

# A Case Report of Steroid-resistant Cryptogenic Organizing Pneumonia Managed with Intravenous Immunoglobulins

Christian Akem Dimala, MD<sup>1</sup>, Urvi Patel, DO<sup>1</sup>, Benjamin Lloyd, MD<sup>1</sup>, Anthony Donato, MD<sup>1</sup>, William B Kimmel, MD<sup>2</sup>, Robert Hallowell, MD<sup>3</sup>, Caitlyn Moss, MD<sup>1</sup>

<sup>1</sup> Department of Medicine, Reading Hospital - Tower Health, West Reading, PA, USA,

<sup>2</sup> Department of Pathology, Reading Hospital - Tower Health, West Reading, PA, USA

<sup>3</sup> Department of Pulmonary & Critical Care Medicine, Massachusetts General Hospital, Boston, MA, USA

## Introduction

### Cryptogenic organizing pneumonia (COP)

Rare respiratory condition

- **Etiology:**

No identifiable cause

- **Histopathology:**

Alveolar ducts & airspaces filled with fibrin & granulation tissue

- **Treatment:**

Steroids, macrolides or immunosuppressants

- Less than 10 reported cases managed with intravenous immunoglobulins (IVIg).

## Case Presentations

- **History of presenting complaint:**

72 years-old male, worsening dry cough for 1 week

- **PMH:**

Atrial fibrillation (on apixaban)

Left total knee replacement complicated by infection (on intravenous daptomycin)

- **Chest x-ray:**

Diffuse bilateral patchy infiltrates, concerning for multifocal pneumonia

- **Investigations:**

Negative for infectious, malignant, autoimmune etiologies

- **Lung biopsy:**

Cryptogenic organizing pneumonia.

