a biochemical adherence guided intervention is superior to standard clinical care in RA patients prescribed MTX.

Methods: RA patients prescribed oral MTX for ≥2 years were randomised 1:1 to receive biochemical adherence biofeedback or control. Clinic-no-demographics, biochemical MTX adherence and DAS-28 and were measured at baseline and three months. Participants in the intervention cohort were telephoned with their biochemical adherence results and adherence was explored. The semi-structured interviews were used to evaluate a sample of patient perspectives about and engagement with the intervention (n=10, visit 4). Ethical approval for MIRA was given by the North West - Haydock Research Ethics Committee (19/NW/0047) and all participants provided written informed consent.

Results: 57 trial participants were recruited, withdrawal rate was 14% and reasons given were intercurrent illness, lost contact, withdrawn consent and one patient died during follow-up leaving full outcome data available for 49 participants. A total of nine semi-structured interviews were recorded and analysed in the qualitative arm of the study. The themes from the interviews were grouped in relation to the core concepts of normalisation process theory, these were: coherence, cognitive participation, collective action, reflexive monitoring. Density mapping of the themes suggested that comprehension of the study purpose might have been limited. However, there were high levels of reflexive monitoring and most of the reflections were of a positive nature. Additionally, the intensity of data relating to cognitive participation and collective action suggest that participants were fully engaged in the trial and were supportive of the intervention and trial process.

Conclusion: The results of the MIRA trial have demonstrated that the use of a biochemical adherence blood test with biofeedback is feasible as part of a clinical trial. Qualitative findings suggested that participants reported that they were happy to take part in the trial. In contrast to expectations, participants were happy to have their MTX adherence monitored.

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AB0472

FILOGTINIB FOR RHEUMATOID ARTHRITIS - AN OBSERVATIONAL STUDY TO ASSESS CLINICAL EFFECTIVENESS IN NHS LoTHIAN

Keywords: Real-world evidence, Targeted synthetic drugs, Rheumatoid arthritis

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Background: Filgotinib (Jysleca) is a Janus-kinase (JAK) inhibitor which in 2021 was approved for use in the UK in moderate or severe rheumatoid arthritis (RA) either as monotherapy or in combination with Methotrexate. A reduced dose of 100mg is recommended for patients aged 75 years or over, or with moderate or severe renal impairment. Clinical efficacy of filgotinib alongside a conventional disease-modifying anti-rheumatic drug (CDMARD) was demonstrated in the FINCH 1 and FINCH 2 trials [1,2] but evidence of real-world effectiveness is currently limited.

Objectives: To describe a cohort of patients prescribed filgotinib (Jysleca) for RA in NHS Lothian and assess clinical response and discontinuation rates in routine clinical practice.

Methods: The electronic patient record was reviewed for patients prescribed filgotinib in NHS Lothian between December 2021 and August 2022. Baseline data was recorded including time since diagnosis of RA, previous and concurrent treatment, duration of treatment with filgotinib and discontinuation reason if applicable. Comorbidities of intestinal lung disease (ILD), prior venous thromboembolism (VTE), major adverse cardiovascular events (MACE) or malignancy were recorded. Steroid prescriptions at the time of commencing filgotinib were recorded. DAS-28 scores within 6 months prior to starting filgotinib were recorded where they had been performed, along with most recent DAS-28 scores.

Results: 145 patients were prescribed filgotinib for RA; 106 females and 39 males. Median age was 64 years. Median treatment duration was 213 days. 35 (24.1%) patients were treated with the reduced 100mg dose. 14 (9.7%) discontinued treatment. 120 (82.8%) were previously treated with an alternative biologic DMARD. 59 (40.7%) had failed multiple biologic DMARDs of different classes. 12 (8.4%) had failed biologic DMARD and small molecule MTX. Pre-treatment DAS-28 scores were recorded in 53 (36.6%), with a mean score of 5.07. DAS-28 scores following commencement of filgotinib were recorded in 29 (20.0%), with a mean score of 3.50. Pre-treatment tender (TJC) and swollen (SJC) joint counts were recorded in 86 (59.3%), with mean TJC 10.35 and SJC 6.50. Post-treatment counts were recorded in 46 (31.7%), with mean TJC 4.65 and SJC 2.91. Pre-treatment patient visual assessment score (VAS) of global health was recorded in 71 (49.0%), with mean VAS 62. Post-treatment VAS was recorded in 32 (22.1%), with mean VAS 43. 12 (8.3%) patients had DAS-28 scores recorded before and after. 7 were classed as a good response by EULAR criteria, 2 were a moderate response, and 3 were non-responders.

