SUBCLINICAL SYNOVITIS IN ARTHRALGIA: HOW OFTEN DOES IT RESULT IN CLINICAL ARTHRITIS? A LONGITUDINAL STUDY TO REFLECT ON STARTING POINTS FOR DMARD TREATMENT

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Background: Clinically apparent arthritis is mandatory for diagnosing and classifying RA. It is often used as endpoint in arthralgia cohorts and as a starting point for DMARD therapy in clinical practice. In recent literature subclinical synovitis, visualized with MRI or ultrasound, is increasingly used as a starting point for DMARD therapy in absence of clinically apparent arthritis. However, not all patients with a subclinical synovitis will develop clinically apparent arthritis, and thus may be overtreated. It has even been suggested to replace the entry-criterion of clinical arthritis by subclinical synovitis within the 2010 classification criteria for RA to diminish overtreatment. However this might lead to an oversimplification of the disease. Because of aforementioned reasoning we aimed to evaluate the risk of overtreatment of these approaches and therefore performed a longitudinal study in three observational arthralgia cohorts.

Objectives: To determine the frequency of non-progression to clinical arthritis in patients with subclinical synovitis, also after considering the 2010-criteria.

Methods: Three individual cohorts of arthralgia patients without clinically apparent arthritis (n=166, 473 and 168) were followed for 1-year on the development of inflammatory arthritis (IA). At baseline subclinical synovitis in hands or feet was visualized with ultrasound (US) (defined as greyscale≥2 and/or power-doppler≥1) in cohort 1 and 3 and MRI (synovitis score ≥1 by two readers) in cohort 2. For all patients with subclinical synovitis the proportion of progressors (true positives) and non-progressors (false positives) were determined. The same analysis was done in the subgroup of patients that fulfilled the 2010 criteria for RA, if subclinical synovitis was used as entry criterion. Analyses were stratified for ACPA.

Results: At baseline 36%, 41% and 31% of patients had subclinical synovitis. Of the ACPA-positive arthralgia patients with subclinical synovitis 46%, 56% and 29% respectively developed IA, whereas 54%, 44% and 71% did not progress. Within ACPA-negative arthralgia patients with subclinical synovitis 34%, 15% and 10% developed IA; whereas 66%, 85% and 90% did not progress (Figure 1A). Similar results were seen in the subgroup of patients that fulfilled the 2010 criteria with subclinical synovitis as entry criterion (Figure 1B).

Conclusion: Replacing clinical arthritis by subclinical synovitis in arthralgia introduces a high false-positive rate: 44-71% (ACPapos)-pos) and 66-90% (ACPapos)-neg) of patients with subclinical synovitis did not develop clinically apparent arthritis within one year. Applying the 2010-criteria in this setting did not diminish the false positive rate. Starting DMARDs in patients without clinical synovitis may therefore introduce considerable overtreatment.

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THE IMPACT OF COMORBIDITIES ON ABSENTEEISM, PRESENTEEISM AND EMPLOYMENT STATUS IN PEOPLE LIVING WITH RHEUMATOID ARTHRITIS

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Background: Many people with rheumatoid arthritis (RA) have comorbidities. However, there is limited research on the impact of multimorbidity on absenteeism (e.g. sick leave) and presenteeism (i.e. reduced productivity while at work due to ill health) in people with RA.

Objectives: i) to explore the impact of comorbidities on absenteeism and presenteeism in patients with RA and ii) to evaluate the association between multimorbidity and employment status.

Methods: A cross-sectional survey was conducted by the National Rheumatoid Arthritis Society (NRAS), UK, collecting information on demographics, education, employment status (i.e. employed (Empl)), stopped/retired early because of RA (Stop_RA), stopped/retired early because of other health issues (Stop_Health)), and disease related variables (e.g. symptom duration, rheumatoid arthritis impact of disease (RAID) questionnaire). Participants were asked to report whether they
had or were treated for any of 15 predefined comorbidities (categorised into 0, 1, 2, or ≥3 (Table)). Percentage of number of hours missed due RA (i.e. absenteeism) and presenteeism (10-point Likert scale) were assessed using the Work Productivity and Activity Impairment Questionnaire (WPAI-RA). For the purpose of this study both absenteeism and presenteeism outcomes were dichotomized (no presenteeism/absenteeism versus any) and only patients aged <65yrs were included.

