



# RECURRENT OR CONCURRENT COLITIS: IMMUNE CHECKPOINT INHIBITOR-INDUCED COLITIS VS CMV COLITIS



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## INTRODUCTION

- ❑ Diarrhea is among the most common adverse events associated with pembrolizumab and other immune checkpoint inhibitors (ICIs).
- ❑ The successful treatment of diarrhea depends on the timely and accurate diagnosis of the underlying etiology.
- ❑ We present a case of refractory diarrhea due to coinciding cytomegalovirus (CMV) colitis in a patient who developed pembrolizumab-induced colitis.

## DISCUSSION

- ❑ Treatment with ICIs is often associated with transient but occasionally severe colitis.
- ❑ The diagnosis of ICI diarrhea requires thorough testing to rule out infectious and other inflammatory causes of colitis; an endoscopic biopsy is ultimately needed to make the diagnosis.
- ❑ Interruption of the ICI and systemic immunosuppression with corticosteroids optimizes outcome in most patients.
- ❑ On the other hand, corticosteroid immunosuppression can lead to activation of CMV, manifesting as transient improvement and then worsening to refractory diarrhea.
- ❑ Repeat infectious workup and endoscopic re-evaluation with tissue biopsy are needed to confirm the diagnosis of CMV colitis.
- ❑ Prompt discontinuation of corticosteroids and initiation of antivirals leads to spontaneous resolution of symptoms.



Figure 1: Colonoscopy showing the diffuse area of moderately congested, erythematous, and inflamed mucosa in the distal sigmoid colon.

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## CASE DESCRIPTION

- ❑ 88-year-old Caucasian male presented to the hospital with chronic diarrhea for 3 months. He was diagnosed with T4bNoMx melanoma, and started on palliative immunotherapy with pembrolizumab one year back.
- ❑ For a year, he tolerated pembrolizumab until he was hospitalized for diarrhea for 2 weeks. His fecal calprotectin was elevated, CMV PCR was undetectable, and CMV immunostaining was negative.
- ❑ Sigmoidoscopy was significant for the erythematous, and inflamed mucosa in distal sigmoid colon, suggesting acute colitis (fig).
- ❑ This was assumed to be pembrolizumab related colitis, and he was discharged on a prednisone taper. However, he continued to have diarrhea, and a couple of months later, he was readmitted for similar complaints.
- ❑ An extensive infectious disease workup was done to rule out other causes of chronic diarrhea. CMV DNA was detected by PCR (>5000 copies/mL), although histopathological studies were negative for CMV inclusions.
- ❑ Our patient was started on valganciclovir infusion for two weeks and received symptomatic management and anti-diarrheal agents. Repeat CMV titers trended down, and his diarrhea improved.