The antidiarrheal efficacy of a proprietary amino acid mixture (enterade) in neuroendocrine tumor (NET) patients.

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ABSTRACT

Diarrhea is a common symptom seen in GEPNET patients, usually caused by: excessive serotonin production, secondary to post-operative short gut syndrome, steatorrhea from somatostatin analogs, bile acid colitis or intestinal bacterial overgrowth. We conducted a retrospective study to evaluate antidiarrheal efficacy of enterade in neuroendocrine tumor patients with quality of life limiting diarrhea.

Methods

Medical records of all the GEPNET patients treated with enterade between May 2017-January 2018 were evaluated. Patients were treated at Markey Cancer Center between May 2017-January 2018. Enterade is classified as a medical food and is available over the counter.

Results

12 out of these 17 responders reported at least 50 percent reduction in diarrhea frequency. 15 patients were on somatostatin analogs at the time of initiation of enterade. 17 out of 23 (73.9%) patients reported subjective improvement in diarrheal symptoms (Table 1). 12 out of these 17 responders reported at least 50 percent reduction in diarrhea frequency.

Conclusions

A prospective Phase II study of enterade in gastroenteropancreatic neuroendocrine tumor patients with quality of life limiting diarrhea is planned.

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ORAL REHYDRATION SOLUTION

Enterade is an amino acid-based, glucose-free medical food/beverage with electrolytes. It comprises of 5 amino acids (Valine, Aspartic Acid, Serine, Threonine, Tyrosine) selected to promote hydration. It has been shown in studies with mice to mitigate radiation-induced acute gastrointestinal syndrome related to reduced electrolyte and nutrient absorption.

INTRODUCTION

•Based on SEER database, gastroenteropancreatic neuroendocrine tumor (GEPNET) incidence has increased 6-fold over past 3 decades.

•North American Neuroendocrine Tumor Society estimates that over 150,000 GEPNET patients are currently living in the United States.

•Diarrhea is a common symptom seen in GEPNET patients, usually caused by: excessive serotonin production, secondary to post-operative short gut syndrome, steatorrhea from somatostatin analogs, bile acid colitis or intestinal bacterial overgrowth.

•We conducted a retrospective study to evaluate antidiarrheal efficacy of enterade in neuroendocrine tumor patients with quality of life limiting diarrhea.

METHODS

•Medical records of all the GEPNET patients treated with enterade for symptomatic diarrhea were evaluated.

•Patients were treated at Markey Cancer Center between May 2017-January 2018. Enterade is classified as a medical food and is available over the counter.

•Enterade was administered as an 8oz bottle BID for 1 week.

•Antidiarrheal efficacy data was available on 23 patients.

•7 patients had small bowel neuroendocrine tumors (NET), 5 had bronchial NETs, 2 had colorectal NETs, 3 had NETs of unknown primary, 3 had gastric NETS, 2 had pancreatic NETs and one had medullary thyroid cancer of prostate.

•14 patients had history of prior bowel resection either for primary neuroendocrine tumor resection or debulking.

•15 patients were on somatostatin analogs at the time of initiation of enterade.

•17 out of 23 (73.9%) patients reported subjective improvement in diarrheal symptoms (Table 1).

•12 out of these 17 responders reported at least 50 percent reduction in diarrhea frequency.

CONCLUSIONS

73.9% (17/23) neuroendocrine tumor patients reported improvement in diarrhea with enterade. 52.2% (12/23) reported more than 50% reduction in diarrhea frequency.

A prospective Phase II study of enterade in gastroenteropancreatic neuroendocrine tumor patients with quality of life limiting diarrhea is planned.