PPIs May Lower Blood Glucose in Diabetics

**BY KATE JOHNSON**

MONTREAL — Pump inhibitor therapy (PIT) that has been improved hemoglobin A1c levels in non-insulin-dependent type 2 diabetes patients, based on results from two retrospective studies.

The studies, presented at the annual meeting of the North American Primary Care Research Group, paved the way for a prospective clinical trial, which is ongoing, said Dr. Michael Crouch of the Texas and Mexican Family Medicine Research Program, in Brownsville.

“A graduate of our program first noted this phenomenon in a diabetic patient when he put on a pump inhibitor for gastrointestinal reflux disease,” he said. “That was the only change in medication, and the patient’s hemoglobin A1c went down.”

Studies in the literature have shown that PPI therapy elevates gastric levels, which in turn signal the pancreas to increase insulin production. However, this observation has never been investigated in the context of diabetes, Dr. Crouch said.

In the first investigation, Dr. Ivan Melendez of Richmond, Tex., studied 347 individuals with type 2 diabetes. None of the patients were taking insulin ther-

When patients were analyzed according to the type of hypoglycemic agent they were taking, they were able to significantly reduce hemoglobin A1c levels by 6.6% compared with those who were not on PPI therapy (6.81% vs. 7.7%).

Those on metformin monotherapy, however, showed significantly different results in mean hemoglobin A1c levels when the patients were taking PPI therapy, compared with when they were not taking metformin (7.1% vs. 7.7%).

“Dr. Melford is now looking at gastric levels in his diabetes patients and has found that PIT alone may be able to have low baseline levels,” Dr. Crouch said. “He’s doing a study now, taking people who don’t have GERD and prescribing a PPI to try and improve their diabetes. So far, it’s very promising; we can repeat the difference well in about 9 out of 10 cases.”

**Table 1.** Treated-Exposed A1c at 12 Weeks

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number of Patients</th>
<th>Start A1c (n=60)</th>
<th>A1c at 12 Weeks (n=58)</th>
<th>Change (n=56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No PIT</td>
<td>29</td>
<td>7.9%</td>
<td>7.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>PIT</td>
<td>31</td>
<td>7.7%</td>
<td>7.3%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

**Disclosures:** Dr. Crouch reported that there were no conflicts of interest associated with either study.

---

**References:**

1. M. Crouch, unpublished data.
2. I. Melendez, unpublished data.