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Original Article

Tofacitinib Versus Oral Prednisolone for Induction of Remission in Moderately Active Ulcerative Colitis [ORCHID]: A Prospective, Open-Label, Randomized, Pilot Study

Arshdeep Singh,[a] Vandana Midha,[b] Kirandeep Kaur,[c] Ramit Mahajan,[a] Dharmatma Singh,[a] Ramandeep Kaur,[a] Aditya Kohli,[d] Avantika Chawla,[d] Kriti Sood,[e] Namita Bansal,[f] Ajit Sood[a]

[a]Department of Gastroenterology, Dayanand Medical College, Ludhiana, Punjab, 141001, India
[b]Department of Internal Medicine, Dayanand Medical College, Ludhiana, Punjab, 141001, India
[c]Department of Pharmacology, Dayanand Medical College, Ludhiana, Punjab, 141001, India
[d]Dayanand Medical College, Ludhiana, Punjab, 141001, India
[e]Department of Pediatrics, Government Medical College and Rajindra Hospital, Patiala, 147001, India
[f]Research and Development Centre, Dayanand Medical College, Ludhiana, Punjab, 141001, India

Corresponding author: Ajit Sood, DM, Department of Gastroenterology, Dayanand Medical College, Ludhiana, Punjab, 141001, India. Email: ajitsood10@gmail.com

Abstract

Background: Oral corticosteroids are first-line agents to induce remission in moderately active ulcerative colitis [UC], but are associated with adverse effects. We compared the efficacy and safety of tofacitinib and prednisolone for induction of remission in moderately active UC.

Methods: This was a single-centre, prospective, open-label, randomized, active-controlled pilot study. Eligible patients [aged ≥18 years] had moderately active UC. Participants were randomly assigned to receive either prednisolone [40 mg daily, tapered by 5 mg every week] or tofacitinib [10 mg twice daily] for 8 weeks. The primary endpoint was composite remission [defined as total Mayo clinic score ≤2, with endoscopic sub-score of 0 and faecal calprotectin <100 µg/g] at 8 weeks.

Results: Seventy-eight patients were randomly assigned to either of the treatment groups. At week 8, the proportion of patients achieving composite remission in the tofacitinib [7/43, 16.28%] and prednisolone groups [3/35, 8.57%] were not significantly different (odds ratio [OR] 2.07, 95% confidence interval [CI] 0.49–8.70; $p = 0.31$). The time to achieve symptomatic remission [normal stool frequency with absence of rectal bleeding] was similar (10 days, interquartile range [IQR 7–18.75] and 10 days [IQR 5–12.5] for tofacitinib and prednisolone, respectively; $p = 0.25$) in the two groups. One patient each in the tofacitinib and prednisolone group discontinued treatment due to development of pulmonary tuberculosis and pustular acne, respectively. One patient receiving tofacitinib developed herpes zoster, but did not require cessation of therapy. No serious adverse events or major adverse cardiovascular events were observed.

Conclusion: In patients with moderately active UC, there was no difference in the efficacy and safety of tofacitinib and oral prednisolone for induction of remission at 8 weeks.

Trail Registration: Clinical Trials Registry of India [CTRI/2021/10/037641]

Key Words: Ulcerative colitis; remission induction; tofacitinib; prednisolone

1. Introduction

The currently available treatment options for induction of remission in moderately severe active ulcerative colitis [UC] include corticosteroids, anti-tumour necrosis factor [anti-TNF] agents [infliximab, adalimumab, golimumab], anti-integrins [vedolizumab], anti-interleukin 12/23 [ustekinumab], janus kinase [JAK] inhibitors [tofacitinib], sphingosine-1-phosphate modulators [ozanimod], and surgery.[1,2] Corticosteroids continue to be the first-line therapy for inducing remission. The long-term use of corticosteroids is associated with serious adverse events, and therefore only short-term use is recommended. It has been demonstrated that despite the growing use of immune-modulators and biologics in the last few years, cumulative exposure to corticosteroids has not decreased.[3]

Tofacitinib is effective for both induction and maintenance of remission in patients with UC.[4] Real-world studies have also demonstrated the efficacy and safety of tofacitinib in inducing remission in anti-TNF-naïve patients.[5–8] With established efficacy and safety, oral route of administration, short half-life, rapid onset of action, ability to use as maintenance therapy, potential to recapture the response with increased dose, and lower reported incidence of adverse events such as osteoporosis, diabetes, and hypertension, tofacitinib is an alternative to corticosteroids for use as a first-line agent

to induce remission in patients with moderately active UC.[9] Additionally, tofacitinib can be used in patients with contraindications to corticosteroids.

