Clinical Impact of Pruritus in Patients with Primary Biliary Cholangitis (PBC): Real World Experience in TARGET-PBC

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The Pervasive Impact of Pruritus on Quality of Life in Patients with Primary Biliary Cholangitis (PBC): Real World Experience in TARGET-PBC

Introduction
- The purpose of this analysis is to assess the impact of pruritus on quality of life (QoL) in patients in the TARGET-PBC cohort.

Methods
- TARGET-PBC is a longitudinal observational study of patients (n=667) enrolled at 38 US sites.
- PBC-40, 5D itch and PROMIS Fatigue surveys are collected in addition to clinical and treatment data.
- Responses to PBC-40 were used to grade pruritus: clinically significant (CS) itch was defined as ≥7 points on the itch domain.
- Kruskal-Wallis tests were used to compare median differences in symptoms between the itch groups.

Results
- PBC-40 domain scores correlated with pruritus severity, with higher scores indicating more impairment across all domains in the CS itch group vs. mild or no itch.
- The largest difference was seen in cognitive and social domains; median scores in the CS itch group were ~80% higher than those in the mild itch group.
- In other domains (fatigue, symptoms, emotional) the difference was smaller with median scores 42%, 46% and 50% greater respectively for the CS itch group.
- Differences between groups remained significant in multivariable analysis when adjusting for covariates.

Table 1: Patient Characteristics by PBC-40 Itch Severity

<table>
<thead>
<tr>
<th>Direction (has itching)</th>
<th>No itch</th>
<th>≥1 to &lt;7 Mild itch</th>
<th>≥7 Clinically significant itch</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Participants, n (%)</td>
<td>41 (19%)</td>
<td>107 (51%)</td>
<td>63 (30%)</td>
<td>0.844</td>
</tr>
<tr>
<td>Gender Female, n (%)</td>
<td>38 (93%)</td>
<td>97 (91%)</td>
<td>59 (94%)</td>
<td>0.0124</td>
</tr>
<tr>
<td>Current Age (years)</td>
<td>Median (Q2 - Q3)</td>
<td>64 (56 - 71)</td>
<td>64 (55 - 71)</td>
<td>58 (52 - 64)</td>
</tr>
<tr>
<td>Age at Diagnosis (years)</td>
<td>Median (Q2 - Q3)</td>
<td>52 (42 - 59)</td>
<td>54 (46 - 60)</td>
<td>49 (39 - 56)</td>
</tr>
<tr>
<td>Most Recent ALP</td>
<td>Median (Q2 - Q3)</td>
<td>153 (126 - 228)</td>
<td>143 (116 - 187)</td>
<td>177 (133 - 284)</td>
</tr>
<tr>
<td>Cirrhosis n (%)</td>
<td>15 (37%)</td>
<td>29 (27%)</td>
<td>30 (48%)</td>
<td>0.0277</td>
</tr>
<tr>
<td>Decompensated Cirrhosis n (%)</td>
<td>5 (33%)</td>
<td>7 (24%)</td>
<td>18 (60%)</td>
<td>0.0174</td>
</tr>
</tbody>
</table>

Conclusion
- Pruritus in PBC has a significant impact on many aspects of QoL: fatigue, social, emotional, cognitive and other symptoms.

Figure 1: Median PBC-40 Domain Scores by Itch Severity

Figure 2: Cohort Itch Severity (PBC-40 Itch Domain)

- 211 patients completed the PBC-40
- Of those who reported any itch (170), 63% had mild itch and 37% clinically significant itch
- The population in this analysis was 92% female, 35% cirrhotic
- Patients with CS itch were younger at diagnosis (Table 1) and currently more frequently had cirrhosis (48 vs 27 and 36%, p = 0.03) and had higher alkaline phosphatase compared to those with mild or no itch, respectively.

Figure 3: Mean Scores on 5D Itch by PBC-40 Itch Severity

- The 5D itch scores were consistent with the PBC-40 itch domain; those with clinically significant itch scored significantly higher (worse) than those with mild itch across all domains with the exception of Direction (has itching gotten better/worse) where both groups scored similarly although the variation in the clinically significant group was lower (SD 0.9 vs. 1.3).

Figure 4: Mean, Median and IQR PROMIS Fatigue

- Patients with CS itch reported significantly greater fatigue on the PROMIS fatigue instrument than those with mild and no itch.
- Median scores in the CS, mild and no itch groups were 61, 50 and 50, respectively (p<0.0001 CS vs. mild).

Figure 5: Mean, Median and Interquartile Range, PBC-40 Domain Scores and Clinical Significance Threshold

Across all domains of the PBC-40, patients with mild itch and no itch scored similarly whereas those with CS itch scored notably worse. The definition of clinical significance suggested by the developers of the PBC-40 instrument, those with CS itch also report CS fatigue and other symptoms and more than 50% have CS cognitive impairment and more than 25% have social difficulties.