

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Birds Vs Bronchial Asthma.

RS Arun*, Aparajeet Kar, and Jhansi Lakshmi Elineni.

Sree Balaji Medical College, Chennai, Tamil Nadu, India.

ABSTRACT

Hypersensitivity pneumonitis (also called allergic alveolitis or extrinsic allergic alveolitis, EAA) is an inflammation of the alveoli within the lung caused by hypersensitivity to inhaled organic dusts. Sufferers are commonly exposed to the dust by their occupation or hobbies. Common agents causing hypersensitivity pneumonitis are agricultural dust, molds, aerosol contaminated water, pet hairs, bird droppings and feathers, saw or wood dust, chemical fumes (such as paints, resins, plastics).

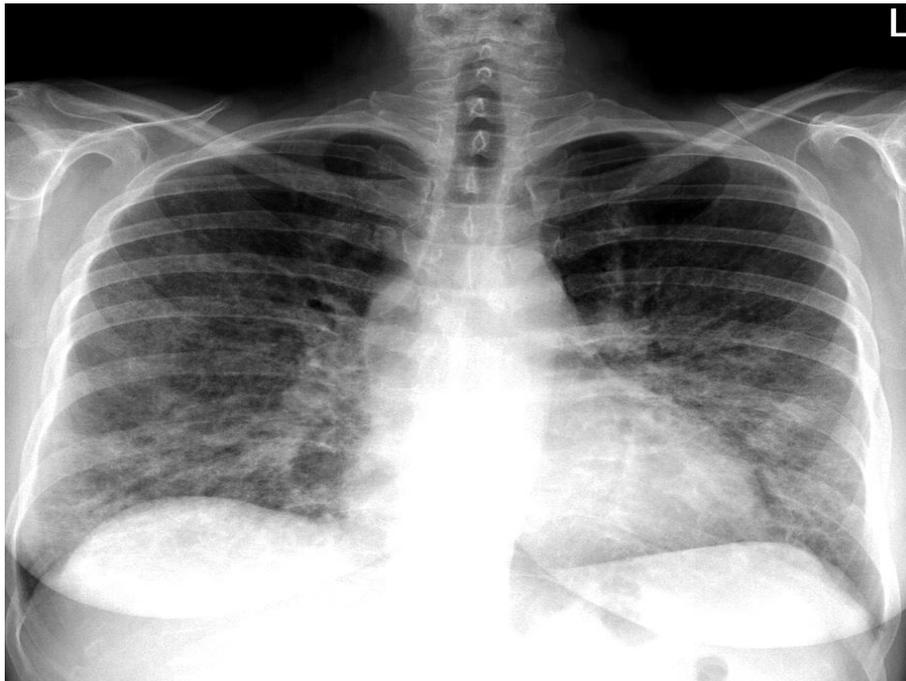
Keywords: birds, bronchial asthma, hypersensitivity, allergy

**Corresponding author*

INTRODUCTION

Bronchial asthma is the most common respiratory problem seen globally; it is a chronic, inflammatory disease of the respiratory tract, which is characterized by bronchial hyper reactivity and respiratory obstruction. It is caused by a combination of genetic and environmental factors. Environmental factors include exposure to air pollution and allergens. This case discussion mainly deals with a specific allergen – avian protein and its other form of hypersensitivity (hypersensitivity pneumonitis) and the interaction with asthma

Case Presentation: A 42yrs old female was referred to respiratory medicine opd in Balaji Medical College with history of poorly controlled asthma for evaluation. Patient had chief complaints of cough for 4 days and wheezing for two days. Cough - acute in onset, initially the cough was non productive and turned to be productive cough, sputum was scanty, whitish, non foul smelling non blood stained. Wheeze for two days. Patient is a known case of bronchial asthma for 10 years. She is not on any regular medications or inhalation therapy and was taking treatment only during exacerbation episodes. Last exacerbation episode was one week back for which patient took treatment from a general physician and she was relieved of symptoms. Patient also gives history of increase in frequency of exacerbation for past two months where patient had to seek physician very often (3-4 times including the last episode) for similar complaints. Initial blood and radiological investigations was done in which elevated neutrophil and ESR levels with normal eosinophil levels and chest x-ray was normal. On further careful history taking patient gave a history of one of her recent hobbies, she started pigeon breeding three months back. This gave us a clue for hypersensitivity related to avian protein. Patient was advised to remove the birds from home along with oral bronchodilator therapy. On further follow up patient was symptomatically feeling better and the frequency of exacerbation of symptoms has markedly reduced





DISCUSSION

Hypersensitivity pneumonitis is a severe, but reversible, cause of interstitial lung diseases however the clinical and investigatory determination towards the diagnosis is difficult in day today practice. The manifestations of the disease may be acute, subacute, or chronic. The utility of antigenic panels in the diagnosis of H P is controversial. It has been shown that a positive antigenic panel does not correlate with symptoms of H P. This delays in primary treatment of the condition which is removal of the offending agent. In this case, the history of indoor pet (Pigeon) and increase in frequency of symptoms was detrimental to the treatment of this condition which is removal of the offending agent.

CONCLUSION

The Symptoms, signs and laboratory findings of acute hypersensitivity pneumonitis can resemble those of many other lung including pulmonary edema, chronic bronchitis, organic dust, toxic syndrome and some pneumoconiosis. History taking plays a vital role in the suspicion of Hypersensitivity pneumonitis. Acute H P is often confused with pneumonia. If patients are removed from exposure before there are permanent radiological or physiological abnormalities, the prognosis is good. If the removal of exposure is impossible the use of efficient mask and other methods to avoid contact (inhalation) also helps in better prognosis.

REFERENCES

- [1] Spagnolo P, Rossi G, Cavazza A, Bonifazi M, et al. Hypersensitivity Pneumonitis J Invest Allergol Clin Immunol. 2015; Vol.25(4):237-250
- [2] Camarena A, Juarez A, Mejia M, et al: Major histocompatibility complex and tumor necrosis factor-alpha polymorphisms in pigeon breeder's disease. Am J Respir Crit Care Med 163:1528-1533, 2001.
- [3] Chen B, Tong Z, Nakamura S, et al: Production of IL-12, IL-18 and TNF-alpha by alveolar macrophages in hypersensitivity pneumonitis. Sarcoidosis Vasc Diffuse Lung Dis 21:199-203, 2004.
- [4] Churg A, Muller NL, Flint J, et al: Chronic hypersensitivity pneumonitis. Am J Surg Pathol 30:201-208, 2006.
- [5] Coleman A, Colby TV: Histologic diagnosis of extrinsic allergic alveolitis. Am J Surg Pathol 12:514-518, 1988.
- [6] Cormier Y, Belanger J: Long-term physiologic outcome after acute farmer's lung. Chest 87:796-800, 1985.



- [7] Costabel U, Guzman J: Bronchoalveolar lavage in interstitial lung disease. *Curr Opin Pulm Med* 7:255–261, 2001.
- [8] Craig TJ, Hershey J, Engler RJ, et al: Bird antigen persistence in the home environment after removal of the bird. *Ann Allergy* 69:510–512, 1992.
- [9] Denis M, Bedard M , Laviolette M, et al: A study of monokine release and natural killer activity in the bronchoalveolar lavage of subjects with farmer’s lung. *Am Rev Respir Dis* 147 : 934–939, 1993 .