In this prospective, open-label, randomized, pilot study, we aimed to evaluate the efficacy and safety of tofacitinib and corticosteroids [oral prednisolone] in a head-to-head comparative pilot study for inducing remission in patients with moderately active UC.

2. Methods

2.1. Study design

This was a single-centre, prospective, open-label, parallel group, randomized, pilot study conducted at a tertiary care centre in India. The study protocol was approved by the Institutional Ethics Committee and registered at Clinical Trials Registry of India [CTRI/2021/10/037641]. All authors had access to the study data, and reviewed and approved the final manuscript. The study was supported by the Research and Development Center, of the study site (reference number DMCH/R&D/2021/74).

2.2. Participants

Adult patients [aged 18 years or older] with moderately active UC [defined as total Mayo score 6–9, with endoscopic Mayo sub-score of 2 or 3] of any disease extent and on stable dose of 5-aminosalicylates and/or thiopurines over the 4 weeks prior to recruitment, were enrolled. The endoscopic Mayo score was determined based on the central reading of video-colonoscopy images by a single expert endoscopist [R.M.] who reviewed the videos of the entire procedure. The central reader was not involved in therapeutic decision-making and was blinded to treatment allocation, endoscopy time point, and the partial Mayo score of the patient. Trial eligibility was decided on the basis of the centrally read endoscopic scores. Patients with Crohn's colitis, latent (diagnosed by a positive tuberculin skin test, interferon γ release assay [Quantiferon TB Gold], or a chest X ray) or active tuberculosis, active infection [including *Clostridioides difficile* and cytomegalovirus], current or past cancer, major cardiovascular or neurological illness, active thromboembolic disease, pregnancy/lactation, and prior exposure to tofacitinib were excluded. Previous therapy with anti-TNF agents was discontinued at least 8 weeks before enrolment. Concomitant use of thiopurines, at a stable dose, was allowed in patients receiving prednisolone, but was prohibited in patients receiving tofacitinib. There was no washout period between thiopurines and tofacitinib. The simultaneous use of 5-aminosalicylates [3.6–4.8 g/day] was permitted in both groups. All patients provided written informed consent.

2.3. Randomization

The eligible patients were randomized in a 1:1 ratio based on computer-generated random numbers to receive either tofacitinib or prednisolone. To reduce selection bias, the allocation sequence, enrolment, and assignment of participants to the interventions was performed by a clinical research coordinator not involved in the study. The clinicians and the patients were, however, not masked to the intervention. The participants were assigned a subject number in the order of their acceptance into the study. This identifying number was retained throughout the study.

2.4. Procedures

Tofacitinib was prescribed at a dose of 10 mg twice daily, while prednisolone was initiated at 40 mg/day for 1 week and subsequently tapered by 5 mg per week.[4,10] The total Mayo score was evaluated at baseline and week 8, while the partial Mayo score was assessed at baseline and weeks 2, 4, and 8. Participating patients were provided with a symptom diary to record daily stool frequency and number of stools with blood. This diary was reviewed by the investigators to determine the rapidity of response to therapy. Faecal calprotectin [FC; QuantOn Cal, range 25–2000 μg/g] and serum C-reactive protein [CRP] were evaluated at baseline and week 8. At any point of time if the enrolled patient was not responding, he/she was subjected to the rescue therapy [biologics or colectomy, at the discretion of the study investigator] and was considered as treatment failure.

Follow-up assessments for safety [development of adverse events, UC-related hospitalization, and surgery] were done at weeks 2, 4, and 8.

2.5. Outcomes

The primary outcome was composite remission [defined as total Mayo score ≤2, with endoscopic Mayo sub-score of 0 and FC < 100 μg/g] at week 8. The major secondary outcomes were clinical remission [defined as total Mayo score ≤2, with no individual sub-score exceeding 1 point], clinical response [defined as decrease in total Mayo score by at least 3 points and at least 30%, with an accompanying decrease in the rectal bleeding sub-score of at least 1 point or absolute rectal bleeding sub-score of 0 or 1], and endoscopic mucosal healing [defined as endoscopic Mayo sub-score of 0 or 1]. Symptomatic remission [defined as the sum of rectal bleeding and stool frequency sub-score not exceeding 1 point], biomarker remission [defined as FC < 100 μg/g], and endoscopic remission [defined as endoscopic Mayo sub-score of 0], together with changes in the partial Mayo score, FC, and serum CRP at week 8 were also evaluated. Patients who required a change in treatment for UC or underwent colectomy before week 8 or patients with missing data were considered not to have reached the primary or secondary endpoints and were taken as treatment failures.

Any adverse event resulting in death, or threatening life, requiring hospitalization, or resulting in persistent or significant disability/incapacity was considered a serious adverse event.

