

## Pembrolizumab Induced Ulcerative Duodenitis Treatment Successfully Treated with Prednisone

Khola Qamar, Abhinav Tiwari

Department of Gastroenterology, Southwestern Vermont Medical Center  
Sacred Heart Medical Center at RiverBend – PeaceHealth

### Introduction

Programmed death ligand-1 (PD-L1) inhibitors belong to a category of immune checkpoint inhibitors (ICIs) and have been used to treat melanoma, lung cancer, renal cell carcinoma Hodgkin's lymphoma, and gastric cancer.

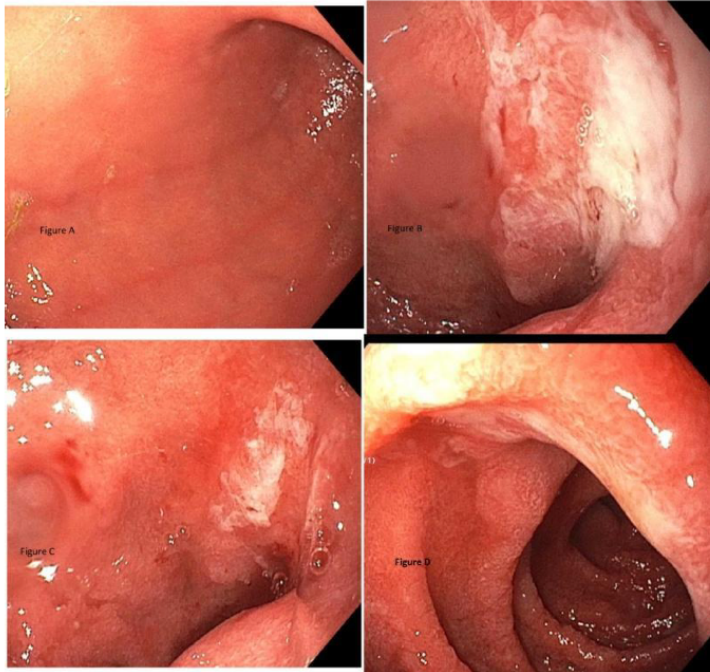
Colitis is the most frequent GI side effect. Here, we present a unique case of isolated ulcerative duodenitis associated with PD-L1 use, successfully treated with steroid.

### Case Presentation

57-year-old female with h/o metastatic malignant melanoma treated for 8 months with Pembrolizumab (Keytruda). Last dose received 1 month ago.

She presented with acute onset N/V, and LUQ pain. She denied NSAID use. Workup including CBC, LFTs, contrast enhanced CT abdomen was unremarkable.

EGD revealed multiple superficial duodenal ulcers in the bulb and 2<sup>nd</sup> part with background of mucosal inflammation.



Biopsies showed markedly active duodenitis with villous atrophy, cellular atrophy, cryptitis, crypt abscess and crypt dropout consistent with medication induced injury. She was started on 1 mg/kg (60 mg) prednisone, tapered by 10 mg/week resulting in symptomatic improvement in 1 week.

### Discussion

<20 cases of PD-L1 associated upper GI adverse events have been reported.

EGD findings have been variable including normal, mild gastritis, gastric erosions, hemorrhagic gastritis, atrophy, and ulceration.

Our case is unique as the patient had isolated duodenal findings.

The exact mechanism of injury is unknown, although several mechanisms of tissue injury due to self-reactive CD8-positive T cells and plasma antibody-mediated autoantibody production from CD4-positive T cells have been proposed.

Our patient responded well with tapering dose of prednisone; however refractory cases require treatment with anti-tumor necrosis factor (TNF)- $\alpha$  antibody- infliximab.

It is imperative to carefully examine the duodenum including 2<sup>nd</sup>/3<sup>rd</sup> part when excluding ICI related upper GI adverse effects.