Achieving a Low Disease State within First 3 Months in Early Rheumatoid Arthritis Results in Lower Fatigue Over 5 Years

Melissa Holdren1, Oss Schier2, Susan J. Bartlett3-4, Louis Bessette2, Gilles Boine3, Glen Hazlewood2, Carol Hitchon5, Edward Keystone1, Diane Tin5
Carter Thorne6, Vivian Bykerk11,12, Janet Poole7, Western University, London, Canada; 2University of Toronto, School of Public Health, Toronto, Canada; 3McGill University/MUHC, Montreal, Canada; 4Johns Hopkins Medicine, Baltimore, United States of America; 5University de Laval, Quebec City, Canada; 6University de Sherbrooke, Sherbrooke, Canada; 7University of Calgary, Calgary, Canada; 8University of Manitoba, Winnipeg, Canada; 9University of Toronto, Toronto, Canada; 10Southlake Regional Health Center, Newmarket, Canada; 11Hospital for Special Surgery, New York, United States of America; 12Well Comell Medical College, New York, United States of America

Background: Up to 80% of rheumatoid arthritis patients report clinically relevant fatigue. Fatigue is complex multi-factorial process that can result in adverse affects on patients’ physical and emotional well-being.

Objectives: To examine the relationship between disease activity and fatigue over time in early rheumatoid arthritis (ERA).

Methods: Data were from patients with ERA (symptoms < 12 months) enrolled in the Canadian Early Arthritis Cohort (CATCH). CATCH participants completed repeat clinical assessments, laboratory investigations and self-reported questionnaires including rating their fatigue over the past week using a 10 point numerical rating scale (NRS). Fatigue severity was classified as low (≤2); moderate (>2 but ≤5) and high (>5) based on other published RA studies. Bivariate relationships between disease activity measures and fatigue over 5 years of follow-up were estimated using the Pearson correlation coefficient. T-tests and repeated measures were used to compare differences in fatigue ratings in patients who did vs. did not achieve a low disease state (DAS28 <3.2) within 3-months of cohort entry.

Results: Of the 1864 patients included, 1640 (88%) met criteria for RA, 1342 (72%) were women and most had moderate-high baseline disease with a mean (SD) DAS28 of 4.9 (1.5). Fatigue was common with 19% reporting moderate and 59% severe fatigue at baseline. Fatigue was positively and strongly correlated with pain and patient global ratings (r 0.56-0.67, p<0.001), positively and moderately correlated with DAS28 (r 0.35-0.49, p<0.001), and positively but more weakly correlated with tender/swollen joint count, physician global assessment, ESR and CRP (r 0.10-0.39, p<0.01) throughout the first year of follow-up. Patients who reported low fatigue severity by three months continued to have significantly lower fatigue throughout follow-up compared to those with moderate or high fatigue (p<0.001). Patients who achieved DAS28 REM or LDA within 3-months of cohort entry had significantly lower mean fatigue compared to those with more active disease throughout 5 years of follow-up (p<0.001) (Figure 1).

Disclosure of Interests: Melissa Holdren: None declared, Oss Schier: None declared, Susan J. Bartlett Consultant for: Pfizer, UCB, Lilly, Novartis, Merck, Janssen, AbbVie, Louis Bessette: None declared, research support from: Amgen, BMS, Janssen, Roche, AbbVie, Pfizer, Merck, Celgene, Sanofi, Lilly, Novartis, Consultant for: Amgen, BMS, Janssen, Roche, UCB, AbbVie, Pfizer, Merck, Celgene, Sanofi, Lilly, Novartis, Speakers bureau: Amgen, BMS, Janssen, Roche, UCB, AbbVie, Pfizer, Merck, Celgene, Sanofi, Lilly, Novartis, Patel: None declared, Rachel Kapelow: None declared, Rachel Kapelow, Consultant for: Eli Lilly and Company.

Figure 1. Mean patient fatigue scores based on NRS of 1-10 over subsequent visits, split based on DAS28 score at 3 months.