2.6. Statistical analysis

This was a pilot study. At a standardized difference of 0.2, a power of 90%, type I error rate of 5%, and an allocation ratio of 1, the estimated sample size of the pilot study was a minimum of 46 patients with the sample size of the main trial estimated at 600 patients.

Baseline data are reported as number [%] or mean ± SD, or median [interquartile range, IQR] as appropriate and categorical variables summarized as frequencies with percentages. Outcomes were assessed by intention-to-treat analysis. To compare the parameters between the two groups of patients, the Chi square test was used for categorical variables, Student's t test for continuous variables with normal distribution, and Wilcoxon–Mann–Whitney U test for continuous variables with skewed distribution. The binary efficacy endpoints were compared in the tofacitinib and prednisolone groups by a Cochran–Mantel–Haenszel

chi-square test. The type I error rate was controlled at an alpha level of 0.05. The frequency and types of adverse events were summarized. All the statistical calculations were done using SPSS v21 [IBM 2012; IBM SPSS Statistics for Windows, Version 21.0].

3. Results

Between November 2021 and May 2022, 87 patients with moderately active UC were screened and 78 [89.65%] patients meeting the eligibility criteria were randomized [Figure 1]. Of these 78 patients (mean age 37.78 ± 13.94 years, 42 [53.84%] males), 43 received tofacitinib and 35 received prednisolone. The median disease duration was 3 years [IQR 1–7 years]. The majority of the patients had left-sided colitis [n = 53, 67.94%]. Seven [8.97%] patients were previously exposed to anti-TNFs [infliximab]. Baseline patient and disease characteristics are summarized in Table 1.

At week 8, a greater proportion of patients in the tofacitinib group achieved composite remission, though statistical significance was not achieved (7/43, 16.28% patients in the tofacitinib group vs 3/35, 8.57% in the prednisolone group; odds ratio [OR] 2.07 [95% confidence interval,

Figure 1. Trial profile.

CI 0.49–8.70], $p = 0.31$). Clinical remission at week 8 was achieved in 18 of 43 [41.86%] patients receiving tofacitinib and 13 of 35 [37.14%] patients receiving prednisolone (OR 1.21 [0.48–3.04], $p = 0.67$). Clinical response was seen in 28 of 43 [65.12%] and 25 of 35 [71.42%] patients in the tofacitinib and prednisolone groups, respectively (OR 0.74 [0.28–1.95], $p = 0.55$). Twenty-eight [65.12%] patients in the tofacitinib group and 20 [57.14%] patients in the prednisolone group had endoscopic mucosal healing at week 8 (OR 1.40 [0.55–3.50], $p = 0.47$) [Figure 2].

Trends favouring tofacitinib were observed in the other endpoints of symptomatic remission (OR 1.47 [0.59–3.65], $p = 0.40$), biomarker remission (OR 1.66 [0.66–4.18], $p = 0.27$), endoscopic remission (OR 2.34 [0.66–8.20], $p = 0.18$), and a composite of symptomatic plus biomarker remission (OR 1.05 [0.40–2.74], $p = 0.91$), though statistical significance was not reached. [Supplementary Figure 1].

The mean partial Mayo scores declined in both treatment groups [from 5.41 ± 0.95 and 5.58 ± 0.90 at baseline to 2.65 ± 2.14 and 2.78 ± 2.26 at week 8 in the tofacitinib and prednisolone groups, respectively]. The least square mean change in the partial Mayo score from baseline at weeks 2, 4, and 8 were comparable in both groups [Figure 3a].

Patients in either treatment group demonstrated a decline in the inflammatory biomarkers, FC and CRP. FC decreased from a median value of 2000 µg/g [IQR 1546–2000] at baseline to 112 µg/g [IQR 25–266] at week 8 in the tofacitinib group, and from 2000 µg/g [IQR 835-2000] at baseline to 212 µg/g [IQR 39–688] at week 8 in the prednisolone group [$p = 0.28$] [Figure 3b]. Likewise, the median CRP at week 8 was similar in the two groups (2.30 mg/L [IQR 0.52–10.5] in the tofacitinib group vs 2.07 mg/L [IQR 0.60–7.80] in the prednisolone group; $p = 0.99$) [Figure 3c].

The median number of days taken for stool frequency subscore to decrease by ≥1 point was similar in the two groups (5 days [IQR 3.5-7] for tofacitinib vs 6 days [4–8] for prednisolone; $p = 0.54$). However, the rectal bleeding sub-score decreased by ≥1 point earlier in patients receiving prednisolone (median 4 days [IQR 2–5]) compared to patients receiving tofacitinib (median 6 days [IQR 3–8], $p = 0.04$). No difference was observed in the median number of days required to achieve symptomatic remission between the two groups (10 days [IQR 7–18.75] and 10 days [IQR 5–12.5] for the tofacitinib and prednisolone groups, respectively; $p = 0.25$).