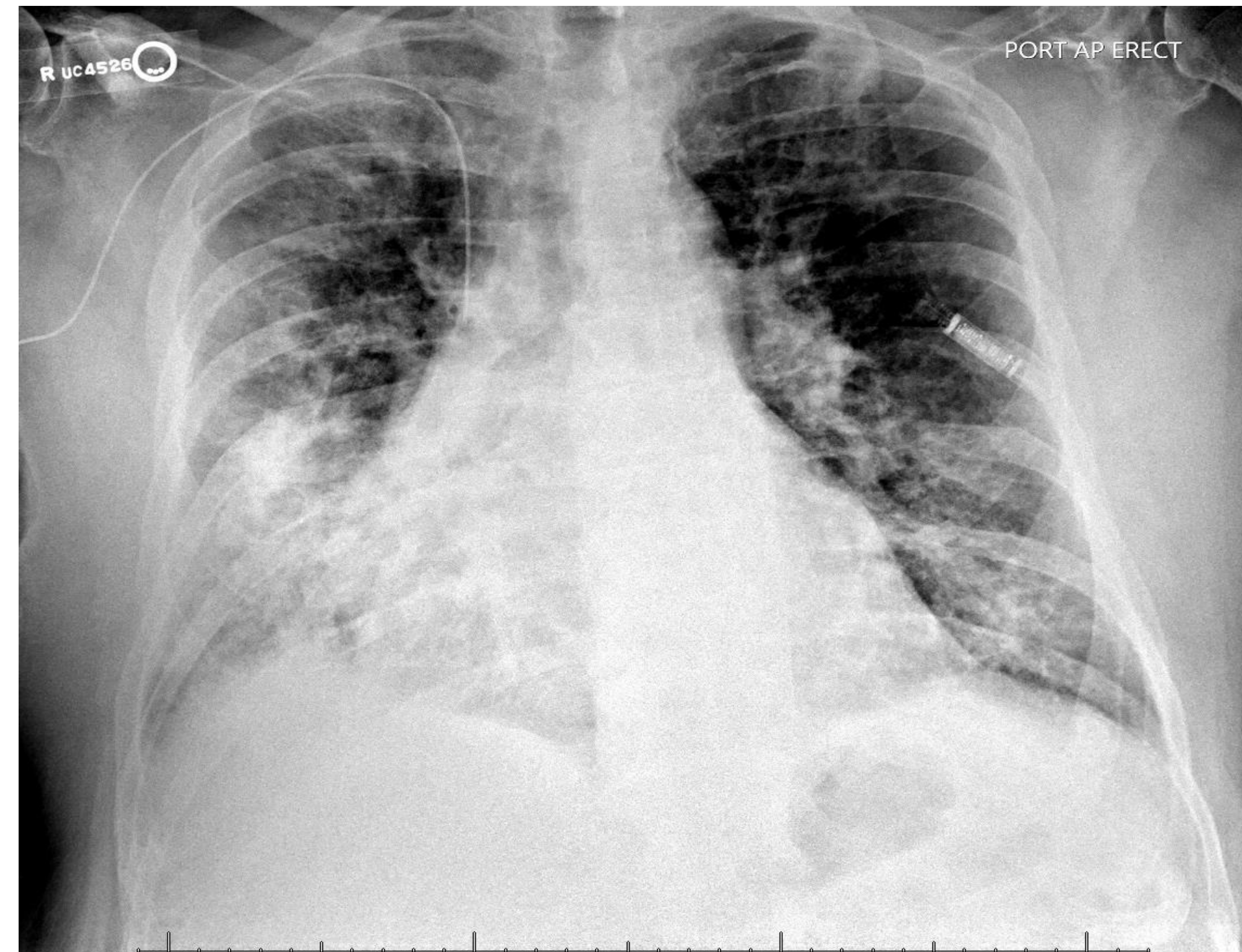


Figure 1: Chest radiograph at presentation showing diffuse bilateral patchy infiltrates.

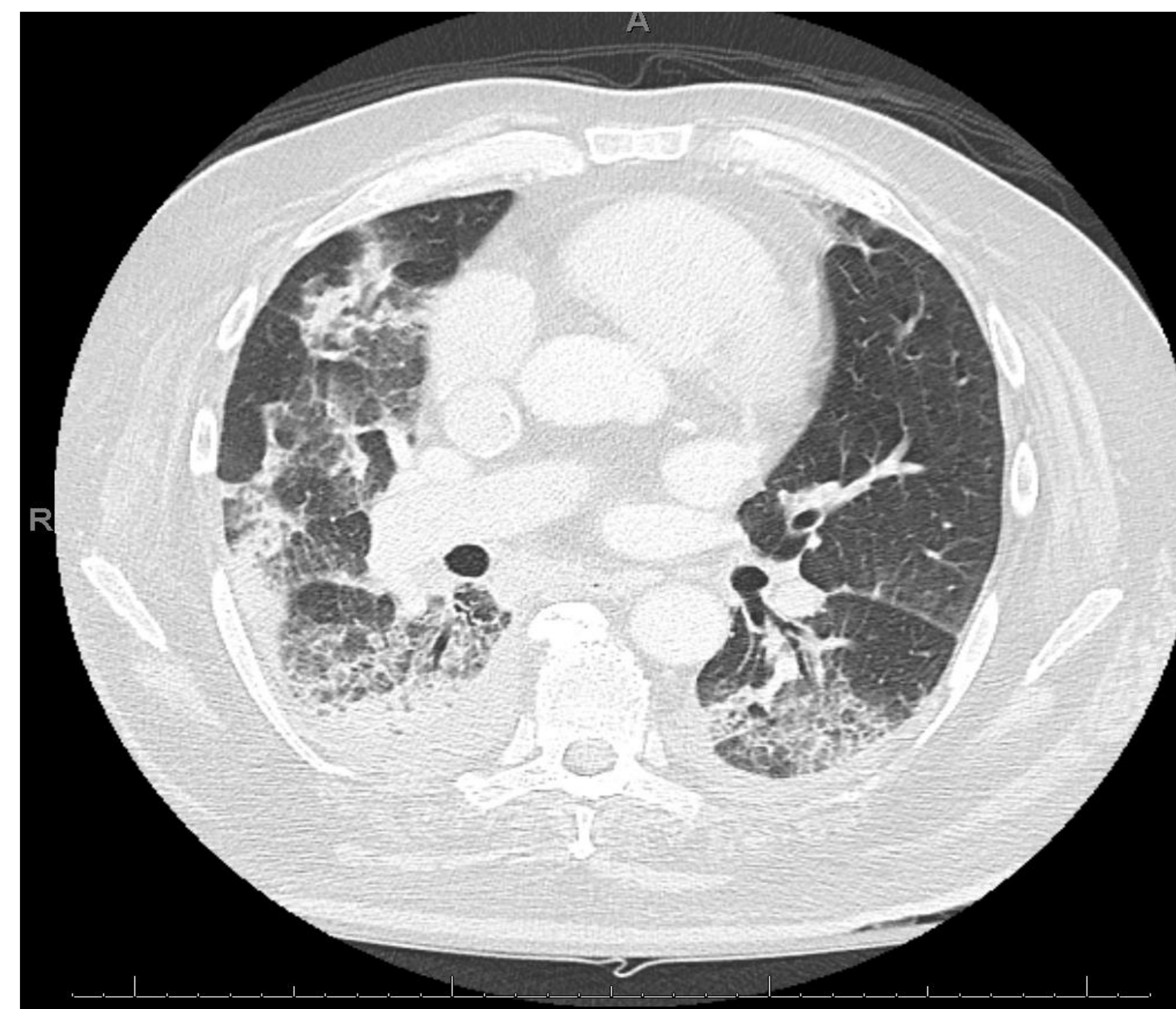


Figure 2: CT scan of the chest showing patchy opacities of both lungs involving all lobes bilaterally with some consolidation changes and mild bilateral pleural effusions

