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Immune-Mediated Pneumonitis in an MSI-H Metastatic Colorectal Cancer Patient Treated with First-Line Pembrolizumab: A Case Report

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Background: Immune checkpoint inhibitors have revolutionized the treatment of advanced instability-high (MSI-H) colorectal cancer. Pembrolizumab, a PD-1 inhibitor, offering durable responses and improved outcomes compared to conventional chemotherapy. Immune-mediated pneumonitis is a rare but potentially life-threatening complication.

Case History: L.M, a 70-year-old male, affected by right-sided colon adenocarcinoma, MSI-H, with synchronous liver metastases. He was ECOG 0. Was started on pembrolizumab 200 mg every 3 weeks as first-line therapy. Two weeks after the third cycle, the patient began reporting reduced exercise tolerance, dry cough, shortness of breath. Fine crackles were audible at the lung bases. HRCT revealed ground-glass opacities. Laboratory tests were unremarkable. Nasopharyngeal swabs were negative. Bronchoscopy with BAL revealed a lymphocyte-predominant pattern and no pathogens were isolated. Diagnosis of grade 2 immune-mediated pneumonitis related to pembrolizumab therapy was made. Pembrolizumab was immediately discontinued and oral prednisone at 1 mg/kg/day was initiated. After two weeks, follow-up HRCT showed near-complete resolution of the infiltrates. Corticosteroids were gradually tapered over 6 weeks. The patient resumed treatment without further problems.

Discussion: This case underscores the importance of recognizing and managing immune-related adverse events in patients undergoing immune checkpoint inhibitor therapy. Pneumonitis can present insidiously. Prompt identification and treatment can lead to complete resolution.

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