Table 1. Baseline characteristics of the enrolled population

	Tofacitinib [*n* = 43]	Prednisolone [*n* = 35]	Significance
Age, years	37.63 ± 14.30	39.21 ± 14.85	0.63
Males	25 [58.14]	17 [48.57]	0.40
Disease duration, years	3 [2–8]	2 [1–5]	0.05
Disease extent			
Proctitis	5 [11.63]	4 [11.43]	0.97
Left-sided colitis	29 [67.44]	24 [68.57]	0.91
Pancolitis	9 [20.93]	7 [20.00]	0.91
Total Mayo Score	7.79 ± 1.12	7.97 ± 1.06	0.47
Endoscopic Mayo Score	2.38 ± 0.48	2.31 ± 0.53	0.54
Faecal calprotectin, µg/g	2000 [1546–2000]	2000 [835–2000]	0.14
C-reactive protein, mg/L	16 [8.03–24.00]	8 [2.80–24.00]	0.08
Previous treatment			
5-ASA	42 [97.67]	32 [91.43]	0.22
Thiopurines	18 [41.86]	12 [34.29]	0.49
Prednisolone	28 [65.12]	14 [40]	0.04
Anti-TNF	6 [13.95]	1 [2.86]	0.09

The values are presented as mean ± SD, *n* [%], or median [IQR] as appropriate.
5-ASA, 5-aminosalicylates; TNF, tumour necrosis factor.

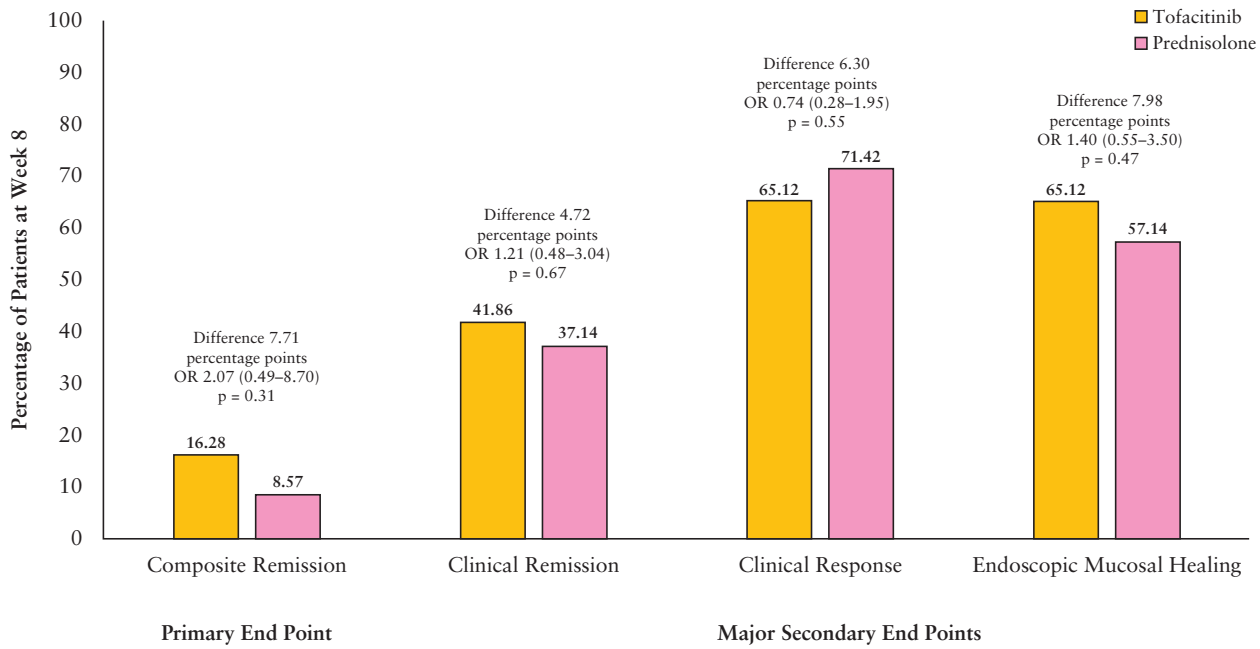

Figure 2. Efficacy outcomes at week 8.