- **Initial treatment:**

No improvement with antibiotics and high dose steroids

- **Final treatment:**

Intravenous immunoglobulins (IVIg) 0.4 g/kg/dose

Mycophenolate mofetil (MMF) 500 mg BD

- **Follow-up:**

Improvement after 5-day course of IVIg and MMF

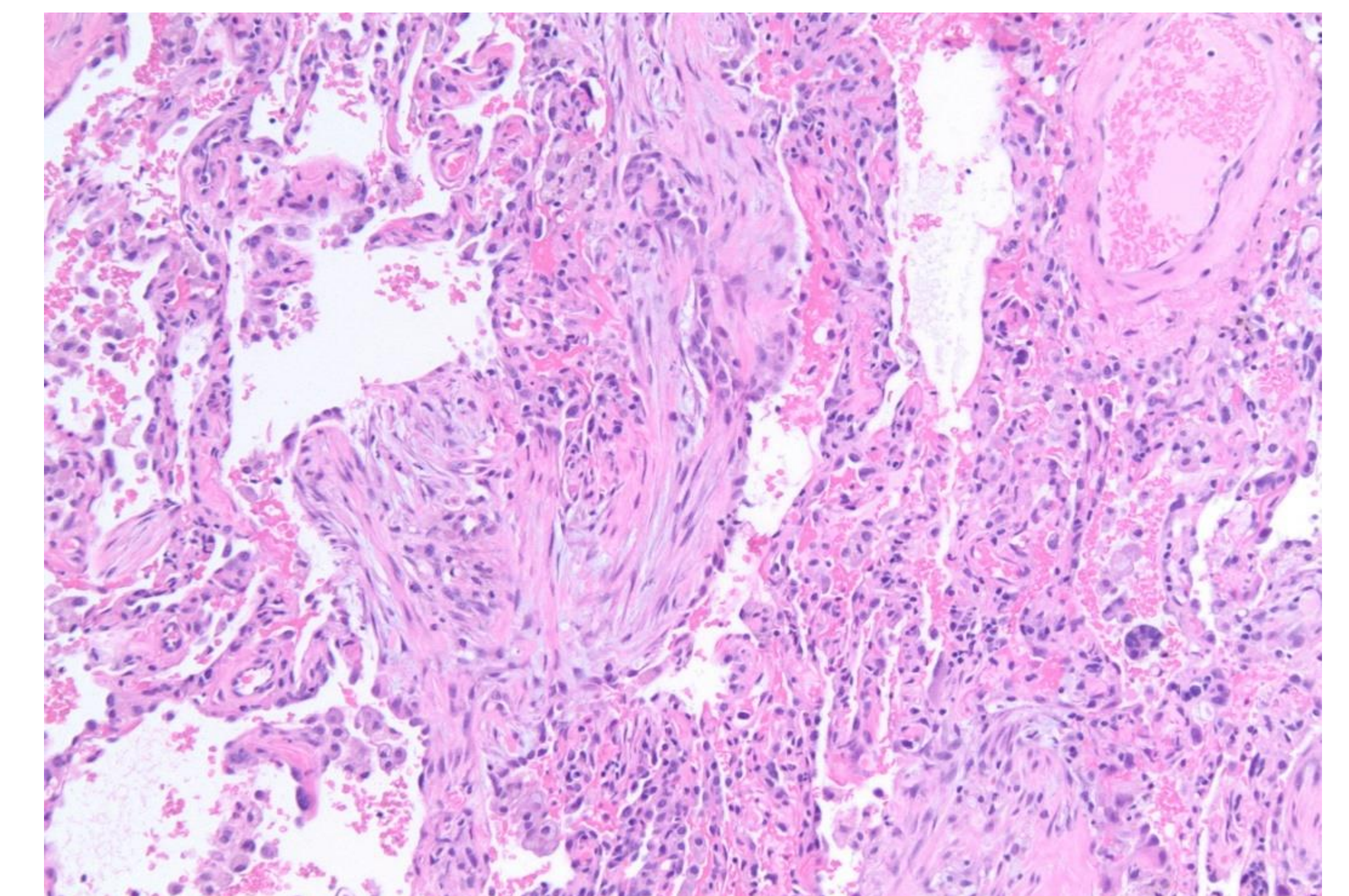


Figure 3: Right lung biopsy pathology with hematoxylin-eosin stain at 200x magnification shows organizing pneumonia in a background of diffuse alveolar damage

## Conclusion

Intravenous immunoglobulins (IVIg) should be increasingly considered as an important steroid-sparing alternative in patients with COP.

— References

Lee DH, Yeo JH, Kim YI, Gim SJ, Sohn JW, Yhi JY. Successful Immunoglobulin Treatment in Severe Cryptogenic Organizing Pneumonia Caused by Dermatomyositis. *Acute Crit Care*. 2015 Aug 30;30(3):212–7.