

Chemotherapy Induced Pulmonary Fibrosis

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Background: FOLFOX (Oxaliplatin, 5-Fluorouracil, and Leucovorin) is one of the most commonly used first-line chemotherapies for metastatic colorectal cancer in the USA, and its efficacy has been repeatedly demonstrated by numerous trials. However, it has many side effects that affect numerous organ systems including myelosuppression, neuropathy, hepatotoxicity, and pulmonary toxicity. This case describes an 81-year-old male who developed pulmonary fibrosis after receiving FOLFOX chemotherapy, a late and rarely documented adverse affect.

Case Report: Our patient was an 81-year-old male who underwent 12 cycles of adjuvant FOLFOX chemotherapy for metastatic colon cancer. Patient is a nonsmoker, has no industrial exposure to pulmonary toxic agents, no past medical history of autoimmune diseases, and was on medications for hypertension, diabetes mellitus type 2, GERD, Benign Prostatic Hyperplasia, and hypothyroidism, none of which have any known pulmonary toxicity. The patient developed shortness of breath and dyspnea over the next two years, and serial CT scans of the chest showed progressive fibrosis of the lungs. Patient was originally admitted on 2 liters of oxygen via nasal canul with follow up imaging revealing bilateral pneumothoraces secondary to pulmonary fibrosis, five years after initiating FOLFOX treatment.

Conclusion: FOLFOX is known to have many adverse effects, including myelotoxicity, neurologic toxicity, diarrhea, and cardiopulmonary toxicity. In this case report, it is our belief that this patient developed bilateral pneumothoraces secondary to pulmonary fibrosis, which in turn was likely to have been caused by the patient's 12 cycles of FOLFOX therapy. Our case report represents an uncommon pulmonary side effect of FOLFOX and a unique manifestation with limited prior documentation.