For each of the predefined subgroups [including sex, disease duration, disease extent, endoscopic severity, and previous treatment], the 95% CIs of the differences in efficacy of tofacitinib and prednisolone to achieve composite remission were plotted. Except for previous exposure to thiopurines, there were no differences in the efficacy of tofacitinib and prednisolone [Figure 4]. Also, there were no significant differences in rates of clinical remission, clinical response, or endoscopic mucosal healing when the patients were stratified according to sex, disease duration, disease extent, and endoscopic severity, except that prednisolone was more likely to produce a clinical response in patients with proctitis, and patients with prior exposure to anti-TNFs were more likely to achieve the secondary endpoints of clinical response and endoscopic mucosal healing with tofacitinib. [Supplementary Figure 2].

Adverse events were noted in 46.5% [$n = 20$] of patients receiving tofacitinib and 57.1% [$n = 20$] of patients receiving prednisolone. The most frequently reported adverse event was hair loss [$n = 6$, 13.95%] in patients receiving tofacitinib and development of cushingoid features [$n = 12$, 34.28%] in patients receiving prednisolone. No serious adverse events were reported in either of the two intervention groups [Table 2]. One patient each in the tofacitinib and prednisolone group discontinued treatment due to development of pulmonary tuberculosis and pustular acne, respectively. One patient developed herpes zoster. The herpes zoster was limited to a single dermatome and treated with antivirals [valacyclovir 1 g three times daily for 7 days]. The patient was able to continue tofacitinib through the course of herpes zoster infection. At week 8, patients in the tofacitinib group had a higher mean change in lipid levels [total cholesterol, triglycerides, low-density lipoprotein cholesterol, and high-density lipoprotein cholesterol] as compared to patients receiving prednisolone [Supplementary Figure 3]. However, only two patients in the tofacitinib group and one patient in

