Maralixibat, an Ileal Bile Acid Transporter Inhibitor, Delays the Need for Liver Transplant in Patients With Alagille Syndrome: Real-World Experience

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Introduction
- Alagille syndrome (ALGS) is a rare, defi nitive, autosomal dominant disorder that presents with a broad range of clinical manifestations.
- The key clinical manifestations include cholestasis, failure to thrive, cardiac disease, and progressive liver disease, all of which can lead to liver transplantation or death.
- Cholestasis is a major limiting component of ALGS and among the most severe of all chronic liver diseases.
- Patients with ALGS frequently require liver transplantation before the age of 1 year.

Objective
- To report real-world experiences of delaying the need for liver transplantation following treatment with maralixibat in 2 children with ALGS.

Methods
- Chart reviews were performed for 2 patients with ALGS listed for liver transplantation due to cholestasis whose treatment with maralixibat stabilized delay of liver transplantation.

Results

Table 1. Laboratory Values for Patients at Baseline and After Maralixibat Treatment

<table>
<thead>
<tr>
<th>Case</th>
<th>Laboratory assessment</th>
<th>Baseline value</th>
<th>Last visit after MIxT treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Weight (kg)</td>
<td>17.1</td>
<td>20.9</td>
</tr>
<tr>
<td></td>
<td>Total bilirubin (mg/dL)</td>
<td>11.4</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>AST (U/L)</td>
<td>166</td>
<td>385</td>
</tr>
<tr>
<td></td>
<td>ALT (U/L)</td>
<td>156</td>
<td>101</td>
</tr>
<tr>
<td>2</td>
<td>Weight (kg)</td>
<td>17.0</td>
<td>20.9</td>
</tr>
<tr>
<td></td>
<td>Total bilirubin (mg/dL)</td>
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</table>

Conclusions
- The 2 cases presented provide real-world evidence of the effectiveness of maralixibat in delaying the need for liver transplantation in patients with ALGS due to significant and rapid improvements in pruritus and liver biochemical parameters.
- In Case 1, pruritus control with maralixibat enabled liver transplantation evaluation to be postponed, allowing for ongoing optimization of his nutrition and cardiac disease.
- In Case 2, after 6 months of maralixibat treatment, the patient is now active on the transplant list (status 7), discontinued several concomitant medications, and is able to sleep through most nights.
- These real-world cases highlight the impact that maralixibat has on improving pruritus-free survival in patients with ALGS.

Abbreviations
ALGS, Alagille syndrome; ALT, alanine aminotransferase; AST, aspartate aminotransferase; CSS, Clinical Score System; FISV, functional intestinal status; IBD, inflammatory bowel disease; MIxT, medium-chain triglyceride, fish oil, nucleotides; N3D, nucleotide; OCA, oseltamivir; cov, covariates; OR, odds ratio; TIPSS, transjugular intrahepatic portosystemic shunt; WCC, white blood cell count.

Acknowledgments
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References