Conclusion: The drug survival rate of 90.3% after efficacy assessment at clinical review suggests a good tolerance, patient acceptability and clinical effectiveness. This Edinburgh-based, real-world, unselected patient cohort includes a high rate of multidrug-resistant RA yet sustains a high drug survival rate at 6 months. The cohort is limited by the lack of accurate DAS-28 recording in the clinical record. This may in part reflect the Lothian model of treating imaging-confirmed synovitis in the absence of a DAS-28 result.


Title: Filgotinib for Rheumatoid Arthritis - an observational study to assess clinical effectiveness in NHS Lothian.

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AB0473

THE EFFICACY OF METHOTREXATE MONOTHERAPY STRATEGY CHOSEN AS FIRST-LINE DMARD THERAPY IN PATIENTS WITH NEWLY DIAGNOSED RHEUMATOID ARTHRITIS: RETROSPECTIVE EVALUATION OF SINGLE TERTIARY CENTER EXPERIENCE

Keywords: Remission, Disease-modifying drugs (DMARDs), Rheumatoid arthritis

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Background: Rheumatoid Arthritis (RA) is a chronic systemic disease in which immunologically mediated inflammation of synovia-lined joints can disrupt joint structure and function. Methotrexate is the first recommended conventional disease-modifying antirheumatic drugs (DMARD) when diagnosed in patients with RA. The goal of treatment is low disease activity or remission [1].

Objectives: It was aimed to retrospectively evaluate the response of patients who received methotrexate (MTX) monotherapy as a first-line DMARD strategy in newly diagnosed RA patients.

Methods: Between January 2018-September 2022, 642 patients diagnosed with RA in the Department of Internal Medicine Rheumatology of Sakarya University were retrospectively analyzed. All patients fulfilled the criteria for the 2010 Rheumatoid arthritis classification. Patients with newly diagnosed RA and obtaining MTX monotherapy as the first conventional DMARD strategy were included in the study. Patients diagnosed in another center and initially started conventional DMARD combination therapy were excluded from the study. Patients who discontinued treatment due to side effects were excluded and 73 were included in the study. At the age of diagnosis, rheumatoid factor and anticyclic peptide antibody levels of the patients were recorded. Disease activity was evaluated at 0-3-6 months with the Disease Activity Score Calculator for Rheumatoid Arthritis (DAS-28). Data were analyzed using the computer program SPSS 21. Wilcoxon Signed Rank test and Friedman test were used from non-parametric tests. p<0.05 was considered statistically significant.

Results: The mean age of the patients was 54.82±11.65 years. Before MTX treatment, 27 (37.0%) patients had moderate DAS-28 scores and 46 (63.0%) patients had high disease activity. In the third months after MTX treatment, 44 (60.3%) patients were in remission or low disease activity, and 29 (39.7%) patients were moderate or high disease activity. In the sixth months after MTX treatment, 61 (83.6%) patients were in remission or low disease activity, and 12 (16.4%) patients were moderate or high disease activity (Table 1). The median DAS-28 score of the patients before MTX treatment was 5.51 (min-max: 3.49-7.77), the median score of the third months after treatment was 2.86 (min-max: 0.77-5.63) and the sixth months after treatment was 2.33 (min-max: 0.77-5.24). A significant improvement was observed in the DAS-28 score evaluated during the
Drugs have been demonstrated, suggesting that second-generation JAK inhibitors may maximize efficacy and enable a safer profile. Although a matched-adjusted individualized (RA), but there are still patients refractory or intolerant to multiple bDMARDs.

Results: Methotrexate is the first recommended conventional DMARD when diagnosed in patients with rheumatoid arthritis. However, clinical practice for monotherapy or combination use is quite heterogeneous. In this study, it was shown that the efficacy of MTX monotherapy was high in patients who were planned as the first conventional DMARD strategy, and the rate of patients who achieved the goal the sixth months increased.

Background: In practice, bDMARDs and subsequent first-generation JAK inhibitors (JAKi) have significantly improved the management of rheumatoid arthritis (RA), but there are still patients refractory or intolerant to multiple bDMARDs. The fact that first-generation JAKi inhibit more than one JAK molecule has given rise to hopes that second-generation JAKi with enhanced kinase selectivity may maximize efficacy and enable a safer profile. Although a matched-adjusted indirect comparative study, differences in efficacy between some of the two JAKi drugs have been demonstrated, suggesting that second-generation JAKi may be effective for RA patients who are intolerant or have inadequate responses to first-generation JAKi.

