

## Introduction :

Smoking associated interstitial lung diseases such as Respiratory Bronchiolitis –Interstitial Lung Disease (RB-ILD) and Desquamative Interstitial Pneumonitis (DIP) are uncommon conditions with an increased prevalence among smokers. The diagnosis is based on the radiological finding in association with histology.

## Case Description:

A 53-year-old male presented to the hospital with progressively worsening shortness of breath over a 2 year period. His symptoms initially occurred only with exertion but now he had breathlessness even at rest. He denied any cough, sputum production, weight loss or fever. He was a chronic smoker. He denied a history of COPD, asthma or TB. He recalled being diagnosed with lung disease a few years ago, the details of which were unavailable. He denied receiving any treatment. The patient worked as a construction worker before quitting his job due to progressive disability from his shortness of breath.

On examination, bilateral lower lobe rales were heard on auscultation and clubbing of fingers was seen. The patient's oxygen saturation was 97% on room air. His blood work on admission was normal, The chest X-ray revealed bilateral interstitial markings and CT scan of the chest showed diffuse bilateral ground glass opacity with associated cystic changes. A bronchoscopy with trans-bronchial biopsy was done which was non-diagnostic.

The patient then had a Video Assisted Thoracoscopic Surgery (VATS) with biopsy. The biopsy revealed diffuse infiltration of the lung parenchyma by macrophages. The diagnosis of Desquamative Interstitial Pneumonitis was made. Despite cessation of smoking, his symptoms failed to improve and he was started on prednisone.

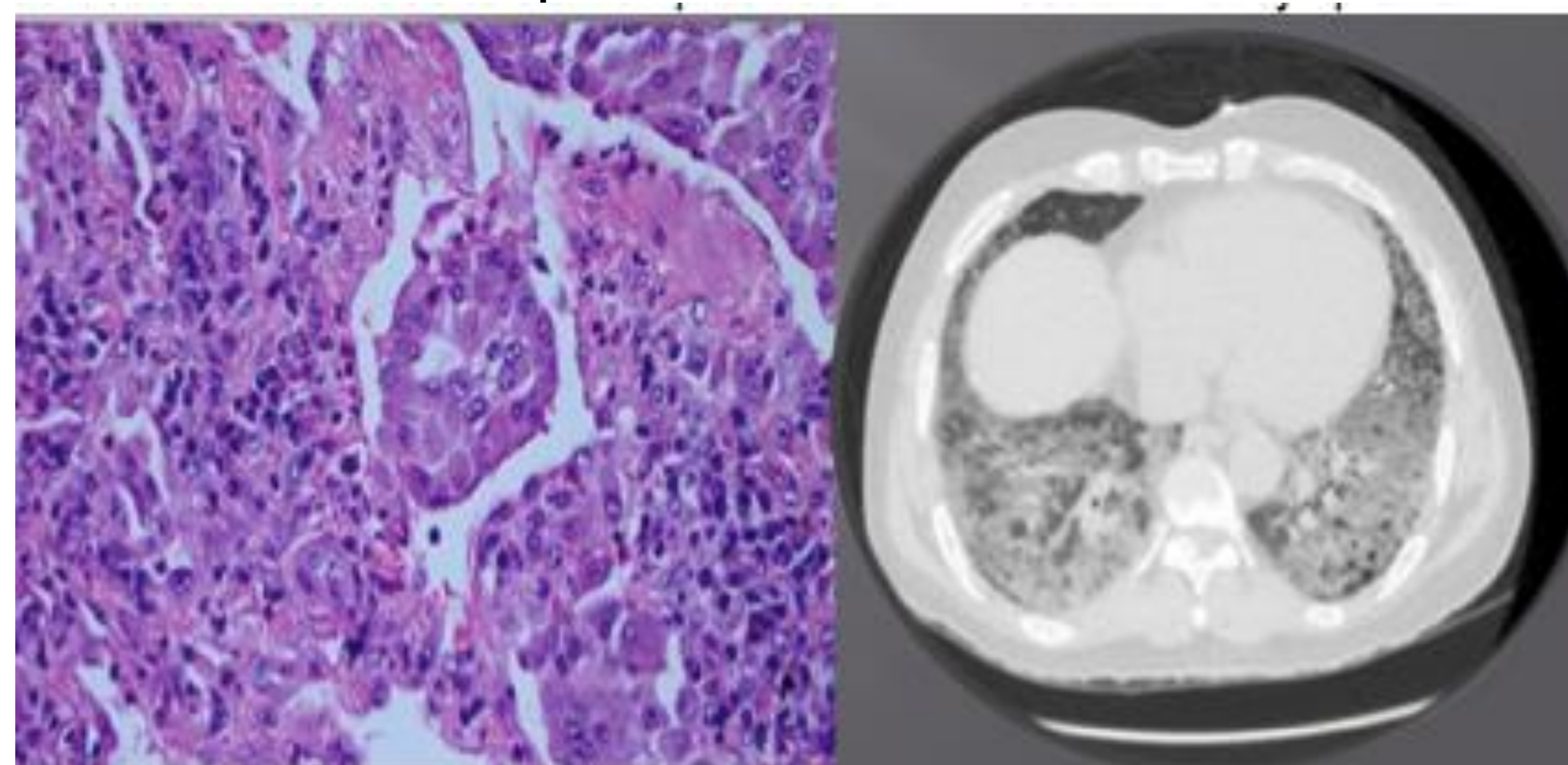


Figure 1. Histology showing pigmented macrophage and CT showing basal ground-glass opacity

## Discussion:

DIP is an uncommon lung disorder seen primarily among the smokers. Other causes of DIP include connective tissue disease and drug induced lung disease. The disease usually presents as diffuse ground glass opacity and has to be differentiated from other disorders with similar radiologic finding, which include pneumocystis pneumonia, hypersensitivity pneumonitis and Non Specific Interstitial Pneumonitis. While RB-ILD usually resolves with smoking cessation, patients with DIP often are treated with steroids for symptoms.

## Reference:

Desquamative interstitial pneumonia and respiratory bronchiolitis-associated interstitial lung disease. Ryu JH et al. Chest. 2005 Jan;127(1):178-84.