

AROMATHERAPY MAY NOT BE SO RELAXING AFTER ALL: A CASE OF ACUTE EOSINOPHILIC PNEUMONIA

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Case Presentation

1st presentation

19-year-old medically free female, presented with 1 week history of fever, cough and dyspnea after suddenly and deeply inhaling a scented oil. She was febrile, in respiratory distress and desaturating down to 51%. CXR (Figure 1-A) & CT chest (Figure 1-B).

Labs

WBC: $7.49 \times 10^3/\mu\text{L}$ with 66% neutrophil and 3% eosinophils ($0.23 \times 10^9/\text{L}$).

Hospital course

She was admitted to the ICU, intubated &, received Dexamethasone for 3 days. She improved and was extubated then shifted to the ward and discharged home the next day.

2nd presentation

The patient was well until day 4 after discharge where her symptoms recurred. In the ED she was in respiratory distress with an oxygen saturation of 86%.

Labs

WBC: $37.4 \times 10^3/\mu\text{L}$, with 15% eosinophil ($6 \times 10^3/\mu\text{L}$).

Hospital course

She was re-admitted and started empirically on Piperacillin-tazobactam, received a single dose of hydrocortisone 100mg and was kept on 4 liters of oxygen. Her symptoms improved the next day with decreasing oxygen requirements and drop in her WBC. Methylprednisone was started for a suspected diagnosis of **acute eosinophilic pneumonia (AEP)**. The patient improved with the steroids and BAL was done, showing WBC count of 614 cells/cumm and eosinophil of 84%.

She was discharged home on prednisone 50mg which was tapered off.

The patient had complete resolution of her symptoms and lung infiltrates with the steroids. (Fig.2)

Figures

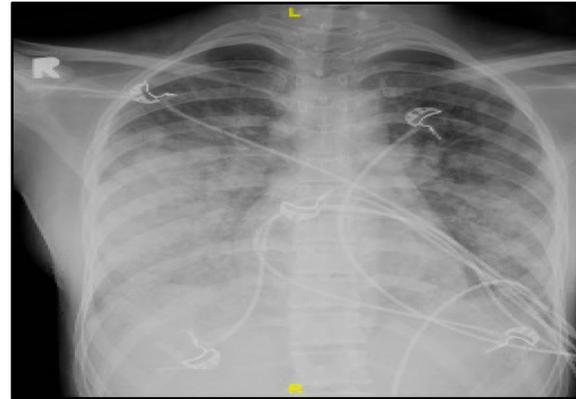


Figure 1-A

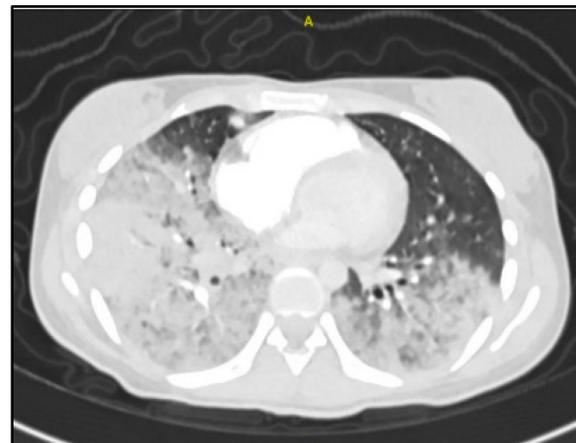


Figure 1-B



Figure 2

Discussion

- AEP is a rare entity with around 200 cases reported worldwide.¹
- The cause is unknown, but it has been suggested to be the result of an acute hypersensitivity reaction to an unknown allergen in a previously healthy individual.²
- Our patient is the first case reported after deep and sudden inhalation of a scented oil .
- **The diagnostic criteria for AEP includes**
 - Acute onset with febrile respiratory manifestations
 - Bilateral diffuse infiltrates on imaging
 - $\text{PaO}_2 \leq 60$ or oxygen saturation $< 90\%$
 - $\geq 25\%$ or more eosinophils in the BAL
 - Absence of determined cause of AEP. ³

Our patient fulfills the criteria for AEP diagnosis.

- The mainstay of treatment is corticosteroids and patients usually have a rapid response as witnessed in our patient.³

References

1. Pizzuto, M., Seychell, M., Caruana Montaldo, B., & Mizzi, A. (2019). Idiopathic acute eosinophilic pneumonia. *BMJ Case Reports*, 12(9), e231095.
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3. Cottin, V. (2016). Eosinophilic Lung Diseases. *Clinics in Chest Medicine*, 37(3), 535–556.