Deucravacitinib, an oral, selective, allosteric tyrosine kinase 2 inhibitor, in moderate to severe plaque psoriasis: evaluation of lipid parameters in the phase 3 POETYK PSO-1 and PSO-2 trials

Mark Lebwohl, 1 Bruce Strober, 2 Misti Linaberry, 3 Kim Hoyt, 3 Subhasish Banerjee, 4 Renata M Kisa, 5 Nehal N Mehta 6

1Cahn School of Medicine at Mount Sinai, New York, NY, USA; 2Yale University School of Medicine, New Haven, and Central Connecticut Dermatology, Cromwell, CT, USA; 3Bristol-Myers Squibb, Princeton, NJ, USA; 4The George Washington University School of Medicine, Washington, DC, USA

Synopsis

• The phase 3 POETYK (POETYK: Pan-European and International Study of Tyrosine Kinase 2) trials are randomized, double-blind, placebo-controlled, parallel-group studies designed to evaluate the efficacy and tolerability of deucravacitinib, an oral, selective, allosteric tyrosine kinase 2 (TYK2) inhibitor, in moderate to severe plaque psoriasis (Ps) patients who have not responded to prior conventional Ps ther.
• Deucravacitinib is a novel, oral, selective, allosteric tyrosine kinase 2 inhibitor. It inhibits the downstream signaling pathway of TYK2, and with it the production of inflammatory mediators.
• In clinical trials, deucravacitinib demonstrated efficacy in the treatment of Ps, including improvements in the Ps Area and Severity Index (PASI) and Psoriasis Dermatology Life Quality Index (PDLQ)

Results

Changes in lipid parameters from baseline to Week 16 in patients treated with placebo, deucravacitinib, and apremilast over 16 weeks

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Placebo (n = 166)</th>
<th>Deucravacitinib 6 mg QD (n = 163)</th>
<th>Apremilast 30 mg BID (n = 165)</th>
<th>Grade at Week 16, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cholesterol</td>
<td>148.4 (93.76)</td>
<td>154.2 (93.49)</td>
<td>157.4 (94.24)</td>
<td>5%</td>
</tr>
<tr>
<td>HDL cholesterol</td>
<td>41.9 (10.6)</td>
<td>42.3 (10.7)</td>
<td>42.5 (10.8)</td>
<td>5%</td>
</tr>
<tr>
<td>LDL cholesterol</td>
<td>110.0 (35.17)</td>
<td>108.4 (34.3)</td>
<td>108.3 (34.2)</td>
<td>5%</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>110.8 (33.77)</td>
<td>95.4 (28.6)</td>
<td>109.2 (33.3)</td>
<td>5%</td>
</tr>
</tbody>
</table>

Objective

• No patient discontinued deucravacitinib due to a lipid-related adverse event

Conclusions

• Changes in lipid levels at Week 52 were minimal and not clinically significant, and the safety profile was consistent with changes seen at Week 16.

Methods

Study design

• This was a phase 3 randomized, double-blind, placebo-controlled, parallel-group study (POETYK PSO-1 and PSO-2) to evaluate the efficacy and tolerability of deucravacitinib in moderate to severe Ps patients who had not responded to prior conventional Ps ther.
• Patients received deucravacitinib 6 mg QD, once daily, or placebo for 52 weeks.
• The study population included patients who had failed prior Ps ther.

Lipid assessments

• Lipid assessments assessed total cholesterol, HDL cholesterol, LDL cholesterol, and triglycerides.
• Lipid changes were evaluated using the change from baseline to Week 16.

Acknowledgments

• This study was sponsored by Bristol Myers Squibb

Writing and editorial assistance was provided by Liz Rockstein, PhD, of Peloton Advantage, LLC, an OPEN Health company, Parsippany, NJ, USA, funded by Bristol Myers Squibb

References