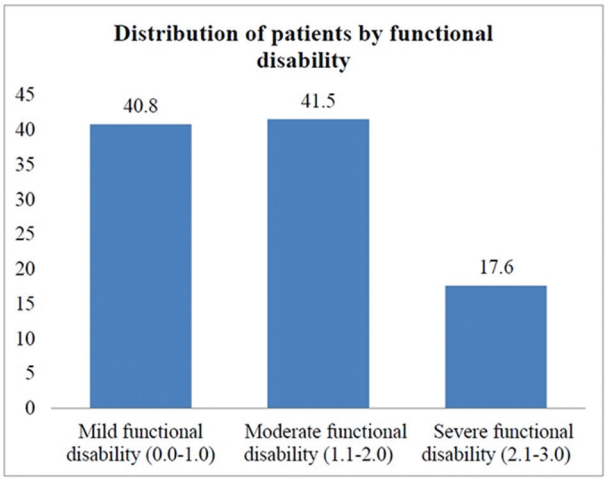

Figure 1: Distribution of patients by functional disability using HAQ

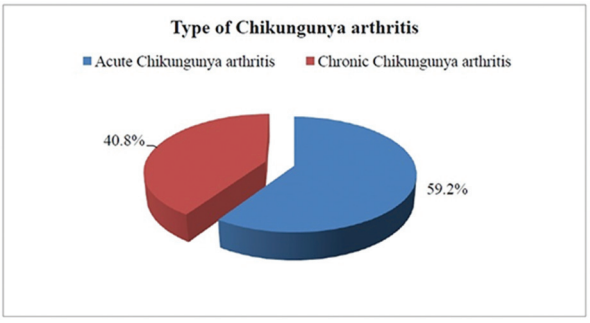

Figure 2: Type of Chikungunya arthritis

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SAT0458 EVALUATION OF DISABILITY IN THE COLOMBIA CHIKUNGUNYA EPIDEMIC WITHIN A COLOMBIAN COPCORD STUDY

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Background: During the 2014-2015 a Chikungunya virus (CHIKV) epidemic reached Colombia. Concurrently, the Community Oriented Program for the Control of Rheumatic Diseases (COPCORD) was being developed in Colombia to establish rheumatic diseases prevalence. Since CHIKV generates rheumatic manifestations, the presence of CHIKV infection was included.
Objectives: Based on the population entered in this program this study was developed with the aim to describe the disability of CHIKV infection through four questionnaires (HAQ-DI, EQ-5D, EQ-5D VAS and VAS for pain).
Methods: World Health Organization (WHO) criteria for CHIKV diagnosis and ELISA IgG and IgM serology were performed to identify CHIKV infection. Four groups of patients were defined: true positives (WHO + and + serology), true negatives (WHO - and - serology), false positives (WHO + and - serology), false negatives (WHO - and + serology). Three scores of disability and one of pain were applied to evaluate disability. A descriptive analysis was made using the media and standard deviation for continuous variables and percentage for the categorical variables, the Odds ratio was calculated with a confidence interval of 95% and a p< 0.05% for statistical significance
Results: From 548 patients with clinical suspicion of CHIKV infection, 295 were positive for CHIKV IgG and/or CHIKV IgM. Functionality evaluated by HAQ-DI showed a media of 0.17 (SD±0.45), with highest score after 7 weeks since the beginning of symptoms and the lowest in patients