Methods: 413 randomly selected older adults (mean age 63 years) had magnetic resonance imaging at baseline and approximately 2.6 years later to measure knee OP, cartilage defect, cartilage volume, BMLs, meniscal extrusion, IPFP quality score/maximum area and effusion-synovitis. Weight, height, body mass index (BMI) and leg muscle strength were measured by standard protocols.
Results: 85% participants had MRI-detected OP at baseline. Over 2.6 years, the average OP score increased significantly in all compartments. The OP score remained stable in 53% participants and worsened in 46% (≥1-point increase) OP, with 1% decreasing. Baseline factors associated with an increase in MRI-detected OPs over 2.6 years included BMI, cartilage defects, BMLs, meniscal extrusion, IPFP quality score and Effusion. In multivariable analyses, baseline cartilage defects, BMLs and meniscal extrusions and IPFP quality score were site-specifically and significantly associated with increased OP at medial tibiofemoral, lateral tibiofemoral and total compartments (p all <0.05). In contrast, total and suprapatellar pouch effusion-synovitis were significantly associated with increased OP at total and lateral compartments (p all <0.01). The significant associations between baseline cartilage volume and increased OPs at medial and total compartments became non-significant after further adjustment for other knee structural abnormalities. Age sex and smoking status were not associated with increased OPs over time.

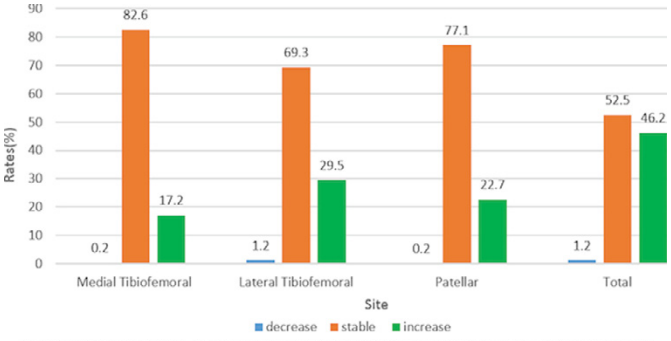

Figure 2. Change in MRI-detected osteophyte scores by site over 2.6 years. Total score was calculated by summing medial tibiofemoral, lateral tibiofemoral and patellar scores.

Conclusions: Knee MRI-detected OP in older adults is common and, in contrast to radiographs, is likely to progress over a relatively short period. Progression can be predicted by structural risk factors suggesting they are a consequence of these abnormalities.
References:
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SATURDAY, 17 JUNE 2017

Infection-related rheumatic diseases

SAT0556 RISK FACTORS FOR SEVERE INFECTION AND RATIONALE FOR IMMUNOGLOBULIN MONITORING DURING RITUXIMAB TREATMENT IN AUTOIMMUNE RHEUMATIC DISEASES

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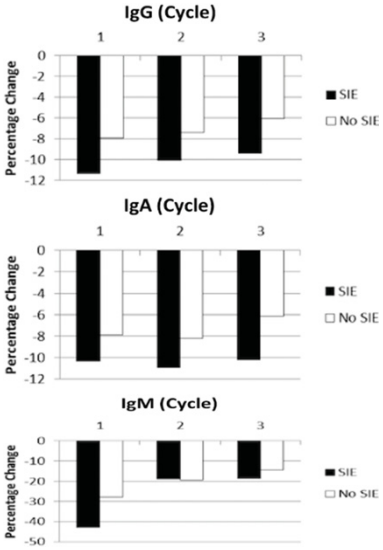
Background: Rituximab (RTX) has been used in the treatment of various autoimmune rheumatic diseases (AIRDs) for over a decade. Repeat cycles are effective for maintenance but may lead to hypogammaglobulinaemia. Low IgG at baseline has been associated with post-treatment infection rate but may be confounded by other clinical variables and fully adjusted models with method for handling missing data have not been presented. Importance of post-treatment change in Igs has also not been proven.
Objectives: To evaluate risk factors for severe infection in multivariable analysis and assess outcome of hypogammaglobulinaemia.
Methods: The first 700 consecutive patients with AIRDs treated with RTX at a single centre were studied. Each cycle of RTX consisted of 2x1000mg infusions repeated on clinical relapse. IgM, IgA and IgG levels were measured at baseline and 4–6 months after each cycle. Multiple imputation was used for missing data. Baseline factors for predicting serious infection and low Ig were tested using univariable and multivariable (MVA) logistic regression analyses.
Results: 550 patients were female, median age (IQR) at RTX initiation 58 (46–68) years and median disease duration (IQR) 7.9 (3.4–15.0) years. 506 (72%) had RA, 94 (13%) SLE, 49 (7%) AAV, 14 (2%) DM, 5 (1%) APS, 6 (1%) SSc and 26 (4%) other CTD. 364 (52%) were biologic-naïve and 515 (74%) were on concomitant DMARDs. Total follow-up: 2940 patient-years (PY). 284 serious infections were recorded in 179 patients (9.7/100 PY); 88 cases within 12 months of cycle 1 (C1). In MVA, previous severe infection (OR 10.7, 95% CI 5.8–19.5), low IgG (OR 3.6, 95% CI 1.5–8.6), previous cancer (OR 2.9, 95% CI 1.2–6.6) and chronic lung disease (OR 1.7, 95% CI 0.9–3.1) increased the odds of a severe infection within 12 months of C1. A diagnosis of CTD was associated with lower risk (OR 0.5, 95% CI 0.2–0.9). Low IgG at RTX initiation was predicted by older age, previous cancer, RA diagnosis, previous severe infection and previous treatment with cyclophosphamide. In C1-C3, higher rate of change in IgA and IgG levels were associated with serious infections (Figure 1). Overall, only 7 (1%) of the patients required Ig replacement in this cohort.



Conclusions: Factors associated with serious infection at RTX initiation include previous serious infection, low IgG, previous cancer, a diagnosis of RA and chronic lung disease. This is the first study to show the rationale for monitoring the rate of change in Ig levels during repeat cycles of RTX, with reduction in all Ig subclasses being associated with increased risk of post-treatment infection. Further analysis including predictors of serious infections in repeat cycles is in progress and will be used to develop guidelines for safety monitoring of rituximab.
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SAT0557 CHIKUNGUNYA OUTBREAK IN BRAZIL: DEMOGRAPHIC AND CLINICAL CHARACTERIZATION OF 732 PATIENTS – CHIKBRASIL COHORT

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Background: Chikungunya Fever (CF) is a disease characterized by acute febrile arthritis and caused by a mosquito-transmitted alphavirus. Considering the wide distribution of the vector, the presence of imported cases from 2010 and Brazilian population's susceptibility, there was a dispersal and establishment of Chikungunya virus (CHIKV) throughout the country. Since 2014, the CF has achieved a large proportion of the Brazilian population and has been responsible for the development of chronic joint symptoms in thousands of people.
Objectives: To describe the demographic, clinical and serological characteristics of patients from specialized Rheumatology services from northeastern Brazil, in a large, multicenter cohort.
Methods: Data from 732 patients in a prospective, multicenter, observational cohort conducted in six research rheumatology centers were analyzed. Patients