The Impact of Using a Bridging Medication on Clinical and Patient Reported Outcomes During a DMARD Interruption

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Introduction

- It is common for RA patients to interrupt their DMARD regimen due to events like infections and surgeries
- Many RA patients need to manage their disease symptoms during a DMARD interruption with a bridging medication

Aim

- To examine clinical and patient reported outcomes of RA patients who use a bridging medication during an interruption of their DMARD regimen

Methods

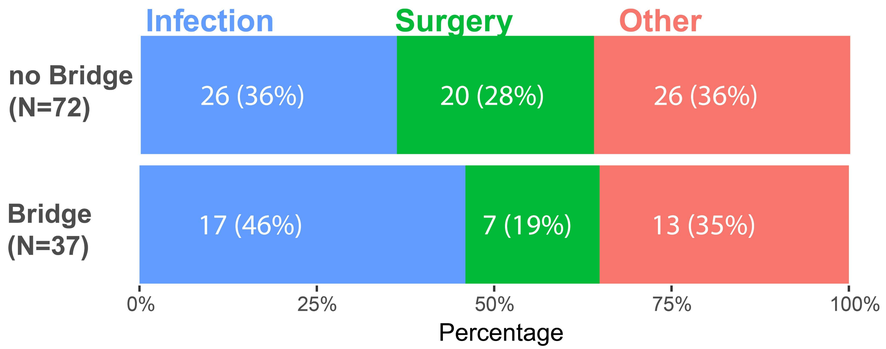
- Clinical and patient reported data were collected from a prospective RA cohort including:
  - Patient demographics
  - Patient reported DMARD interruption of any length in the past 6 months from time of survey and reason for the DMARD interruption
  - Use of a bridging medication (corticosteroid and/or NSAID) during the DMARD interruption
  - Current and previous RA medication use
  - Number of flares, most recent flare duration and most recent flare pain severity
  - Outcomes (VAS pain scale (0-100), fatigue scale (0-100), patient global scale (0-100), and DAS28-CRP3) were collected at the time of survey
    - To assess for baseline outcome differences, VAS pain, fatigue, and patient global scales were also collected 6 months prior and DAS28-CRP3 was collected 1 year prior to the time of survey

Statistical Analyses

- Univariate analyses: clinical and demographic characteristics of patients who had a DMARD interruption and used a bridging medication were compared to patients who did not use a bridging medication
- Outcomes (VAS pain scale, fatigue scale, patient global scale, and DAS28-CRP3) were evaluated in four separate stepwise multiple linear regression models using a bridging medication vs not using a bridging medication as the main predictor
  - Each outcome variable was adjusted for potential covariates of univariate significance ($p<0.15$) and for baseline outcome differences (Figure 2)
- Length of the reported DMARD interruption was included as a covariate in the models

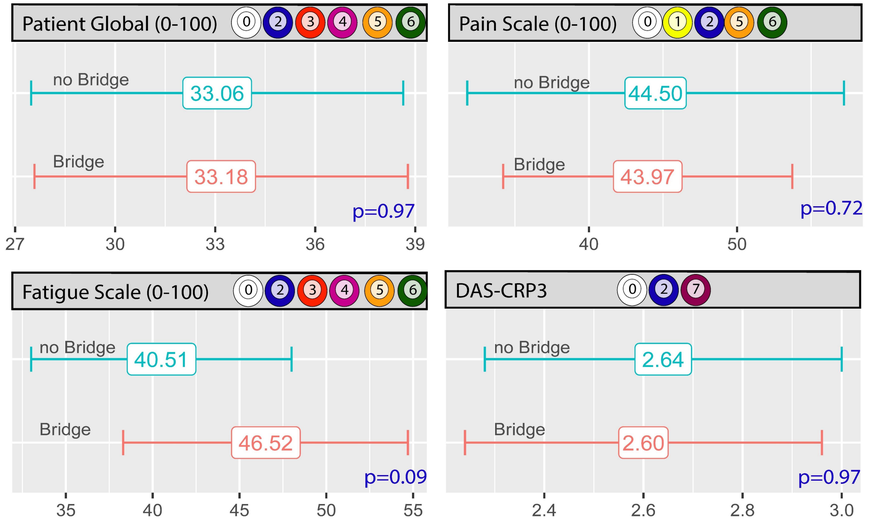
Results

Figure 1. Indications for Patient Reported DMARD Interruption*



*Other includes: side effects, pregnancy, insurance issue, and unknown; all p-values were null

Figure 2. Adjusted Outcome Means for Bridging with and without a Medication during a DMARD Interruption With 95% Confidence Limits



Covariates included in each model:

- (0) Previous outcome measure
- (1) If bridging medication was a new start
- (2) Length of interruption
- (3) Length between interruption and visit
- (4) If reason of interruption is infection
- (5) Current steroid use
- (6) Current TNF use
- (7) Flare duration

Results

- Study surveyed 503 RA patients of which 109 (22%) reported a DMARD interruption in the last 6 months
- On average, patients who reported a DMARD interruption were 59 years old, 85% female, 93% Caucasian, and had 16 years of disease duration
- Of the 109 patients who reported a DMARD interruption, 37 used a bridging medication
- 62% of the patients who reported using a bridging medication indicated that the bridging medication was a new start
- Infection was the most common reason reported for a DMARD interruption (Figure 1)
- Type of DMARD break reported by patient (N=109; categories not mutually exclusive): Anti-TNF 62 (57%), Methotrexate 53 (49%), Non-Biologic DMARD 60 (55%), Biologic DMARD 77 (71%)
- On average, patients who used a bridging medication had a DMARD Interruption that lasted 38 days while patients who did not use a bridging medication had a shorter interruption of 24 days (p=0.02)
- In the univariate analysis, patients who used a bridging medication had worse patient global (p=0.0019), VAS pain (p=0.0017), VAS Fatigue (p=0.04), and DAS28-CRP3 (p=0.0005) scores compared to patients who did not use a bridging medication during a DMARD interruption
- Final stepwise regression models evaluating the outcomes showed no differences in pain, fatigue, patient global, and RA disease activity between patients who did and did not use a bridging medication during a DMARD interruption (Figure 2)

Strengths/Limitations

- Data collected from a large prospective cohort of RA patients
- DMARD interruption data was patient reported
- In some cases, the indication for the DMARD interruption is unknown

Conclusions

- Use of a bridging medication was not associated with better outcomes following a DMARD interruption after adjusting for baseline outcome differences and other significant covariates
- Better treatments for patients who need to manage symptoms during a DMARD interruption may be warranted

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