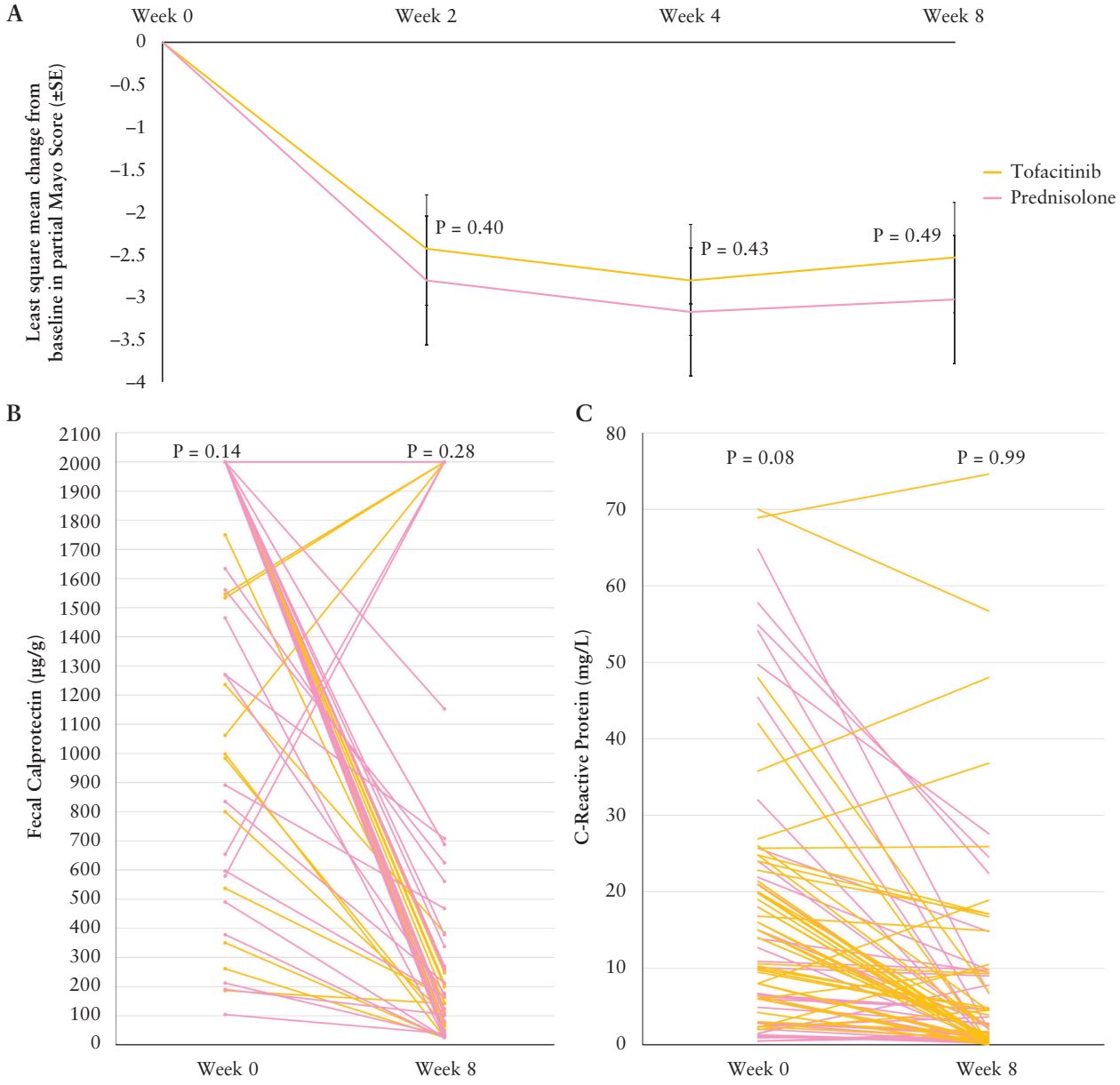

Figure 3. Changes from baseline in [a] Partial Mayo Score, [b] faecal calprotectin, and [c] C-reactive protein.

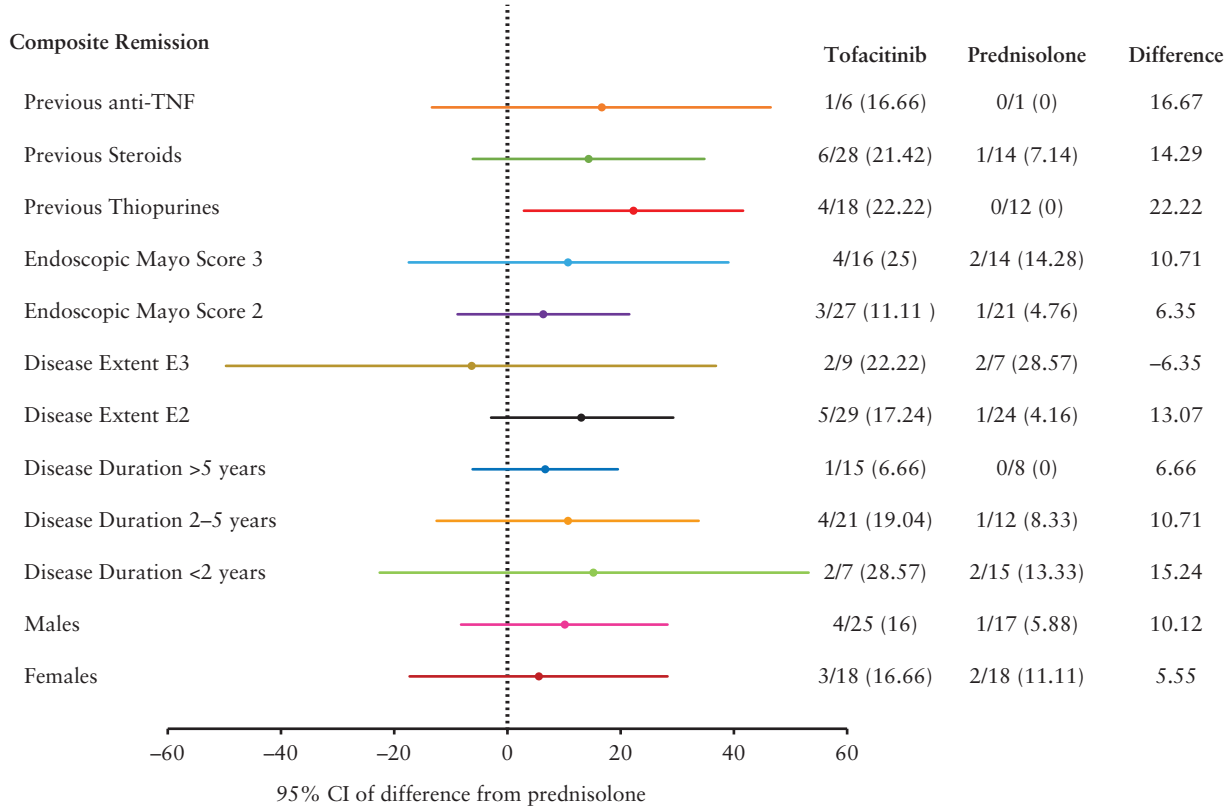

Figure 4. Proportion of patients achieving composite remission, described using predefined sub-groups and the difference [95% confidence interval] in efficacy between the tofacitinib and prednisolone groups.

the prednisolone group needed initiation of lipid-lowering drugs. None of the patients reported major adverse cardiovascular events, lymphopenia, or abnormal liver enzymes. No patient required hospitalization, addition of biologics, or colectomy until the last follow-up. There were no missing data.

