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## RESEARCH ARTICLE

### DARLING DISEASE

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#### ABSTRACT

Darling disease is also called as Histoplasmosis. It is one type of fungal infection caused by *Histoplasma capsulatum* (*H. capsulatum*) and it is acquired through contaminated soil with droppings of chicken or birds. The common symptoms are high fever, cough, and asthenia and weight loss. Lesions on skin and oral cavity. Most of the time we can observe as asymptomatic. People who are suffering from HIV, cancer, and organ transplant recipients are at risk of developing this disease due to less immune system. Proper preventive measures and appropriate diagnosis and treatment on correct time can reduce the further complication of these fungal infections. Person-to-person spread of histoplasmosis does not occur.

## INTRODUCTION

A world famous pathologist Darling discovered Histoplasmosis to be a fungal infection in 1905 therefore it is also called as Darling's disease. The fungal infection is continues to reproduce intracellularly and disseminates throughout the body through lymphatic and blood circulation. Histoplasmosis is caused by inhalation of spores of *H. capsulatum*, it is usually found in the soil contaminated by bird droppings, it is commonly seen in the farmers, garden workers, poultry keepers, construction workers, pest control workers and also sees in some travelers visiting caves and tunnels. *Histoplasma* is a dimorphic fungus, which produces mycelial form in the soil and converts to the yeast form at host body temperature (37 °C), and it usually does not develop the symptoms in good immune system persons but those who are less immune people like childrens, elderly persons and high risk peoples are easily affected in these fungal infections. The majority of infected persons are not having symptoms or a very less mild sickness; it is difficulty to recognize as the cause of histoplasmosis. Histoplasmosis is rarely reported from India, due to its varied clinical presentation and lack of awareness amongst dermatologists. Panja and Sen first reported histoplasmosis from India in 1959. *Histoplasma capsulatum* is endemic in certain North Indian states like West Bengal, where a study showed a prevalence of skin positivity of 9.4% to

histoplasmin antigen. There are a few sporadic case reports from South India.

#### DEFENITION

Histoplasmosis also called as "Darling's Disease" is a community-acquired primary pulmonary disease caused by inhalation of dust containing spores of soil-dwelling dimorphic fungi, *Histoplasma capsulatum*

#### RISK FACTORS

Farmers, poultry workers, constructions workers and roofers, demolition workers, cave explores, gardens workers are more risk and also we can see in HIV, chemotherapy patients, using of corticosteroid, organ transplant patients.

#### CAUSES

Fungal infection caused by thermally dimorphic fungus, *Histoplasma capsulatum* which exists as mycelial form in warm and humid environment contaminated by bird excreta or bat guano and as yeast form in tissues. The disease is acquired by inhaling the spore stage of the fungus. Outbreaks may occur in groups with common exposures to bird or bat droppings, excerta, contaminated soil found in chicken coops, caves, etc.

## SYMPTOMS

Histoplasmosis has been classified as (i) primary acute pulmonary, (ii) chronic pulmonary, (iii) disseminated form, and (DH) occurring in infants, elderly and less immunity people. About 95% of histoplasmosis appears as disseminated infection in HIV persons. The manifestations of disseminated form of histoplasmosis are fever, cough, headache, chest pain, weakness, weight loss, hepato and splenomegaly, and mucocutaneous lesions. About 25–45% in the disseminated form of the diseases seen lesions in the oral cavity and form nodules these are very painful, shallow and deep ulcers. In Skin we can observe lesions like papules and plaques with or without crusts, pustules and nodules, mucosal ulcers and erosions, contagious-like lesions, acneiform eruptions, erythematous papules, and keratotic plaques.

## INVESTIGATION

On physical examinations the patient is having skin warts which were generalized and tender, the distended abdomen with splenomegaly and hepatomegaly. In oral examination find that ulcerated and necrotic lesions located on the labial mucosa, dorsal surface of tongue, and hard and soft palate. The lesions were covered by a pseudomembrane and its very painful and bilateral submandibular lymphadenopathy. Extraoral examination revealed multiple nodular lesions on the chin, face, and the lips, which were tender to palpation. Multiple nodules were seen on the ventral surface of the forearm and dorsal aspect of thigh and increasing the temperature on surrounding. A firm consistency was felt during palpating these lesions. Patient did not have any familial history. Blood test for Hemoglobin, urea, creatinine, bilirubins, and alkaline phosphatase. In Urine examination find protein, RBC and pus cells count. The X-ray of the paranasal sinuses, chest, and abdomen Ultrasonography, Biopsy of a mucosal or cutaneous lesion and lung tissue Bone marrow. The 3 most common serologic assays for histoplasmosis include Immunodiffusion (ID) test, complement fixation (CF) test, and enzyme immunoassay (EIA)

## TREATMENT

Antifungal medications are used to treat Acute and chronic cases Amphotericin B it is the drug of choice for histoplasmosis. For patients who cannot tolerate Amphotericin B, Itraconazole is an effective and alternative therapy and it may be given as a prophylaxis for patients with advanced HIV infection.

## COMPLICATIONS

Histoplasmosis can cause serious complications in infants; older adults with less immune system, these problems can do the life-threatening. Pericarditis. Acute respiratory distress syndrome, Adrenal insufficiency, Meningitis.

## PREVENTION

It's difficult to prevent exposure to the fungus. Avoid exposure to the cave exploring and raising birds, such as pigeons or chickens. Spray contaminated surfaces. Before you dig soil or work in an area soak it with water this can help prevent spores from being released into the air. Wear a respirator mask.

## CONCLUSION

Histoplasmosis as a differential diagnosis should be kept in Mind when diagnosing cases with similar symptoms. Early diagnosis and proper treatment can reduce the symptoms and get good outcome. If delay in diagnosing does not respond to medications and may lead to loss of life.

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