

SUDDEN DYSPNEA IN A PATIENT WITH ULCERATIVE COLITIS

Costa JM*, Soares JB*, Carvalho SD[†] Costeira F[‡], Vieira F[‡], Rolo R[§], Gonçalves R*.
*Gastroenterology Department, [†]Pathology Department, [‡]Radiology Department, [§]Pneumology Department, Hospital de Braga.

INTRODUCTION

Ulcerative colitis (UC) can be associated with several extra-intestinal manifestations. **Pulmonary manifestations in UC are rare and have to be distinguished from infectious complications and side-effects of medications. Mesalazine can cause interstitial lung disease, such as bronchiolitis obliterans with organizing pneumonia (BOOP)** that usually resolves with drug suspension.

We report a case of a patient with UC who was diagnosed with Mesalazine-induced BOOP by lung biopsy and managed with drug withdrawal.

CLINICAL PRESENTATION

24-year-old non-smoking female

Past medical history: extensive UC (since November 2014)

History of medication: 3 g/day of oral Mesalazine in November of 2014 (poor response) → patient entered in a randomized double blind clinical trial comparing Etrolizumab and Infliximab in December 2015 → in May 2017 she left the study due to deterioration of her UC. During her participation in the clinical trial the patient **maintained treatment with 4 g/day of oral Mesalazine.**

Clinical presentation in emergency department (June 2017): sudden (<24h) pain in the lower left hemithorax + dyspnea.

She denied cough, malaise and fever and presented no evidence of respiration distress. Chest auscultation was clear.

Complementary diagnostic exams:

-**Blood tests:** C-reactive protein of 88 mg/dL (normal range: <2.90 mg/dL) and a normal count of WBC and eosinophils.

-**Chest X-ray (Fig. 1a) and CT scan (Fig. 1b, c).**

-**Arterial blood gas test:** normal.

-**Analysis of bronchoalveolar lavage fluid:** stains and cultures for bacteria, acid-fast bacilli and fungi were negative, as was cytologic examination for neoplasia).

-**Bronchoscopy with transbronchial lung biopsy (Fig.2).**

Clinical evolution: The Mesalazine withdrawal led to rapid improvement of respiratory symptoms and an additional Prednisolone trial was not necessary.

Due to active UC the patient was started on Adalimumab 40mg sc eow. After a follow-up of 6 months, the patient showed no respiratory symptoms, and chest CT scan and pulmonary function tests were completely normal (Fig. 3a, b). Nevertheless due to active UC (Mayo score: 8/12) under Adalimumab 40mg sc weekly the patient was proposed to Infliximab (5 mg/Kg/day).

Final diagnosis: Mesalazine-induced BOOP.

The hypotheses of Infliximab-induced BOOP or UC-associated BOOP are less likely since the respiratory symptoms came about six months after the suspension of infliximab and improved despite persistent activity of UC.

