Efficacy and safety of ixekizumab in psoriatic arthritis: a retrospective, single-centre, observational study in a real-life clinical setting

Sirs.

Ixekizumab, a recombinant, humanised, monoclonal antibody, selectively binds and therefore neutralises IL-17A (1). A phase III randomised clinical trials (SPIRIT-P1) showed superiority of ixekizumab over placebo in moderate-to-severe psoriatic arthritis (PsA), in improving disease activity and inhibiting structural damage progression in patients treated with the anti-IL-17A monoclonal antibody for 52 weeks (2). Another phase III randomised clinical trial (SPIRIT-P2) was conducted exclusively on patients who had an inadequate response or intolerance to TNF inhibitors, demonstrating that ixekizumab determined a rapid improvement in the signs and symptoms of PsA (3, 4) and the contemporary amelioration of patient-reported measures of disease activity, generic and skin-specific HRQL, and work impact of PsA on productivity (5).

A retrospective, observational study was conducted to assess the efficacy and safety of ixekizumab in patients affected by both moderate-to-severe plaque-type psoriasis (PsO) and moderate-to-severe PsA in a real-life clinical setting.

We reviewed our clinical records and identified 26 outpatients (Group A) diagnosed with PsA and treated with ixekizumab for a moderate-to-severe cutaneous involvement who were placed in therapy at least 24 weeks before analysis. Among these patients, 17 (Group B) completed 48 weeks of treatment.

Demographic characteristics, clinical type and duration of PsO and PsA, presence of comorbidities and concomitant therapies, information on previous conventional or biological were collected from patients’ medical files and added to the database.

Clinical parameters available at baseline, and for each visit, included Psoriasis Area and Severity Index (PASI) and Body Surface Area (BSA), to determine skin involvement. Likewise, visual analogue scale for pain (VAS Pain), tender joint count (TJC), swollen joint count (SJC), inflammatory markers such as erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP), presence of dactylitis (yes/no) and enthesitis (yes/no) and Disease Activity Index for Psoriatic Arthritis (DAPSA), a tool validated in 2010 for the assessment of PsA severity (6), were collected.

All the adverse events observed or referred by the patients and dropouts were recorded. A statistical analysis was performed using the two-tailed Wilcoxon-Ranked-Signed test, comparing every parameter at baseline (BL) with those observed at week 24 (W24) and week 48 (W48). A p-value less than 0.05 was considered significant. We evaluated 26 patients, 15 males (57.69%) and 11 females (42.31%) with an average age of 57.92 years (range 32.19-82.12) and an average BMI of 28.60 (range 22.72-36.73). Peripheral arthritis was present in 100% of the cases and axial disease coexisted in 11.54%. Enthesitis interested 33.33% of patients. Among comorbidities, hypertension and cardiovascular diseases were those with greater incidence (57.69% and 23.07% of patients respectively), followed by diabetes (26.92%) and fatty liver disease (11.52%).

Only six patients (23.07%) were biological-naive, while the majority (76.92%) failed at least an anti-TNF-alpha inhibitor.

Concerning cutaneous manifestations, both PASI score and BSA extremely significantly improved since W24 (p<0.00001) (from 53.70 to 24.35), and TJC score (p<0.0001) (from 19.83 to 9.71). Pain VAS (p=0.0114) (from 55.71 to 27.14), and SJC score (p=0.00672) (from 2.21 to 0.07) (Table I).

In particular, at W24 84.62% of patients achieved PASI75, 80.77% PASI90 and 57.69% PASI 100. At W48 82.35% of patients achieved PASI75, 70.59% PASI90 and 64.71% PASI 100.

Concerning PsA efficacy outcomes, the improvement from baseline to W24 was statistically significant for DAPSA (p=0.0001) (from 16.99 to 8.68), PAIN VAS (p=0.0001) (from 53.70 to 24.35), and TJC score (p=0.00328) (from 3.74 to 1.39). At W48 the improvement was statistically significant for DAPSA (p=0.00288) (from 19.83 to 9.71), PAIN VAS (p=0.0114) (from 55.71 to 27.14), and SJC score (p=0.00672) (from 2.21 to 0.07) (Table I).

All other clinical variables evaluated showed a progressive reduction, but not statistically significant. Ixekizumab was found to be safe and well tolerated. Two episodes of injection site reactions appeared to be the only adverse events experienced and did not require discontinuation of therapy.

At W24, two patients withdrew from treatment because of lack of efficacy on skin disease.

This study showed a good effectiveness of ixekizumab both on skin lesions and on articular symptoms, in patients affected by moderate to severe PsA.

A high proportion of patients at six months achieved a skin clearance that was maintained over time. Likewise, a low disease activity of arthritis was reached rapidly within the first 6 month of treatment, with a sustained efficacy during the 12 months of the follow-up period.

Moreover, ixekizumab demonstrated a very good safety profile, with no serious adverse events in all the patients treated. Despite the limitations of our study (in particular, the low sample size, a limited follow-up and all patients received the higher dose regimen), our results suggest ixekizumab to be effective, either in plaque-type psoriasis or in psoriatic arthritis, being all considered parameters significantly improved over treatment.

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Competing interests: M. Esposito, A. Giunta and L. Bianchi have served as consultant and speaker for Eli Lilly. V. Manfreda won an award from Eli Lilly for a psoriasis case presentation in 2018. M.S. Chimenti and C. Canofari have no competing interests to declare.

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Table I. Improvement of psoriatic arthritis severity scores from baseline to week 24 (Group A) and from baseline to week 48 (Group B) with relative statistical significance.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Group A (26 patients)</th>
<th>Group B (17 patients)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean PASI</td>
<td>Baseline</td>
<td>Week 24</td>
<td>p-value</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean BSA</td>
<td>13.94</td>
<td>2.43</td>
<td>&lt;0.00001</td>
</tr>
<tr>
<td>Mean PASI</td>
<td>27.74</td>
<td>2.01</td>
<td>&lt;0.00001</td>
</tr>
<tr>
<td>Mean BSA</td>
<td>53.70</td>
<td>24.35</td>
<td>0.0001</td>
</tr>
<tr>
<td>Mean TJC</td>
<td>3.74</td>
<td>1.39</td>
<td>0.00328</td>
</tr>
<tr>
<td>Mean SJC</td>
<td>1.43</td>
<td>0.78</td>
<td>ns</td>
</tr>
<tr>
<td>Mean ESR</td>
<td>25.70</td>
<td>19.35</td>
<td>0.02088</td>
</tr>
<tr>
<td>Mean CRP</td>
<td>1.73</td>
<td>1.27</td>
<td>ns</td>
</tr>
<tr>
<td>Mean DAPSA</td>
<td>16.99</td>
<td>8.78</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

PASI: Psoriasis Area and Severity Index; BSA: body surface area; PAIN VAS: visual analogue scale for pain; TJC: tender joint count; SJC: swollen joint count; ESR: erythrocyte sedimentation rate; CRP: C-reactive protein; DAPSA: Disease Activity Index for Psoriatic Arthritis; ns: non-significant.
References


