Gastritis After Combination Ipilimumab and Nivolumab

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There are many known and common adverse effects of modern immunotherapy medications. Ipilimumab and nivolumab, commonly used in treating metastatic melanoma, are known to cause predominantly lower gastrointestinal symptoms. We report a rare case of isolated gastritis as a side effect of these medications.

INTRODUCTION

Immunotherapies are commonplace in the treatment of many neoplasms, and have an array of reported toxicities. Among the reported gastrointestinal (GI) side effects, diarrhea and colitis are most frequently cited as expected events.[1] However, there have only been a rare handful of reported cases of immune-checkpoint modulator toxicity affecting only the upper GI tract. In this paper we report a case of ipilimumab-nivolumab associated gastritis in a patient treated with these medications at our facility.

Case Report

A 78-year-old male with a past medical history significant for stage IV melanoma presented to the hospital with nausea, vomiting, weight loss, and reduced oral intake for two weeks. The patient had most recently received two rounds of ipilimumab and nivolumab for his melanoma two weeks prior to presentation. He had no history of non-steroidal anti-inflammatory drug (NSAID) use during this time. Physical exam was notable for mild epigastric tenderness. Computed tomography of the chest, abdomen and pelvis showed diffuse thickening of the stomach, compatible with gastritis. Esophagogastroduodenoscopy revealed diffuse, severely erythematous, friable mucosa throughout the entire stomach; biopsies were taken with cold forceps. Patchy, mildly erythematous mucosa without bleeding was found in the duodenal bulb, with the second portion of the duodenum being normal. Pathology revealed subacute gastritis (with acute inflammatory exudate consistent with an area of mucosal ulceration), with other etiologies of gastritis ruled out.

The patient was begun on glucocorticoid therapy and had rapid resolution of his symptoms. Repeat endoscopy confirmed resolution of the previously noted gastritis and inflammation; this was confirmed on pathology as well.

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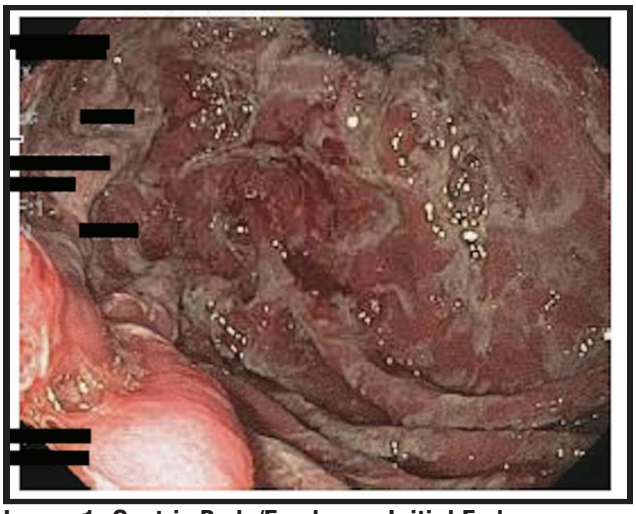

Image 1. Gastric Body/Fundus on Initial Endoscopy

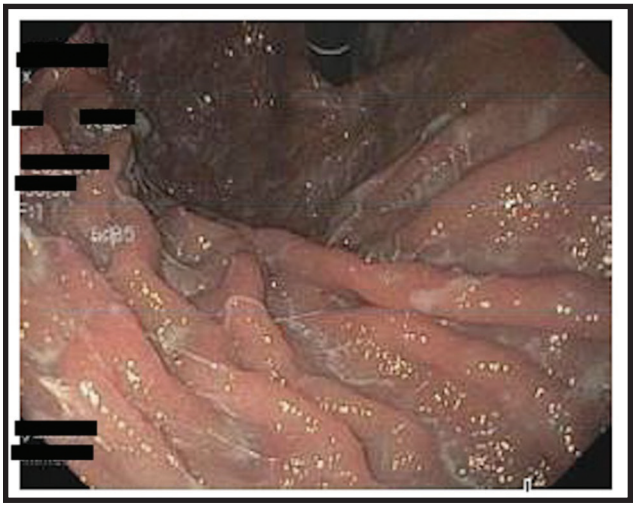

Image 2. Gastric Body/Fundus on Repeat Endoscopy After Therapy

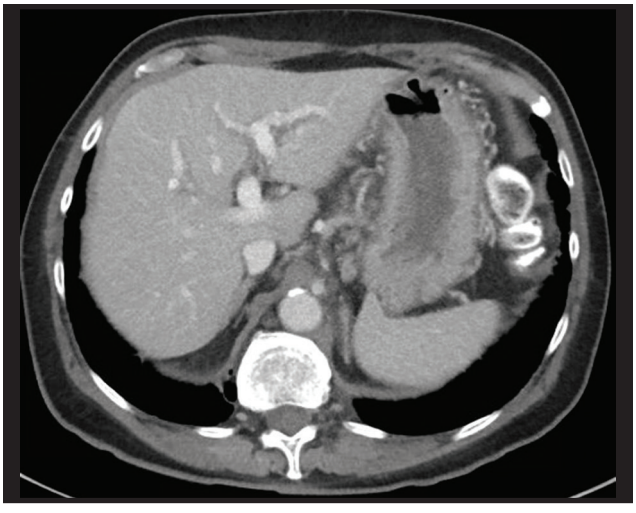

Image 3. Diffuse Thickening of the Stomach on Computed Tomography Scan of the Abdomen

Discussion

Gastritis typically is a result of an infectious, inflammatory, or autoimmune process. H. pylori is a well known cause of gastritis, however, more rare etiologies, such autoimmune metaplastic atrophic gastritis, exist and are important considerations in the approach to patients presenting to care. Gastritis resulting from immune-checkpoint modulators, while rare, falls under the umbrella of side effects called immune-related adverse events (irAEs).[1] The most common gastrointestinal irAEs include diarrhea (44%), colitis (12%), and hepatitis (30%) in patients treated with ipilumumab and nivolumab for melanoma.[1] However, there are a few case reports concerning the development gastritis without enterocolitis after nivolumab treatment alone.[2-5] The presentations and diagnostic challenges of these cases vary. While ileitis[6] and enteritis without colitis have previously been reported,[7] to date, there are no reported cases of a patient treated with both nivolumab and ipilimumab who developed gastritis as the only adverse event.

CONCLUSION

With the plethora of patients now being treated for an array of neoplasms and conditions with immunotherapy, novel adverse events are being reported more frequently. With the multitude of gastrointestinal side effects described in the literature, we describe a previously unknown adverse event associated with combination treatment, and hope this report will help guide future therapeutic choices for patients being considered for immunomodulation therapy. ■

References

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