Reducing Healthcare Utilization with Peptide-Based Diets in Intolerant Home Enteral Nutrition Patients

Dr. Mundi:
For ReachMD, this is Audio Abstracts, produced in collaboration with Nestlé Health Science, Empowering Healthier Lives through Nutrition. I'm Manpreet Mundi, an endocrinologist at Mayo Clinic in Rochester, Minnesota. My area of focus is nutrition, and I'm the current Medical Director of the Home Enteral Nutrition practice here at Mayo Clinic, as well as the Chair of Outpatient Nutrition and Food Services. Today, I'll be reviewing our retrospective work assessing the impact of using peptide-based diets in home enteral nutrition patients who are intolerant to their current formula.

As many of you know, the prevalence of home enteral nutrition has continued to increase over the last few decades. In a previous study, we utilized data available from Medicare, as well as three of the largest infusion companies in the United States, to estimate that there are over 400,000 Americans receiving home enteral nutrition currently. Yet despite this increase, we have not seen an equal rise in the number of studies being conducted in this population, making it very difficult for us to develop guidelines and answer some key clinical questions, such as how to manage enteral nutrition intolerance. Often, we have to extrapolate from data that's available from studies in critically ill or hospitalized patients to guide the management of our home enteral nutrition population. So to address some of this paucity of data, the home enteral nutrition team at Mayo Clinic conducted a retrospective analysis of our home enteral patients who utilized peptide-based diet over a 2.5 year period from January 2016 to May 2018.

Over that time period, we had a total of 95 patients who received peptide-based diets, with 53 of them starting directly on peptide-based diet as their first formula and 42 transitioning from another formula, which we identified as the switch group. Since there were sufficient number of subjects in the study, we were able to analyze the two groups separately, which gave us a great deal of insight into our practice. As an example, patients who started on peptide-based diet as their first formula tended to have a primary diagnosis that predisposed them to malabsorption, such as pancreatic cancer, pancreatitis, gastrointestinal cancer, or gastrointestinal surgery such as bowel resection. The patients within the switch group, on the other hand, typically started on standard polymeric formula, which tends to be the formula that we often use initially, these patients had indications that we usually see in our overall home enteral nutrition practice including head and neck cancer and neurologic indications such as stroke.

We found that both groups tolerated peptide-based diet well. But this was especially evident in the switch group, where we were able to contrast changes from before peptide-based diet to after. There we saw a dramatic improvement in symptoms. For example, 42 percent of patients were experiencing nausea with enteral feeds on previous formula, and this was decreased by half, to 22 percent, on peptide-based diet. We saw similar improvements in diarrhea, abdominal pain or cramps, and distention. In fact, close to half of...
the patients had no symptoms whatsoever after transitioning.

Another key finding was the impact on health care utilization. With transition to peptide-based diet, we saw that there were fewer patient-initiated phone calls, fewer visits to the emergency room related to home enteral nutrition, and fewer provider visits. Other studies have also shown similar results in terms of impact to health care utilization with transition to peptide-based diet. For me, especially in the post-COVID-19 pandemic era, how we use our healthcare resources should be evaluated just as closely as clinical outcomes in future studies.

As a group, we've developed an approach to the formulas that are utilized with most of our patients, such as starting with standard polymeric formulas. If they report symptoms of intolerance, we then have several approaches, including altering how we provide the formula. For example, if someone is receiving formula through syringe feedings or gravity bag, we may slow the rate at which it is administered or transition to pump feedings. Prior to this study, we were a bit more reluctant to transition to another formula due to perceived higher costs associated with the use of peptide-based diets. However when the results of our study revealed the dramatic reduction in health care utilization, it drove home the point that perhaps transitioning to another formula, such as peptide-based diet, should occur sooner in patients who are intolerant to their current formula.

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