Infection-related rheumatic diseases

POS0532 GLOBAL ULTRASOUND SYNOVITIS SCORE MAY REFLECT DEVELOPMENT OF CHRONIC POST-CHIKUNGUNYA RHEUMATISM

Keywords: Infection-related RMDs, Outcome measures, Ultrasound

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Background: Chronic musculoskeletal (MSK) symptoms such as arthralgia and arthritis develop in up to half of patients after acute chikungunya virus (CHIKV) infection. While MSK complaints are common during the acute infection, chronic post-CHIKV rheumatism represents a more severe outcome and is usually assessed by joint counts, laboratory markers and patient-reported outcomes (PROs). Ultrasound (US) may be a practical tool for predicting and confirming the development of chronic CHIKV.
Objectives: To evaluate the clinical relevance of MSKUS findings in post-chikungunya rheumatism.
Methods: 80 patients with acute CHIKV infection were enrolled in a prospective cohort study in Jaén, Peru. Clinical exam, US scans using grey-scale and power Doppler (PDUS), and serum inflammatory markers were performed at inclusion and at 3-month follow-up. Patients completed the RAPID3 outcome assessment and a MSK stiffness questionnaire. Joint counts and PDUS scans included 20 pairs of joints. Global synovitis and tenosynovitis scores were calculated following the EULAR-OMERACT recommendations for rheumatoid arthritis (GLOESS).
Results: 59 patients (mean age 35 years, 68% female) were assessed both in the acute infection stage and at 3-month follow-up. 21 patients (35%) met strict criteria for defining chronic CHIKV rheumatism with a mean 4.4 (±2.2) tender joints and RAPID3 scores >6. In the acute infection phase, global PDUS synovitis and tenosynovitis scores correlated moderately with tender joint count and with pain severity, joint stiffness and RAPID3 scores, but were not strongly predictive of patients who went on to develop chronic arthralgia. After 3 months, global PDUS synovitis scores correlated more strongly with tender joint count (r=0.53, p<0.0001), pain severity (r=0.60, p<0.0001), joint stiffness (r=0.53, p<0.0001) and RAPID3 scores (r=0.60, p<0.0001) (Table 1).
Conclusion: Global PDUS synovitis and tenosynovitis scores may be an objective measure of disease severity in patients developing chronic CHIKV rheumatism. Further validation with longer-term follow-up is needed.

Table 1. Correlation of synovitis and tenosynovitis PDUS scores with clinical examination and patient-reported outcomes (n=59).

Period	Assessment	Variable	Synovitis correlation	P-value	Tenosynovitis correlation	P-value
Inclusion	Clinical exam	Tender joint count	0.35	0.0068	0.30	0.0210
	MSK stiffness	Severity score	0.41	0.0011	0.36	0.0048
	RAPID3	Disability index	0.39	0.0024	0.33	0.0119
		Pain severity	0.36	0.0052	0.29	0.0277
		Patient's global health	0.35	0.0060	0.21	0.1045
		Overall RAPID3 score	0.42	0.0010	0.31	0.0187
Month 3	Clinical exam	Tender joint count	0.53	<.0001	0.52	<.0001
	MSK stiffness	Severity score	0.54	<.0001	0.62	<.0001
	RAPID3	Disability index	0.48	0.0001	0.35	0.0070
		Pain severity	0.60	<.0001	0.56	<.0001
		Patient's global health	0.56	<.0001	0.59	<.0001
		Overall RAPID3 score	0.60	<.0001	0.57	<.0001

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POS0533 RISK OF SEVERE INFECTIONS IN IMMUNE MEDIATED INFLAMMATORY DISEASES WITH IMMUNOGLOBULIN DEFICIENCY UNDER RITUXIMAB THERAPY

Keywords: Infection-related RMDs, Adaptive immunity, bDMARD

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Background: Rituximab (RTX) is effective in treating immune-mediated inflammatory diseases (IMID). Hypogammaglobulinemia may occur under RTX and may increase infection risk.
Objectives: Since data are controversial, we evaluated the risk of severe infection in patients with IMID and hypogammaglobulinemia under RTX therapy.
Methods: We conducted a retrospective single-center study retrieving all patients treated with RTX for IMID. We calculated the incidence of RTX-induced immunoglobulin (Ig) deficiency, the type of Ig deficiency, the incidence of severe infection, and risk factors for severe infection.
Results: 311 patients were analyzed. Mean follow-up was 62.6 months. Exposure was 1623.7 patient-years. 15% of patients developed at least 1 severe infection. Incidence rate was 2.77/100 PY. 29 patients had prevalent Ig deficiency before being treated with RTX. 68 patients developed hypogammaglobulinemia, mainly for IgM (12%) and IgG (8%). Severe infection rate was higher in patients with prevalent Ig deficiency (RR 1.73; 95% CI 0.85-3.53), with significant difference in survival model (Log-Rank test: p=0.033). On the other hand, no excess risk of infection was observed in patients developing Ig deficiency under RTX in univariate analysis (RR 0.68; 95% CI 0.31-1.47) or in survival analyses after adjustment for confounding factors (type of IMID (RA versus other IMID), cumulative dose of RTX, presence of chronic pulmonary comorbidities, use of an immunosuppressive drug at inclusion, and mean dose of GCs collected at each cycle of RTX during follow-up) (Log-Rank test: p=0.399). Chronic lung disease and glucocorticoids (GCs) use during follow-up were associated with an increased risk of severe infection.
Conclusion: We did not observe an increased risk of severe infection in RTX-induced Ig deficiency. However, we found an increased risk of severe infection in case of prevalent Ig deficiency prior to RTX. In case of Ig deficiency, RTX management should be discussed on a case-by-case basis, according to an individual assessment of the infectious risk, especially when GCs therapy is used and chronic lung diseases are present.
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POS0534 PREDICTORS OF SERIOUS INFECTIONS IN RHEUMATOID ARTHRITIS – A PROSPECTIVE BRAZILIAN COHORT

Keywords: Real-world evidence, Rheumatoid arthritis, Infection-related RMDs

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Background: Infectious intercurrences increase mortality and morbidity and often limit immunosuppressive treatment in rheumatoid arthritis (RA) patients [1].The risk of infection in this population may be influenced by factors related to treatment, the characteristics of rheumatic disease and the clinical and social conditions of patients [2].
Objectives: This study aims to evaluate the incidence and factors related to the occurrence of serious infections, defined as the need for hospitalization or the use of intravenous antibiotics for the treatment, among patients with rheumatoid arthritis in Brazil.
Methods: We analyzed data from the REAL [3], a prospective observational study, that evaluated Brazilian RA patients, with clinical and laboratory data