Conclusion: Fatigue is common in ERA and is most strongly correlated with pain and disease activity. Early treatment response within 3-months was associated with short and long-term improvements in fatigue over time. Further longitudinal research examining the time-varying effects of both clinical and psychosocial factors on fatigue is needed.

References:

Acknowledgement: On behalf of Canadian Early Arthritis Cohort (CATCH) Investigators

Optimizing the access to new treatments for RMD patients

Yvan Maque-Acosta1, Julianna Hirsch2, Qingying Lai3, Rachel Kapelow1, Beverly Johnson4, Jacobi Medical Center/Albert Einstein College of Medicine, Internal Medicine, Bronx, United States of America; 5Mt. Sinai St. Luke’s-West Hospital, New York, United States of America; 2Hackensack University Medical Center, Hackensack, United States of America; 4Jacobi Medical Center/Albert Einstein College of Medicine, Rheumatology, Bronx, United States of America

Background: Quality of care measures for rheumatoid arthritis (RA) have been endorsed by the American College of Rheumatology and the CDC. Similar quality indicators have been studied and recommended by the European League Against Rheumatism. Improving quality metrics in an underserved community is a problem given the lack of resources.

Objectives: To identify quality metrics for RA patients with need for improvement in our underserved urban public hospital, and to establish an effective intervention.

Methods: An initial retrospective chart review established baseline data from patients with RA seen in our clinic (July 2015 - July 2016), they were identified by ICD-9/10 coding. We identified 3 RA measures needing improvement: (a) tuberculosis screening (TBsc) 12 months prior to starting a new biologic agent, b) documentation of clinical disease activity index (CDAI) in >50% of encounters, c) appropriate pneumococcal vaccination. We then planned an intervention by placing index cards at computer stations to remind providers to check these measures. We collected data on these 3 variables prior to the intervention (December 2016 - July 2017) and 30+ days after (August 2017 - December 2017). We also compared these results by provider type (attendings and fellows). For statistical analysis we used Chi-Square test and SPSS 24.

Results: Baseline data included 240 patients, analysis prior to the intervention included 86 patients, and after the intervention included 131 patients. CDAI documentation was improved from 72.1% to 90.4% (p<0.001), by stratifying the analysis by provider type, this improvement was only significant in attendings (p<0.005) and not in fellows (p=0.43). Further analysis by including only the same fellows in both pre and post intervention moments (some fellows graduated) showed a significant difference in both attendings (attendings: p=0.005; fellows: p=0.024). In terms of TBsc, baseline data showed 73.1% compliance, however we already found a compliance of 100% prior to the intervention. (Figure 2, p=0.002 when compared with baseline data). Finally, there was no difference in

Disclosure of Interests: Yvan Maque-Acosta: Grant/research support from: Abbvie, Amgen, Lilly, Novartis, Consultant for: Abbvie, Amgen, BMS, Celgene, Eli Lilly, Pfizer, Speakers bureau: Abbvie, Amgen, Lilly, Novartis. Rachel Kapelow: Grant/research support from: Eli Lilly and Company. Beverly Johnson: None declared, Melissa Holdren: None declared, Orit Schieir: None.

Figure 1. Mean patient fatigue scores based on NRS of 1-10 over subsequent visits, split based on DAS28 score at 3 months.
Conclusion: Placing a card reminding providers to check 3 RA quality measures significantly improved CDAI documentation after 30 days of starting the intervention. The compliance with TBsc prior to starting a new biologic agent was 100% even before the intervention, which was better compared to baseline data, likely due to providers being aware there was a problem after initial data was collected. We did not find improvement in pneumococcal immunization rate, most likely because there are multifactorial components to motivating patients to get the vaccine. Our results suggest that interventions as simple as raising provider awareness to a problem such as TB screening, and an index card to remind people to document CDAI can be effective to improve QI measures in RA patients in underserved communities.

REFERENCES:

Disclosure of Interests: None declared