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Immune mediated colitis caused by lung cancer treatment with atezolizumab

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INTRODUCTION

Atezolizumab is an IgG1 isotype monoclonal antibody against the protein programmed cell death-ligand 1 (PD- L1). PD-L1 may be highly expressed in some tumors and is believed to inhibit immune cells that recognize and attack tumor cells. Inhibition of PD-L1 can remove its inhibitory effect and provoke an anti-tumor response.

In October 2016, the Food and Drugs Administration (FDA) approved atezolizumab for the treatment of patients with metastatic non-small cell lung cancer after disease progression during or following platinum based chemotherapy.

CASE REPORT

We present the case of a 43-year-old male with stage IV lung adenocarcinoma in progression, despite standard chemotherapy. He was participating in a clinical randomized trial with four cycles of chemotherapy as follows: cisplatin, pemetrexed and atezolizumab. He showed a good tolerance.

After the last cycle of chemotherapy, he had bloody diarrhea and fever. Stool cultures were negative. A colonoscopy was performed and a pancolitis with a multiple fibrin-coated ulcer was identified. Numerous glandular crypts with cryptic micro-abscesses and a chronic inflammatory lymphoplasmocytic infiltrate were found on biopsy of the colon. These histological findings are similar to those described in ulcerative colitis.

CONCLUSION

Immune mediated colitis is a possible adverse event that is poorly described. It occurs in 19.7% of all patients receiving atezolizumab and requires the administration of corticosteroids for its resolution.

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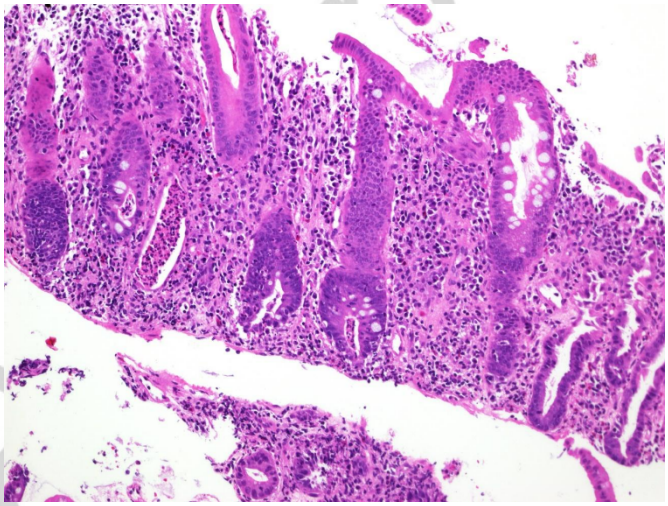

Fig. 1. Endoscopic biopsy with histopathological features of ulcerative colitis. Depletion of goblet cells, cryptitis and cryptic abscesses suggestive of ulcerative colitis.

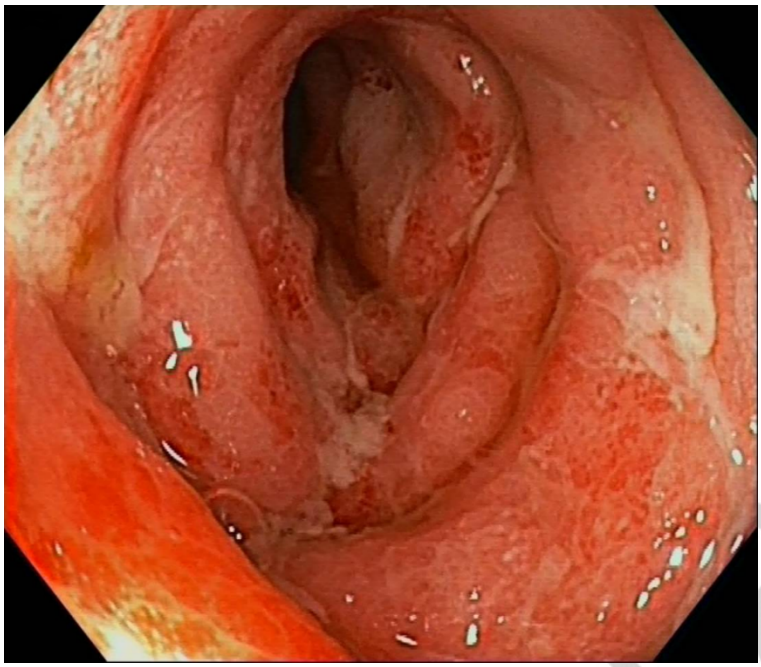

Fig. 2. Edematous and erythematous colonic mucosa with ulcers coated with fibrin and whitish exudates.

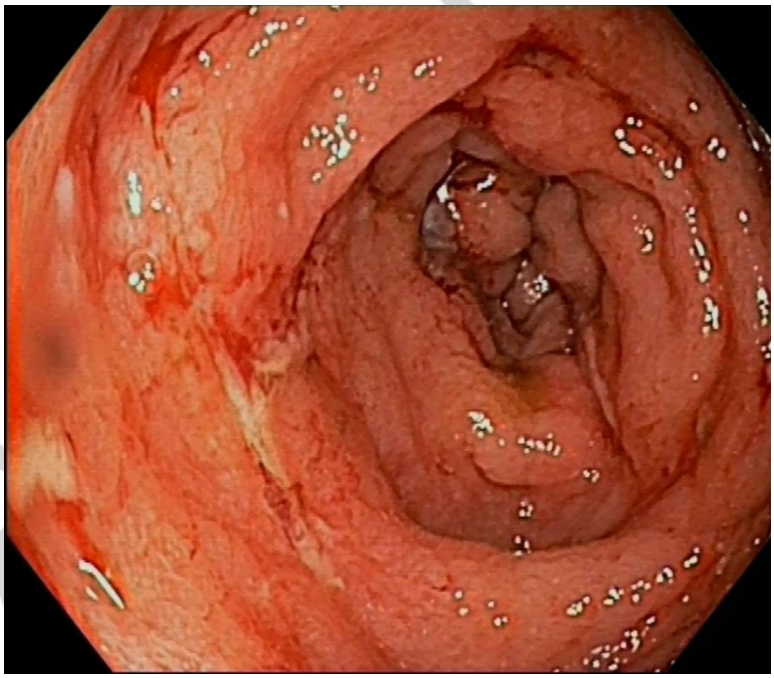

Fig. 3. Colonic mucosa with increased friability and bleeding when rubbed by the endoscope.