Logistic regression analysis were applied to assess the association between number of comorbidities and absenteeism/presenteeism, adjusting for the categorical variables age, gender and education. Chi2-square test was applied to assess frequency of comorbidities and absenteeism/presenteeism, adjusting for the categorical absenteeism/absenteeism versus any) and only patients aged <65yrs were included.

The frequency of the following comorbidities were observed between the three employment status groups (Empl, Stop_RA, Stop_Health, respectively): heart disease (5.7%, 16.3%, 26.7%), blood pressure, lung disease, diabetes, ulcer or stomach disease, kidney disease, liver disease, anaemia or other blood disease, cancer, depression, anxiety, OA, back pain, osteoporosis and Siipgen. Bold figures P<0.05.

Conclusion: Although the study is cross-sectional and no temporal association can be determined, this study shows that not only personal and work related contextual factors should be considered when preventing worker productivity loss, but also other comorbidities.

Disclosure of Interests: A. Bradshaw: None declared, Ailsa Bosworth Speakers can be determined, this study shows that not only personal and work related contextual factors should be considered when preventing worker productivity loss, but also other comorbidities.

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RHEUMATOID ARTHRITIS AT TREATMENT WITH BDMARD OR TDMARD: VACCINATION RATES AND INCIDENCE OF RESPIRATORY INFECTIOUS DISEASES, RESULTS FROM A COHORT

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Background: Vaccination regimes have been evaluated for long time in rheumatic diseases, being a strong recommendation to vaccinate against Influenza and Pneumococcus (13 and 23-valent). Rheumatoid arthritis (RA) patients have higher rates of infectious diseases, caused by many reasons, being patient’s comorbidities, rheumatic disease and treatments used the most important1-2. Objectives: To analyze the incidence of respiratory infectious diseases in these patients regarding for vaccination status. Also prove the degree of accomplishment of vaccination calendar according to recommendations.

Methods: Patients diagnosed of RA at treatment with bDMARD or tDMARD, in Rheumatology Department of aforementioned hospital, during Influenza vaccination campaign in 2018 (October 2018 – February 2019) were included. Clinical, demographic and therapeutic data were reviewed. Stata 15.1 was used to perform statistical analysis.

Results: 237 patients finally fulfilled inclusion criteria, excluding deceased or finished treatment (460 patients were diagnosed of RA and 954 patients conform all bDMARD and tDMARD of Rheumatology Department). Mean age at beginning of vaccination campaign was 61.5 years old (SD 13.6), 79% were female. Mean time of diagnosis was 15.4 years (SD 9.4), 79.7% patients receive Influenza vaccine, although higher rates were found in Pneumococcal vaccine (86.9% 13-valent and 81.8% 23- valent). Most patients were at treatment with anti-TNF (57.2%, the most prevalent was etanercept 27.5% followed by adalimumab 11.0% and infliximab 10.2%). csDMARD concomitant was achieved by 67.4% patients (methotrexate 73%) and 61% receive corticosteroids. Only 3 patients got hospitalized by pneumonia. As opposed, 39 patients suffer from a respiratory infectious disease without hospitalization (mean of 1.33 infections/patient). After multivariate analysis, only 13-valent Pneumococcal vaccine is relevant statistically significant with higher rates of respiratory infectious diseases (Chi2=6.25 p=0.012 OR 2.86 CI95% 1.12 to 6.88). Other variables analyzed were kind of bDMARD/tDMARD, Influenza vaccine, 23-valent Pneumococcal vaccine, concomitant csDMARD/corticosteroids, but no relationship was found. Conclusion: Vaccination status is still incomplete in majority of rheumatic patients. Its benefits have been explained in a variety of studies. That is the...