Fatigue is one of the core domains to be measured in all clinical trials for psoriatic arthritis (PsA). Studies of fatigue in PsA in Asia are scarce. To describe the prevalence and evaluate the factors associated with fatigue in PsA patients within a multi-ethnic Asian population.

Objectives: To determine the relationships between tofacitinib treatment, dermatologic improvements, and health-related quality of life (HRQoL) in patients with psoriatic arthritis.

Methods: We used data from the PRESPOND registry for PsA patients attending an outpatient clinic of a tertiary institution in Singapore. Demographics and disease characteristics were evaluated. Fatigue was assessed by question 1 of BASDAI (BASDAI-F) and the vitality domain of SF-36 (SF-36 VT). Of these, disease activity and chronicity were significantly associated with fatigue in PsA patients within a multi-ethnic Asian population.

Conclusion: PsA-associated fatigue is prevalent in this Asian PsA cohort and is associated with disease activity and chronicity.

References:

Disclosure of Interests: Joel Shi Quan Tan: None declared, Warren Fong Consultant of: Abbvie, Janssen, Novartis, Speakers bureau: Abbvie, Janssen, Novartis, Yu Heng Kwan: None declared, Ying Ying Leung Speakers bureau: Novartis, Janssen, Eli Lilly

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Table 1. Multivariable analysis for variables associated with fatigue

<table>
<thead>
<tr>
<th></th>
<th>BASDAI-F</th>
<th>SF-36 VT</th>
</tr>
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<tbody>
<tr>
<td><strong>b</strong></td>
<td>95% CI</td>
<td><strong>b</strong></td>
</tr>
<tr>
<td>Back pain (0-10)</td>
<td>0.335</td>
<td>(0.180, 0.568)</td>
</tr>
<tr>
<td>Peripheral joint pain (0-10)</td>
<td>0.027</td>
<td>(0.012, 0.042)</td>
</tr>
<tr>
<td>PGA (0-100)</td>
<td>0.211</td>
<td>(0.061, 0.236)</td>
</tr>
<tr>
<td>HAQ-DI (0-3)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age, y</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BMI, kg/m²</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 1. Principal component analysis with 5 components and residuals (in dotted lines). Only factor loadings with magnitudes greater than 0.40 are shown.

Figure 2. (A) Proportion of Patients Reporting Improvements ≥MOD and (B) Scores ≥Age- And Gender-Matched Normative Values at Week 12


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AB0836 PREVALENCE AND DETERMINANTS OF FATIGUE IN PSORIATIC ARTHRITIS IN AN ASIAN POPULATION

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Background: Fatigue is one of the core domains to be measured in all clinical trials for psoriatic arthritis (PsA). Studies of fatigue in PsA in Asia are scarce.

Objectives: To describe the prevalence and evaluate the factors associated with fatigue in PsA patients within a multi-ethnic Asian population.

Methods: We used data from the PRESPOND registry for PsA patients attending an outpatient clinic of a tertiary institution in Singapore. Demographics and disease characteristics were evaluated. Fatigue was assessed by question 1 of BASDAI (BASDAI-F) and the vitality domain of SF-36 (SF-36 VT).

Results: 131 patients (50.4% men, 63.4% Chinese, median PsA duration 1.78 years) with completed data for fatigue were included. The median (IQR) tender and swollen joint count was 2 (5) and 1 (3) respectively. 45 patients (34%) experienced high fatigue (defined by BASDAI-F ≥ 6/101,2). 5 clusters of factors were identified using principal component analysis that explained 66.2% of the variance of all factors, which mapped to disease activity, disability, demographics (ethnicity and gender), and BMI (Figure 1).

Of these, disease activity and chronicity were significantly associated with fatigue in PsA patients within a multi-ethnic Asian population. Disease activity and chronicity were significantly associated with fatigue in PsA patients within a multi-ethnic Asian population. In a multivariate analysis, back pain, peripheral joint pain, and patient global assessment were associated with BASDAI-F, whereas peripheral joint pain, HAQ-DI, and BMI were associated with SF-36 VT (Table 1).

Conclusion: PsA-associated fatigue is prevalent in this Asian PsA cohort and is associated with disease activity and chronicity.

References:

Disclosure of Interests: Joel Shi Quan Tan: None declared, Warren Fong Consultant of: Abbvie, Janssen, Novartis, Speakers bureau: Abbvie, Janssen, Novartis, Yu Heng Kwan: None declared, Ying Ying Leung Speakers bureau: Novartis, Janssen, Eli Lilly

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AB0837 ITCH AS THE MAJOR MEDIATOR OF THE EFFECT OF TOFACITINIB ON HEALTH-RELATED QUALITY OF LIFE IN PSA: A MEDIATION ANALYSIS

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Background: PsA is a chronic, systemic inflammatory disease with signs and symptoms across multiple domains, including cutaneous manifestations, which can impact health-related quality of life (HRQoL). Tofacitinib is an oral Janus kinase inhibitor for the treatment of PsA. In two Phase 3 randomised studies, patients (pts) with active PsA treated with tofacitinib experienced greater improvements in various dermatologic endpoints, compared with placebo. As pruritus is a bothersome symptom of skin disease in pts with PsA, we sought to determine how tofacitinib affects HQoL via clinical improvements in skin symptoms including itch.

Objectives: To describe the prevalence and evaluate the factors associated with fatigue in PsA patients within a multi-ethnic Asian population.

Methods: Analyses used data (mean scores from Months 1 and 3) from two Phase 3 studies (OPAL Broaden [NCT01877668]; OPAL Beyond [NCT01882439]) of pts with active PsA treated with tofacitinib 5mg twice daily or placebo; pts...
were tumour necrosis factor inhibitor (TNFi)-naive or had previous inadequate response (IR) to ≥1 TNFi. All pts were treated continuously with a single conventional synthetic DMARD. Mediation modelling, a statistical method used to assess mechanisms underlying observed relationships between different variables via other explanatory variables (mediators), was applied. The mediation model included: treatment, as the independent (explanatory) binary variable (tofacitinib 5mg BID vs placebo); HQoL, measured by Dermatology Life Quality Index (DLQI), as the dependent (outcome) variable; and two mediators, pt-reported Itch Severity Index (ISI) and Physician’s Global Assessment of Psoriasis (PGA-PsO) (a latent variable represented by erythema, induration and scaling). The initial model designated the treatment effect on DLQI mediated via ISI and PGA-PsO as an indirect effect, and treatment effects not attributable to ISI or PGA-PsO as a direct effect (Figure 1).

**Results:** Data were collected from 468 pts, pooled from both studies. In the initial model (pooled data), the effect of tofacitinib treatment on DLQI was largely mediated by itch (measured by ISI) and PGA-PsO (indirect effect) (p=0.0001); the effect of treatment attributable to factors other than ISI and PGA-PsO (direct effect) was not statistically significant (p=0.66). Results were consistent for pooled and individual study data. Because the direct effect was small and not statistically significant, the model was re-specified to exclude the direct effect of tofacitinib treatment on DLQI. In the revised model (pooled data), 17.7% of the indirect effect was attributable to PGA-PsO (p=0.0006) and 83.2% was attributable to itch (assessed by ISI) (p<0.0001) (Figure 2). Analyses of individual studies using the revised model gave results generally consistent with pooled data.

**Conclusion:** Dermatology-focused mediation modelling showed that a majority of the effect (~80%) of tofacitinib treatment on DLQI is mediated by improvements in itch, with ~20% mediated via improvements in PGA-PsO.

**Figure 1. Initial mediation model**

**Figure 2. Revised mediation model**