



Internal Medicine Flashcard

An elderly man with fever, dyspnoea and eosinophilia

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1. Case description

An 81-year-old man presented to the author's hospital with one-week history of fever, non-productive cough and intermittent desaturations. This patient has known penicillin allergy, chronic hepatitis B and previous cholecystectomy. Five weeks before, the patient was admitted for polymicrobial bacteremia (*Escherichia coli*, *Morganella morganii* and *Enterococcus casseliflavus*) secondary to a multiloculated liver abscess that was not amenable to drainage. Since then, he had been on daptomycin for five weeks and ertapenem for ten days. Antibiotics had earlier been switched from cefepime to ertapenem following recrudescence of fever. Full blood count revealed normal leucocyte count of

$9.72 \times 10^9/L$ but new onset peripheral eosinophilia of $0.89 \times 10^9/L$. Serum procalcitonin was $0.36 \mu\text{g/L}$. A chest radiograph performed showed new interstitial infiltrates in bilateral middle and upper lung zones with bilateral small pleural effusions (Fig. 1, Panel A). A repeat ultrasound of the abdomen showed significant reduction in the size of the liver abscess. What is the diagnosis?

2. Discussion section

Daptomycin and ertapenem were stopped with prompt resolution of the fever and respiratory symptoms, as well as improvement of the eosinophilia. No bronchoscopy was performed in view of prompt

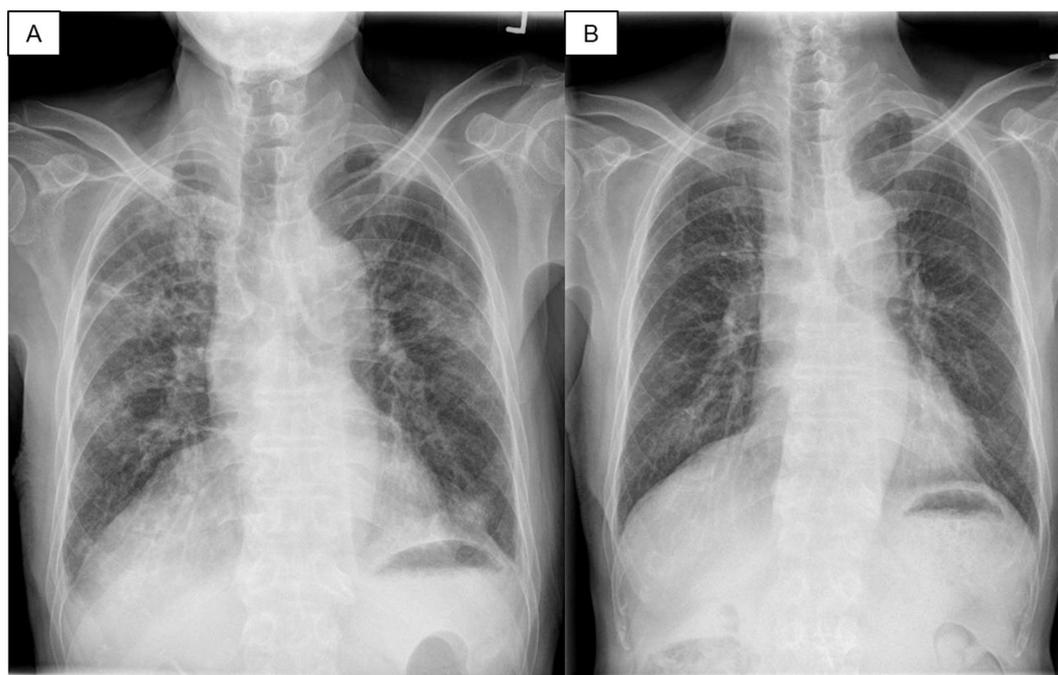


Fig. 1. A: Chest radiograph on presentation showing bilateral interstitial infiltrates in middle and upper lung zones and mild blunting of bilateral costophrenic angles. B: Repeat chest radiograph six weeks after cessation of daptomycin.

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resolution of symptoms. A diagnosis of acute eosinophilic pneumonia possibly secondary to daptomycin was diagnosed. A repeat chest radiograph six weeks later showed complete resolution of the pulmonary infiltrates (Fig. 1, Panel B).

Eosinophilic lung diseases comprise of a spectrum of pulmonary parenchymal diseases, which are characterized by infiltration of lung interstitium and alveolar spaces by eosinophils. The commonest inciting causes include drugs, toxins or fungal infections. This entity is often characterized by peripheral eosinophilic count of $> 0.5 \times 10^9/L$ and bronchoalveolar lavage differential cell count of 25% eosinophils or more, and typically $> 40\%$ [1]. Based on a review of 196 case reports of drug-induced eosinophilic pneumonia published between 1990 and 2017, daptomycin was the leading cause with 32 cases (16.3%) [2]. In a systematic review of daptomycin-induced eosinophilic pneumonia, majority of the patients were elderly males, with average duration of daptomycin therapy being 2.8 ± 1.6 weeks upon onset of symptoms [3], which is compatible with our patient's profile. The commonest

clinical findings include dyspnoea (94%), peripheral eosinophilia (77%) and fever (57%). In patients on a prolonged course of daptomycin, it is important to be cognizant of eosinophilic pneumonitis as a possible complication.

Conflict of interest

None.

References

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