



# Mesalamine induced eosinophilic pneumonia



Ankit Gupta, MD, MS<sup>a,\*</sup>, Swati Gulati, MD, MS<sup>b</sup>

<sup>a</sup> Pulmonary and Critical Care Medicine, Hartford Healthcare, Hartford, CT, USA

<sup>b</sup> Pulmonary and Critical Care Medicine, University of Alabama at Birmingham, Birmingham, AL, USA

## ARTICLE INFO

### Article history:

Received 16 February 2017

Received in revised form

9 April 2017

Accepted 10 April 2017

## ABSTRACT

We present the case of a twenty two year old Caucasian male with ulcerative colitis on mesalamine who presented with dry cough, fever, malaise and dyspnea on exertion. He had peripheral eosinophilia and apical ground-glass opacities on computed tomography of the chest. He had no new exposures and his infectious workup was non diagnostic. Bronchoalveolar lavage showed eosinophilia raising the suspicion of mesalamine induced eosinophilic pneumonia. His symptoms improved after discontinuing mesalamine with a tapered dose of steroids.

© 2017 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## 1. Case report

Our patient is a 22 year old male with ulcerative colitis on mesalamine for 9 months who presented with a 3 months history of recurrent episodic bouts of dry cough, fever and wheezing. He presented to the Emergency room twice and received outpatient oral steroids, inhaled corticosteroids and antibiotics for “asthma exacerbation” with a temporary improvement in symptoms. Every time his symptoms recurred within days of the steroid taper. He had no new exposures. He was eventually admitted to the hospital with a fever of 101° C, tachycardia, tachypnea and hypoxia requiring 2 L O<sub>2</sub> through a nasal cannula for a pulse oximetry of 91%. He had expiratory wheezing on his examination. He had peripheral eosinophilia and leukocytosis. His immunological workup including ESR was normal. CT of the chest demonstrated patchy alveolar ground glass opacities and no lymphadenopathy (Fig. 1). Bronchoscopy revealed normal airways with BAL eosinophilia (28%). Infectious workup was again noncontributory. His symptoms were attributed to mesalamine induced eosinophilic pneumonia and mesalamine was discontinued. He was eventually discharged on a slow taper of oral steroids with dramatic improvement in symptoms. His office spirometry 3 months later was normal with a normal diffusion. A follow up CT chest showed significant improvement in his alveolar opacities.

## 2. Discussion

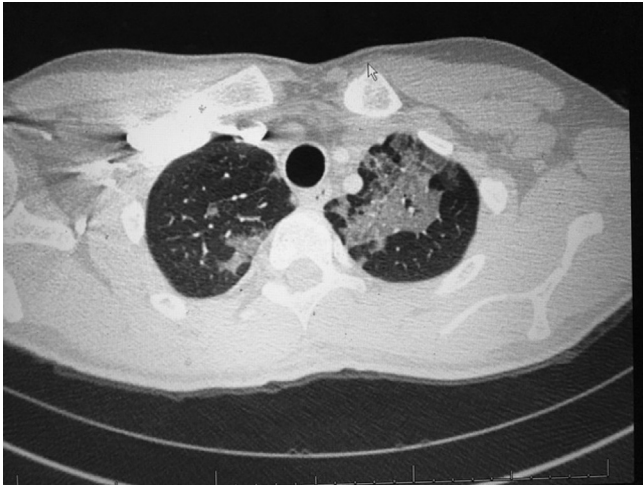
Ulcerative colitis can have extra-intestinal involvement including the lungs [1]. Commonly associated complications of Inflammatory bowel disease (IBD) include pleurisy, obstructive/restrictive airway disease, interstitial lung disease, lung nodules, pulmonary eosinophilia, vasculitis, granulomatous lung disease etc. Not just the disease itself, medications used in the management of IBD can also cause pulmonary toxicity, albeit less commonly [2]. Mesalamine is a safe medication widely prescribed for IBD. It is a very rare cause of lung disease including interstitial lung disease and eosinophilic pneumonias [3–5]. Patients are often misdiagnosed as asthma/bacterial pneumonia due to the rarity of this correlation. Peripheral and BAL eosinophilia with a suggestive clinical and radiological picture clinches the diagnosis. Patients usually respond quickly with drug discontinuation and prednisone.

## 3. Conclusion

Clinicians should keep rare complications of mesalamine including eosinophilic pneumonia in mind while using the drug for IBD.

\* Corresponding author.

E-mail addresses: [ankitguptapulmonary@gmail.com](mailto:ankitguptapulmonary@gmail.com) (A. Gupta), [sgulati@uabmc.edu](mailto:sgulati@uabmc.edu) (S. Gulati).



**Fig. 1.** Patchy ground glass opacities.

### Conflict of interest

The author(s) declare(s) that there is no conflict of interest regarding the publication of this paper.

### References

- [1] I. Storch, D. Sachar, S. Katz, Pulmonary manifestations of inflammatory bowel disease, *Inflamm. Bowel Dis.* 9 (2) (2003) 104–115.
- [2] R.A. Foster, D.S. Zander, P.J. Mergo, J. Valentine, Gastroenterology F. mesalamine-related lung disease: clinical, radiographic, and pathologic manifestations, *Inflamm. Bowel Dis.* 9 (2003) 308–315.
- [3] M. Inoue, N. Horita, N. Kimura, R. Kojima, N. Miyazawa, Three cases of mesalazine-induced pneumonitis with eosinophilia, *Respir. Investig.* 52 (3) (2014 May) 209–212.
- [4] T.H. Lee, S.H. Lee, Y.S. Cho, et al., A case of drug-induced interstitial lung disease in a patient with ulcerative colitis receiving mesalamine, *Intest. Res.* 5 (2007) 192–195.
- [5] K. Tanigawa, K. Sugiyama, H. Matsujama, et al., Mesalazine-induced eosinophilic pneumonia, *Respiration* 66 (1999) 69–72.