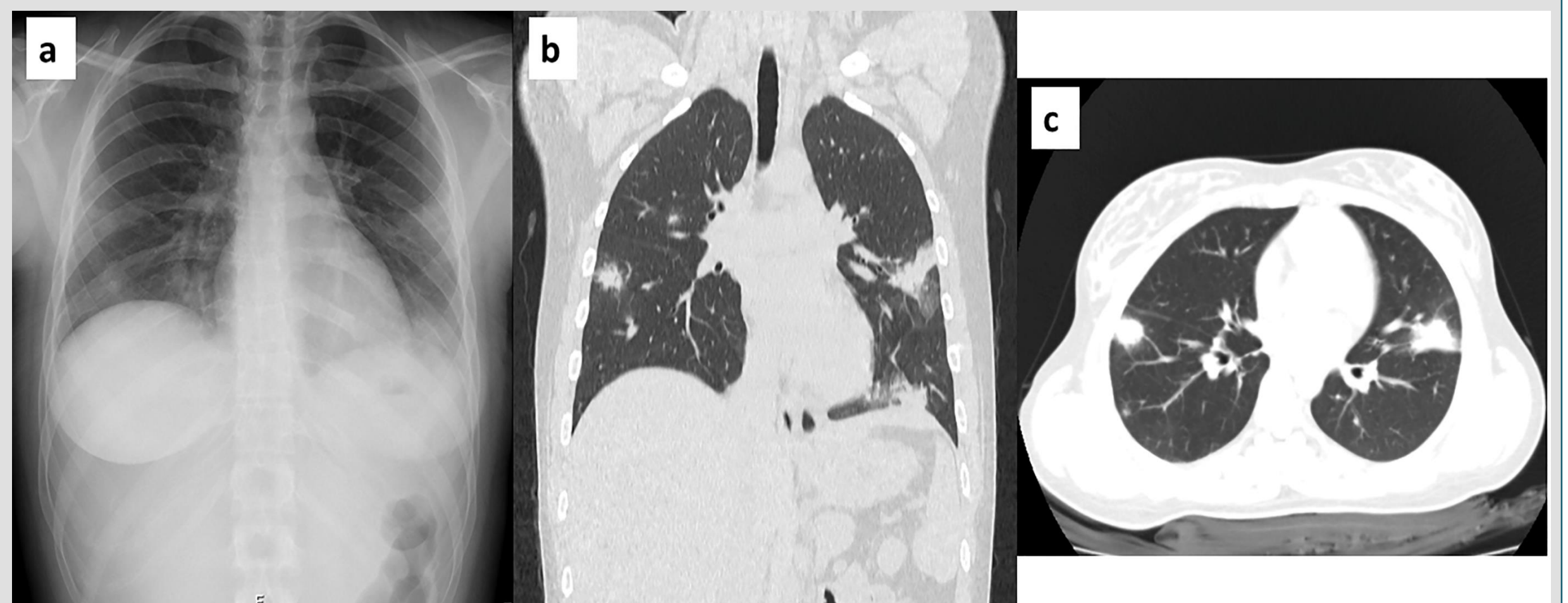


Figure 1. Thorax X-ray images showing patchy bilateral infiltrates (a). Thorax CT scan images in coronal (b) and axial (c) view revealing patchy bilateral consolidations and ground glass opacities in a subpleural distribution.

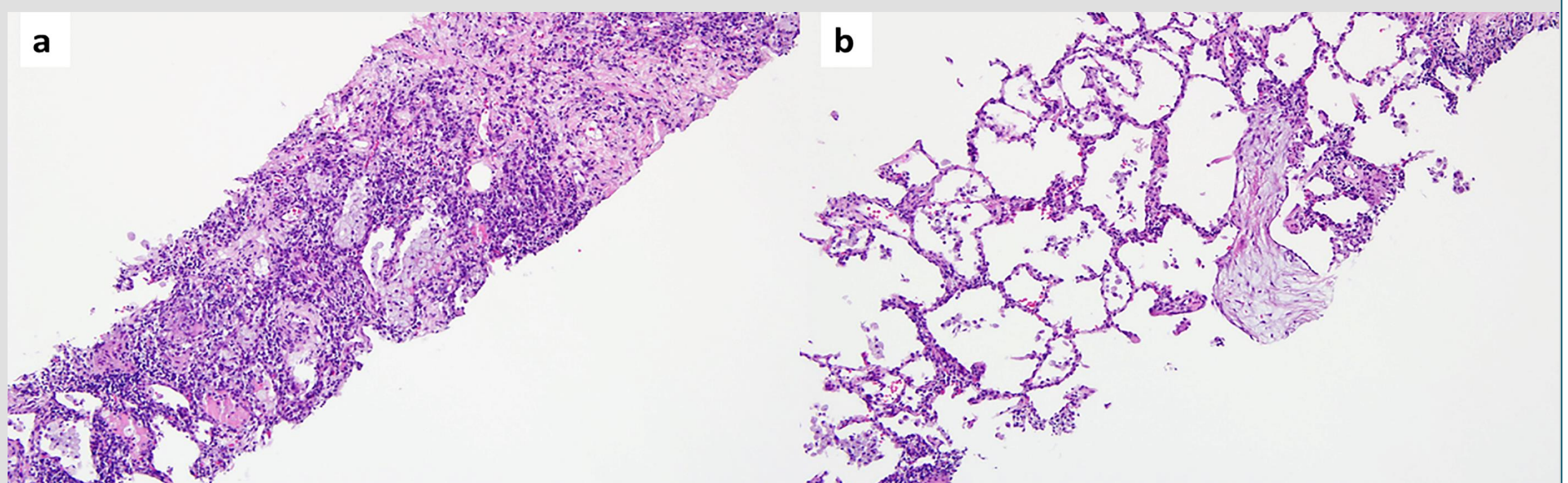


Figure 2. Histological examination of specimen obtained from bronchoscopy with transbronchial lung biopsy showing pulmonary parenchyma with interstitial fibrosis and inflammatory infiltrate (H&E,100x) (a). Presence of foamy macrophages in alveolar spaces as well as Masson bodies were also observed (H&E,100x) (b). The histological picture was consistent with the diagnosis of BOOP.

