

CASE REPORT

BIRD FANCIER'S LUNG: A CASE REPORT

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ABSTRACT: We report the case of a 31 years old male suffering with severe breathlessness due to Pigeon fancier's Lung.^[1,2] He had previously raced and bred Pigeons for 25 years at home.

KEYWORDS: Bird Fancier's Lung, Chronic Pigeon breeder's Lung, Hypersensitivity Pneumonitis.

INTRODUCTION: Hypersensitivity Pneumonitis (HP), also known as extrinsic allergic alveolitis, is a form of interstitial lung disease (ILD) that is characterized by diffuse lung inflammation in the parenchyma and small airways of individuals sensitized to a variety of potential occupational and environmental antigens.^[3] Pigeon fanciers Lung, a form of hypersensitivity Pneumonitis is an unusual but important occupational and recreational case of severe and debilitating breathlessness.

CASE REPORT: A 31 year old man was admitted with a history of dry cough for the past 4 months, increased for the past 20 days and progressively worsening dyspnea for the past 2 months. He denied any history of chest pain, wheeze, fever, peripheral oedema, loss of weight, loss of appetite and joint pain or rashes over the body. The patient was treated for pulmonary tuberculosis in the right upper lobe in 1990 for a period of 6 months. He was neither a smoker nor an alcoholic and denied any exposure to asbestos or significant family history. He gives history of breeding pigeons at home for the past 25 years.

On clinical examination he was afebrile, pulse 96 beats per minute, Blood pressure 124/86 mm Hg and tachypnoeic at 26 breaths per minute. Oxygen saturation was 94% in Room air. Chest Auscultation revealed Bilateral inspiratory crackles in the interscapular area with no wheeze. Full blood count, serum electrolytes, Renal hepatic and thyroid function were normal. Electro cardiogram was unremarkable. ANA was Negative for Anti-Nuclear antibodies. Arterial blood gases on 60% oxygen shown type I respiratory failure: pH of 7.45 (7.35 – 7.45), pCO₂ 4.98 kPa (4.67-6.4), pO₂ 6.11 kPa bicarbonate 25.8 mmol/L and base excess 1.7. PFT Showed Restriction pattern. DLCO was reduced. Six minute walk test showed significant desaturation.

Patient was treated with Antibiotics, Bronchodilators and Steroids (Injection Solumedrol). Patient showed symptomatic and Radiological improvement. Patient was under close monitoring for a period of six months. Series of ABG's, PFT with DLCO showed gradual improvement. Patient was advised to change the home and to avoid further exposure to Birds.

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BREEDING OF PIGEON AT PATIENT'S HOME

FIGURE 1: Chest radiograph showing bilateral interstitial reticular shadowing with loss of lung volume.



Fig. 1

A high – resolution computed tomography scan (Figure 2) of the thorax showed widespread ground glass opacification and patchy asymmetrical areas of normal lung tissue. The appearances are consistent with a long standing allergic alveolitis.

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FIGURE 2: Computed tomography scan of the thorax showing ground glass opacification and patchy asymmetrical areas of normal lung tissue.

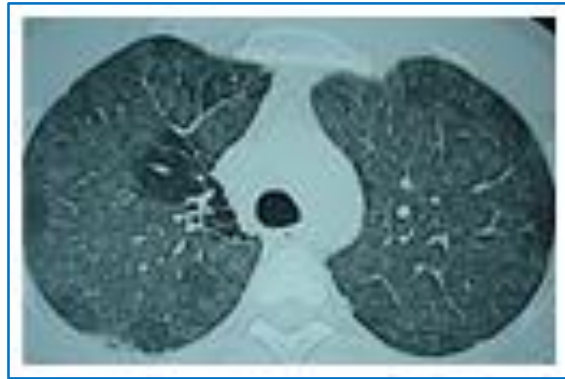


Fig. 2

The working diagnosis was hypersensitivity pneumonitis (Extrinsic allergic alveolitis). Treatment included oxygen, oral and IV corticosteroids.

DISCUSSION: Hypersensitivity Pneumonitis (HP) is a collection of allergic lung diseases caused by the inhalation of antigenic organic particles of fumes.^[4,5] HP is histologically characterized by the triad of non Necrotising granulomas, chronic inflammatory change in small airways and diffuse interstitial infiltrates of chronic inflammatory cells.^[6] Pigeon fanciers lung is a type of HP caused by airborne exposure to avian antigens. The disease may present acutely or sub-acutely and such episodes usually resolved with cessation of the antigen exposure. Chronic disease may progress to irreversible disease. HP forms a substantial and important subgroup of interstitial lung diseases,^[7] which are disorders that primarily affect the lung parenchyma in diffuse manner.^[8]

Lifestyle questions are integral to a case of this type and must include an assessment of potential hazards from occupational and animal exposure. Prevention and early diagnosis of these at risk of developing chronic lung diseases required adequate knowledge awareness and understanding of the disease in the enthusiast and by the medical professional.

Corticosteroids are indicated for the treatment of severe acute and sub-acute HP and for chronic HP that is severe or progressive. Long – term corticosteroid therapy for the treatment of chronic HP should be considered only if objective improvements in clinical signs, pulmonary function, or radiographic abnormalities are documented.

CONCLUSION: Pigeon fanciers Lung can be associated with severe debilitating dyspnoea and patient may present many years after exposure to avian antigens. Physicians should be encouraged to take a detailed occupational and recreational history in any patient presenting with unexplained breathlessness.

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REFERENCES:

1. Hanak V, Golbin JM, Ryu JH. Causes and presenting features in 85 consecutive patients with hypersensitivity pneumonitis. *Mayo Clin Proc.* 2007; 82 (7): 812-816.
2. Morell F, roger A, Reyes L, Cruz M, Murio C, Munoz X. Bird fancier's lung: a series of 86 patients. *Medicine.* 2008; 87 (2): 110-130.
3. Hypersensitivity Pneumonitis: What's New? PCCSU Article 06. 01. 11 by Mridu Gulati, MD, MPH.
4. Fink JN: Hypersensitivity Pneumonitis. *J Allergy Clin Immunol* 1984, 74:1-10. PubMed Abstract Publisher Full Text.
5. Kaltreider HB: Hypersensitivity Pneumonitis. *West J Med* 1993, 159: 570-8. PubMed Abstract PubMed Central Full Text.
6. Ohtani Y, Saiki S, Kitaichi M, Usui Y, Inase N, Costabel U, Yoshizawa Y: Chronic bird fancier's Lung: histopathological and clinical correlation. An application of the 2002 ATS / ERS consensus classification of the idiopathic interstitial pneumonias. *Thorax* 2005, 60: 665-71. PubMed Abstract Publisher Full Text.
7. Demedts M, Wells AU, Anto JM, Costable U, Hubbard R, Cullinan P, Slabbynch H, Rizzato G, Poletti V, Verbeke EL, Thomeer MJ, Kokkarinen J, Dalphin JC, Taylor AN: Interstitial lung diseases: an epidemiological overview. *Eur Respir J* 2001, (Suppl): 2s-16s.
8. Dr. I Johnston (Chairman), British Thoracic Society, Standards of Care committee: The diagnosis, assessment and treatment of diffuse parenchymal lung disease in adults. *Thorax* 1999, (Suppl 1): S1-S28.

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