4. Discussion

This randomized pilot study compared the efficacy and safety of tofacitinib with prednisolone for induction of remission in patients with moderately active UC. A total of 78 patients were randomized to receive either tofacitinib or prednisolone. At the end of the study period, there was no significant difference between the proportion of patients achieving composite remission in the two groups [7/43, 16.28% in the tofacitinib group vs 3/35, 8.57% in the prednisolone group; OR 2.07, 95% CI 0.49–8.70; $p = 0.31$]. The secondary endpoints of endoscopic remission, symptomatic remission, and biomarker remission were also achieved in a similar proportion of patients in both groups, though a trend favouring tofacitinib was seen. With a larger sample size, the trends observed in the current study may result in better remission and response rates in patients receiving tofacitinib.

Corticosteroids are not recommended as maintenance therapy due to risks of adverse events and secondary loss of efficacy.[11] The remission achieved by corticosteroids is maintained by immune-modulators, commonly thiopurines. However, these have a slower onset of action and take 12–16 weeks to manifest the steroid-sparing effect.[12] Furthermore, a proportion of patients are either primary non-responders or have secondary loss of response to thiopurines; requiring repeat course[s] of corticosteroids or a switch to biologics. The advantage with tofacitinib induction is that the same drug is continued for maintenance of remission, albeit at a lower dose. The secondary loss of response, if it occurs, can be regained by incrementing the dose.[13–15]

On subgroup analyses, stratification of patients based on sex, disease extent, disease severity, and disease duration did not reveal significant differences in the efficacy of the two drugs, except that prednisolone was more effective in inducing a clinical response in patients with proctitis. Tofacitinib was observed to have a greater benefit in inducing composite remission in thiopurine-experienced patients, and clinical response and endoscopic mucosal healing in anti-TNF-experienced patients. Patients who relapse, despite being on optimized therapy with thiopurines, warrant either addition of biologics [monotherapy or combination therapy with thiopurines] or a switch to small molecules. However, offering another course of corticosteroids in these patients is often used in real-world. Our observations reveal that corticosteroids are inferior to tofacitinib in inducing composite remission in this subgroup of patients. Regarding the possible explanation of the better response to tofacitinib in patients with prior anti-TNF exposure, *in vitro* studies have demonstrated an upregulation of the JAK-STAT pathways [JAK2 and STAT3, in particular] in the CD11b+ cells from inflamed colonic mucosa in anti-TNF refractory patients. Both JAK2 and STAT3 promote Th17 cells, which have been incriminated in the pathogenesis of inflammatory bowel disease. Furthermore, these isolated CD11b+ cells, when treated with JAK inhibitors, had decreased secretion of cytokines [TNFα

Table 2. Safety outcomes at week 8

Adverse event	Tofacitinib [$n = 43$]	Prednisolone [$n = 35$]	Significance [p value]
Total adverse events	20 [46.51]	20 [57.14]	0.35
Hair loss	6 [13.95]	2 [5.71]	0.23
Cushingoid features	—	12 [34.28]	<0.0001
Increase in disease activity of ulcerative colitis	5 [11.62]	2 [5.71]	0.37
Acne	4 [9.30]	7 [20]	0.18
Nasopharyngitis	1 [2.32]	—	0.37
Arthralgia	2 [4.65]	—	0.20
Headache	1 [2.32]	—	0.37
Mood changes	—	1 [2.85]	0.27
Infections			
Serious infection	—	—	—
Herpes zoster	1 [2.32]	—	0.37
Tuberculosis	1 [2.32]	—	0.37
Hyperglycaemia [drug induced]	—	2 [5.71]	0.11
Dyslipidaemia [requiring addition of lipid-lowering drugs]	2 [4.65]	1 [2.85]	0.68
Cardiovascular adverse events	—	—	—
Lymphopenia	—	—	—
Abnormal liver enzymes	—	—	—
Elevated creatinine kinase	—	—	—

and interleukin-8], suggesting the efficacy of tofacitinib in anti-TNF-experienced patients.[16]

Rapidity of onset of action is a major determinant of the choice of therapy for induction of remission. The rapidity of symptomatic improvement, assessed by the number of days taken for stool frequency and rectal bleeding scores to decrease by ≥1 point each, was also similar in the two groups. In the current study, a median of 5 and 6 days were taken before symptomatic improvement was discernible with prednisolone and tofacitinib, respectively. This is similar to previously published reports on time to improvement in symptoms, with both tofacitinib and corticosteroids.[17,18] Interestingly, a proportion of patients who did not achieve symptomatic improvement by day 6 were still able to achieve composite remission at week 8.