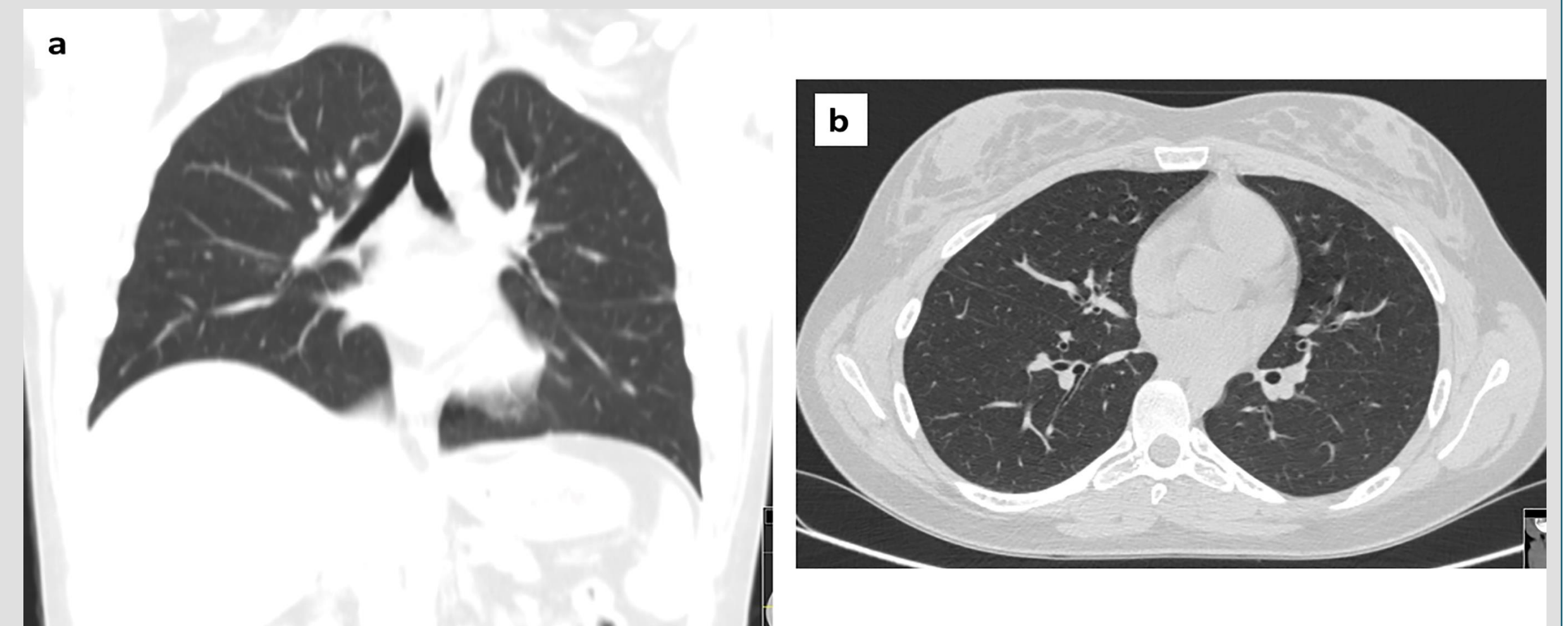


Figure 3. Thorax CT scan images in coronal (a) and axial (b) views showing complete resolution of lung abnormalities.

DISCUSSION/CONCLUSION

Mesalazine-induced lung toxicity in UC is rare with just over 30 cases reported in the literature. Although its pathogenesis still remains unknown.

Lung toxicity related to Mesalazine (including BOOP) usually occurs within the first 3 months after starting Mesalazine treatment, although it may occur within a few days to several years of treatment.

Commonly symptoms resolve after cessation of the medication, although in rare severe cases with respiratory failure treatment with Corticosteroid may be necessary.

It is not always easy to distinguish pulmonary manifestations of UC from Mesalazine-induced lung toxicity. Response to Mesalazine withdrawal, drug-induced lymphocyte stimulation tests and rechallenge to Mesalazine may help in the differential diagnosis.

Despite its rarity, the Mesalazine-induced lung toxicity, including BOOP, should be considered in UC patients developing unexplained respiratory symptoms even under long-term Mesalazine therapy.

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