Objectives: We evaluated the real-world course of upadacitinib (UPA), a second-generation JAKi, in a single-center cohort of RA patients, including refractory patients with resistance to first-generation JAKi inhibitors. All RA patients who started UPA between May 2021 and June 2022, including those who had previously received tofacitinib (TOF) and/or baricitinib (BAR), were eligible for the study. Kaplan-Meier survival rates were calculated based on ineffectiveness or intolerance as the reason for discontinuation. The rate of concomitant use of PSL (<5 mg/day) remained unchanged at 10.7%, and the rate of MTX decreased from 27.7% to 7.1%, mainly in the 1st JAKi group. 4 patients developed herpes zoster within 6 months and UPA was resumed after a temporary suspension. 2 patients discontinued UPA due to inadequate efficacy and 8 due to adverse events. Adverse events requiring hospitalization were bacterial pneumonia, putaminal hemorrhage, and sudden death with suspected acute myocardial infarction.

Conclusion: UPA was effective in RA patients, including first-generation JAKi-resistant patients, with few cases of discontinuation due to inadequate efficacy. Although some Japanese patients taper off UPA due to their light weight, advanced age, or complications, more than 60% of patients maintained efficacy with UPA at 7.5 mg/day or less, suggesting that taper-off is feasible. After disease activity decreased, tapering or discontinuation of concomitant MTX was prioritized, but there were no cases of apparent flares, again confirming the efficacy of UPA alone. In addition to the long-term safety of UPA, head-to-head between JAKi and baricitinib should be considered in the future.

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**AB0475**

**TRANSCRANIAL DIRECT CURRENT STIMULATION DECREASES CHRONIC PAIN IN PATIENTS WITH RHEUMATOID ARTHRITIS: A RANDOMIZED, CONTROLLED, DOUBLE-BLIND CLINICAL TRIAL**

**Keywords:** Rheumatoid arthritis, Pain

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**Background:** Rheumatoid Arthritis (RA) patients often present chronic pain that may persist beyond therapeutic control of objective signs of inflammation [1] and may cause significant physical and psychological impairments. Complex mechanisms encompassing peripheral and central sensitization seem to be involved [2]. In fibromyalgia patients, Transcranial Direct Current Stimulation (tDCS) appears to be effective for decreasing chronic pain symptoms [3].

**Objectives:** To verify the effect of active tDCS on pain and clinical symptoms in RA patients.

**Methods:** This double-blind randomized pilot clinical trial recruited women aged between 18 and 70 years diagnosed with RA and stable (3 months) low inflammatory status (CRP <10 mg/L, ESR < 20 mm/h, swollen joint count ≤ 1) and persistent pain (VAS-pain > 4cm), from the Rheumatology ambulatory clinic of Hospital de Clínicas de Porto Alegre/Brazil. The patients were randomized into two different groups: active tDCS (A-tDCS) and Sham (S-tDCS). The 20 sessions of tDCS (2mA) were applied at home daily, for 20min, 5 days/week. Main outcome was pain by visual analogue scale (VAS cm) after 4 weeks. Additional evaluations: pressure pain threshold (PPT Kg), disease activity (DAS28-ESR), physical function (HAQ-DI), fatigue (FACIT-F), central sensitization (Central Sensitization Inventory - CSI), and safety. The Paired-sample t test, the Wilcoxon test, the T-tests for independent samples, the Mann-Whitney test and the Generalized estimating equations (GEE) were performed using a gamma model were performed (accepted at p ≤ 0.05).

**Results:** Twelve patients have completed this pilot study (A-tDCS, n=6 and S-tDCS, n=6). At baseline, there are no differences in clinical features between groups (Table 1). After the 4-week intervention, the time of intervention was associated with changes on VAS-pain (p=0.004). There was between groups a trend towards a statistically significant difference for the A-tDCS group (p=0.096). Both groups improved patients on HAQ-DI, FACIT-F and CSI. On the other hand, the CRP, DAS28-ESR and PPT did not change (p>0.05) in both groups (Table 1). All patients reported low intensity of itch as an adverse effect during the session of tDCS.