The safety profile was similar in the two the study groups, with the exception of a higher prevalence of cushingoid features in patients receiving prednisolone. One patient in the tofacitinib group developed herpes zoster limited to a single dermatome. Another patient receiving tofacitinib developed pulmonary tuberculosis when tofacitinib was withdrawn. Although none of the randomized trials of tofacitinib report development of tuberculosis as an adverse event, there are case reports of reactivation/development of tuberculosis in patients on tofacitinib, suggesting adoption of screening strategies for latent tuberculosis infection before starting tofacitinib, especially in tuberculosis-endemic regions.[4,7,19,20]

The current study is the first head-to-head pilot study comparing the efficacy and safety of prednisolone and tofacitinib for inducing remission in UC. A stringent primary outcome criterion of composite remission, including clinical symptoms, inflammatory biomarkers, and endoscopic activity, is a strength of the study. In addition, the majority of the patients were anti-TNF-naïve. This represents the patient population requiring corticosteroids for induction of remission in real-world settings. Though a formal cost–benefit analysis was not performed, tofacitinib may have an added advantage of cost effectiveness, especially in low- and middle-income resource-constrained countries, such as India, where low-cost generic formulations are available. However, in countries where low-cost formulations are not available, the cost of therapy may be comparable to that of anti-TNF biosimilars. The study is limited by its small sample size, non-blinded nature [incorporating a degree of observer bias], and recruitment of patients from a single centre. The extended tofacitinib induction regimen [16 weeks] was not followed and therefore the efficacy of tofacitinib might be underreported.[21] The participants were followed up for 8 weeks only, which was too short a period to determine the disease course of these patients including future use of corticosteroids/biologics/escalation of dose of tofacitinib as well as to identify all the possible adverse events, especially those with low occurrence rates.

To conclude, in patients with moderately active UC, tofacitinib or prednisolone had similar rates of inducing composite remission at 8 weeks, though a trend favouring tofacitinib was demonstrated. Tofacitinib, with its equal efficacy and rapidity of onset of action compared with prednisolone, and acceptable safety profile, together with the proven durability of maintenance of tofacitinib-induced remission with continuation at a reduced dose, vies for use as the preferred induction agent. A larger randomized controlled trial is needed to confirm the findings.

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Conflict of Interest

Ajit Sood is on the advisory board of Janssen Asia Pacific and has received a speaker honorarium from Pfizer India. All other authors declare no conflicts of interest.

Author Contributors

Arshdeep Singh: conception, design, data collection, analysis and interpretation, literature review, writer, critical review. Approved the final draft submitted. 2. Vandana Midha: conception, design, data collection, analysis and interpretation, literature review, writer, critical review. Approved the final draft submitted. 3. Kirandeep Kaur: literature review, writer, critical review. Approved the final draft submitted. 4. Ramit Mahajan: literature review, critical review. Approved the final draft submitted. 5. Dharmatma Singh: data collection, analysis and interpretation, critical review. Approved the final draft submitted. 6. Ramandeep Kaur: data collection, critical review. Approved the final draft submitted. 7. Aditya Kohli: data collection, critical review. Approved the final draft submitted. 8. Avantika Chawla: data collection, critical review. Approved the final draft submitted. 9. Kriti Sood: literature review, critical review. Approved the final draft submitted. 10. Namita Bansal: analysis and interpretation, critical review. Approved the final draft submitted. 11. Ajit Sood: conception, design, supervision, analysis and interpretation,

literature review, writer, critical review. Approved the final draft submitted.

Data Availability

The data that support the findings of this study, including raw data, analytical methods, and study materials are available from the corresponding author upon reasonable request.

Supplementary Data

Supplementary data are available online at *ECCO-JCC* online.

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* Recommended dose for induction and maintenance is 200 mg once daily.[1] JYSELECA is not recommended in patients aged 75 years and older as there is no data in this population; in patients aged 65 years and over the recommended dose is 200 mg once daily for induction treatment and 100 mg daily for maintenance treatment.[1]
** Data from a *post-hoc* analysis of diary data from the double-blind, randomised, placebo-controlled 58-week SELECTION trial. Achievement of stool frequency subscore of ≤1 by Day 3 in biologic-naïve patients, and rectal bleeding subscore of 0 by Day 5 in biologic-experienced patients.[2]
† Interim analysis of SELECTIONLTE assessing the efficacy and safety of open-label JYSELECA 200 mg through LTE Week 144 in completers and LTE Week 192 in non-responders, respectively, representing a total of 3.9 years of treatment each (completers: 58 + 144 weeks; non-responders 10 + 192 weeks).[3]
†† Determined in a *post-hoc* exploratory analysis of the SELECTION trial assessing HRQoL and the comprehensive disease control multi-component endpoint, which comprises both clinical and QoL outcomes, in individuals receiving JYSELECA (n=786).[4] Each patient has their own definition of normal life.

▼ This medicine is subject to additional monitoring.

HRQoL, Health-related quality of life; LTE, Long term extension; QoL, Quality of life; UC, Ulcerative colitis.

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