

Bird Fancier's Lung

Overview

While the entire world, especially China, is grappling with cases of the novel coronavirus, its impact on India has been relatively limited. The cases reported in the country are being taken care of with appropriate quarantine measures. This isn't the first time that the world and mankind have been taken by surprise with a new microbe causing a large scale epidemic. Be it the bubonic plague that affected England in the mid 14th century, the MERS and SARS that struck in the 2000s or the novel coronavirus that has wreaked havoc in the last two months, diseases in animals do get transmitted to humans and catch us when we are most unprepared. One such epidemic, waiting to happen right here in our country, in our cities is due to pigeons! Yes, the docile looking, cooing grey birds that are found at our windows are potentially harmful!



Feeding the pigeons plays a considerable part in the Mythological and religious ideas of Vedas, but it can also cause life-threatening diseases. Pigeon droppings/Poop contain a fungus that can cause infections which is vulnerable to people if

inhaled.

There are three human diseases that have a link to pigeons: Histoplasmosis, Psittacosis and Cryptococcosis. Another disease that is important to mention and a cause of worry is Hypersensitivity pneumonitis (HP), which is a non-IgE mediated immune lung disease. Bird fancier's lung or pigeon fancier's lung is a type of hypersensitivity pneumonitis and is caused by exposure to avian antigens that are found in the air and

cause a hypersensitivity reaction in a susceptible individual. Though it is believed to be rare, it is definitely under-diagnosed. For this reason, there aren't many statistics on this condition.

Major factors

The excreta of birds are responsible for numerous diseases and can lead to allergies like the bird keeper's lung, irritation in air passages and other respiratory diseases. Bird droppings are not only responsible for diseases but they are also erosive in nature, damaging property in the process. The faeces dry down hard like cement staining the surface area so tough, that it can get very difficult to clean it. The acidic nature of the pigeon droppings can corrode metal, plastic, laminate flooring and even outdoor furniture causing expensive damages in the vicinity. Due to high levels of pollutants in the air, it is a worrisome cause, especially the fungus growing on air conditioners, where the pigeon droppings are the perineal cause of lung infections.

Pigeons are hosts to parasitic pests such as ticks, fleas and bird mites, which can spread to people. These parasites can invade buildings in search of a new food source.

Common Pigeon Diseases

Some common diseases caused by pigeons include canker, live, fleas, coccidia, worms, Hexamita, mites, chlamydia, respiratory infections and mycoplasma.

Health and Risk factors

Pathogens can spread from pulmonary foci haematogenously to other organs such as the central nervous system and if untreated, the diseases caused can be fatal. Symptoms generally occur about 10 days after infection. The initial symptoms include dyspnea, chills, fever, non-productive cough

and chest discomfort.

In the chronic form, there is usually anorexia, weight loss, extreme fatigue and progressive pulmonary fibrosis, causing irreversible and increasingly diminishing the efficiency of the lungs over time. As a result, sufferers may have repeated chest infections and ultimately struggle to breathe. This condition can eventually end up being fatal to some people. Individuals who are at high risk are pet shop owners and employees, bird owners and those with compromised immune systems.

Exposure to pigeon poop containing cryptococcus fungi was cited as one of the main causes of lung failure in two women in India. These women suffered from a condition called Chronic Hypersensitivity Pneumonitis or Environment related Lung Fibrosis for years. Both the cases underwent Lung Transplants and ultimately died.

Differential Diagnosis



Pigeon

Fancier's Lung X-ray Image

Source:

<https://www.sciencedirect.com/science/article/pii/S0422763816301364>

X-ray or CT scans will show physical changes in lung

structure. Lung function tests Blood tests to identify antibodies against the dust (allergen). Bronchoscopy used to collect specimens from your lung for further testing or Open lung biopsy another procedure to get lung tissue for further testing

Treatment

Steroid therapy like Prednisone, Corticosteroids, Azathioprine, and N-acetylcysteine (NAC) which often suppress symptoms temporarily, in the early stages of the disease, and reduces inflammation and also delay scarring (fibrosis) in the lungs.

Antifibrotics like Pirfenidone and Nintedanib are administered only when corticosteroids and immunosuppressive treatments fail to improve patients condition.

Oxygen therapy to improve Lung damage and difficulty in breathing

Pulmonary rehabilitation can include physical exercise, nutritional counselling, Breathing techniques to improve lung efficiency.

Lung transplant that may be the last option for patients suffering from Chronic Hypersensitivity Pneumonitis or Environment related Lung Fibrosis for years.

Preventive factors

To get rid of pigeons one can try with bird controlling solutions like control gel, wire barriers, spikes, bird netting.

Following good hygiene practices and disposal of animal droppings in a contained and safe way. Washing of hands and cleaning any exposed skin before eating, drinking or putting hands near your mouth should be avoided. Proper hand hygiene

should be practised after feeding or handling birds. People having a compromised immune system should not clean up the droppings.

Few chemicals available in the market can be used to clean up the mess made by birds in a safe manner. The best way to safeguard oneself is to use disposable protective gloves and masks.

'Prevention is better than cure', they say and so it is best to limit excessive exposure to birds, especially pigeons and their droppings.

(Reference:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3719228/>)