Experience of baricitinib in a real world population with efficacy and side effects: a South London regional analysis

Dr O Buckeldee, Dr K Biddle, Dr A Latheef, Dr I Al-Shakarchi, Prof N Sofat

Baricitinib is the most common Janus Kinase inhibitor (JAKi) used in the treatment of rheumatological conditions. Whilst randomised controlled trials have demonstrated the efficacy and safety profile of baricitinib, real-world data on the experience of JAKi use in clinical practice is lacking. The aim of this analysis was to evaluate baricitinib use in a real-world patient population in South London.

We looked at two rheumatology departments in South London (St George’s Hospital; a tertiary teaching centre and Kingston Hospital; a district general hospital). All patients prescribed baricitinib between January 2017 to June 2022 were included in the analysis. A retrospective assessment of electronic patient notes was performed to evaluate disease activity (as determined by DAS-28 scores at baseline, 3-6 months and presently); adverse effects including side effects, rates of and reasons for discontinuation; and prescribing practice, including previous use of other biological disease modifying anti-rheumatic drugs (bDMARDs). Baseline data including age, gender, co-morbidities and rheumatological diagnoses were also included.

233 patients were included in this evaluation, with seropositive rheumatoid arthritis being the most common diagnosis (58%) and with a significant female population (87%). Baricitinib improved average DAS-28 scores from 5.75 (range 3.57-8.3) at baseline to 3.23 (range 0.28-7.49) at 3-6 months post-baricitinib, with the most recent DAS-28 score of 2.90 (range 0.56-6.77)

Rates of adverse effects were low as shown in Table 1. Baricitinib was discontinued in 60/233 patients, with average duration to discontinuation of 9.5 months. The most common reasons for discontinuation were: ineffective disease control (28/60), recurrent bacterial infection (5/60), deranged liver function (3/60) and venous thromboembolism (2/60). Eight patients died whilst taking baricitinib. Where documented, the causes of death were Covid-19 (4/8) and malignancy (1/8).

110 out of 233 patients had received other bDMARDs before starting baricitinib. Documented reasons for baricitinib choice over tumour necrosis factor inhibitors (TNFi) included: previous lack of response to TNFi (89/233), contra-indication to TNFi (11/233) and preference of oral route (10/233).

Our real-world study of JAKi use shows that baricitinib is efficacious in the treatment of rheumatological conditions. Moreover, baricitinib is well tolerated, with low rates of adverse effects and subsequent discontinuation.

|  |  |
| --- | --- |
| Table 1 | |
| Adverse effects | Number of patients (n=233) |
| Infection (bacterial) | 17 |
| Infection (shingles) | 6 |
| Infection (other viral) | 4 |
| Infection (fungal) | 3 |
| Hypercholesterolemia | 12 |
| Diarrhoea/gastrointestinal | 11 |
| Deranged LFTs | 7 |
| Headaches | 2 |
| DVT | 1 |
| Neutropenia | 2 |
| Oedema | 1 |
| Paraesthesia | 1 |
| Parotid swelling | 1 |
| Uveitis | 1 |
| Apical thrombus | 1 |