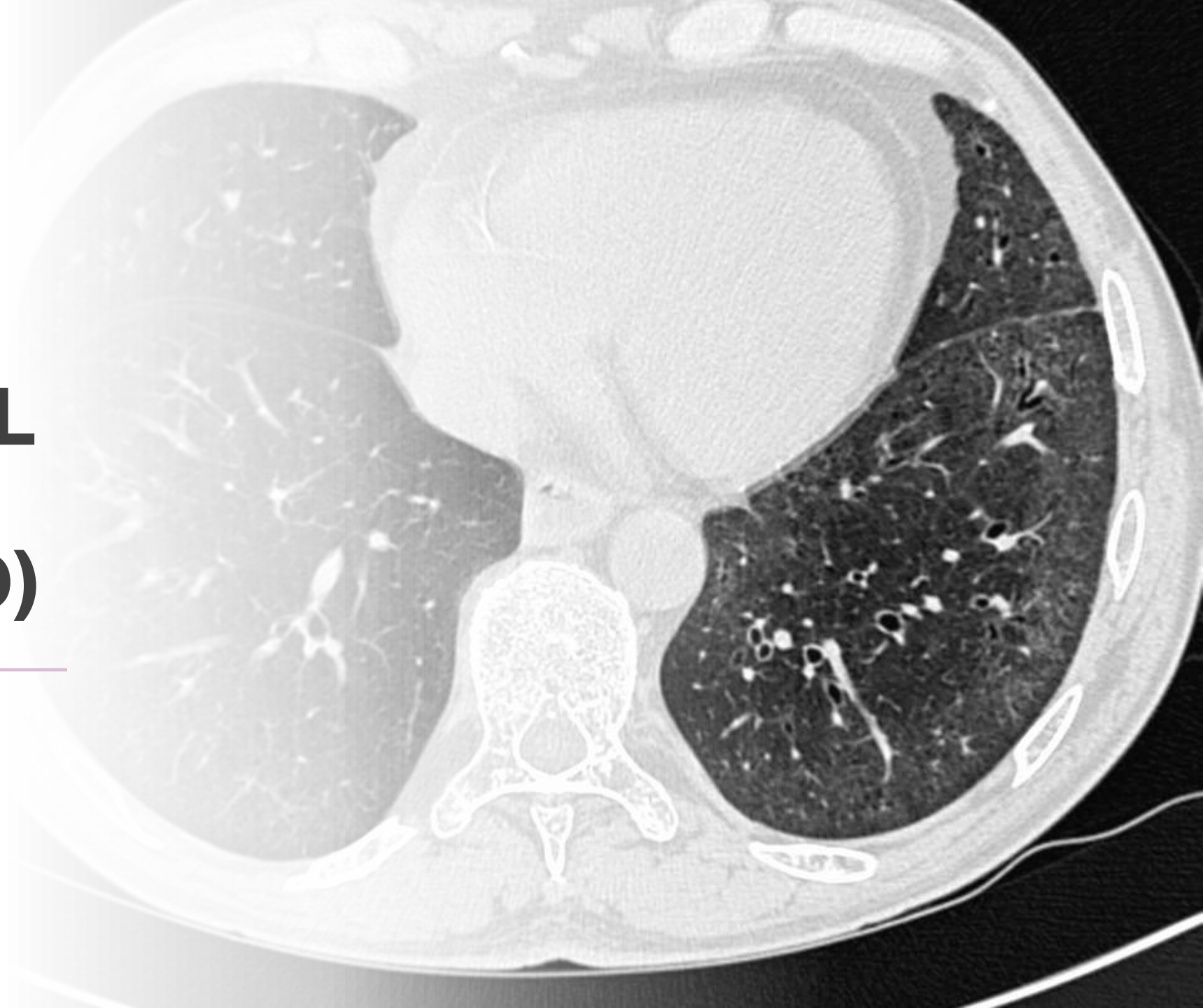




# **INTERSTITIAL LUNG DISEASE (ILD)**

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**A BRIEF OVERVIEW**



# INTRODUCTION

- Heterogenous group of conditions affecting Lung Parenchyma
- Chronic inflammation &/or progressive interstitial Fibrosis

# INTRODUCTION

- It is now more commonly known as Diffuse Parenchymal Lung Disease (DPLD)
- These are considered collectively as they share several clinical and pathological features

# CLINICAL FEATURES

## CLINICAL PRESENTATION

- Dry cough
- Exertional Dyspnea
- Features of other diseases

## EXAMINATION

## RADIOLOGY

## PULMONARY FUNCTION

# CLINICAL FEATURES

## CLINICAL PRESENTATION

## EXAMINATION

- Clubbing
- Cyanosis
- Crackles
- Cor-Pulmonale

## RADIOLOGY

## PULMONARY FUNCTION

# CLINICAL FEATURES

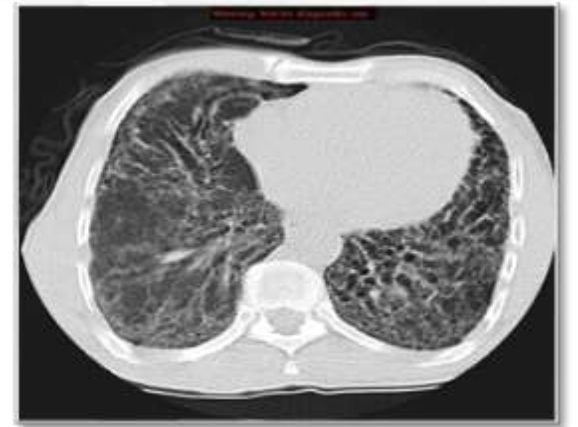
## CLINICAL PRESENTATION

## EXAMINATION

## RADIOLOGY

## PULMONARY FUNCTION

- Small lung volumes
- Ground – glass shadows
- Reticulonodular shadows
- Honey-combing
- Traction bronchiectasis



# CLINICAL FEATURES

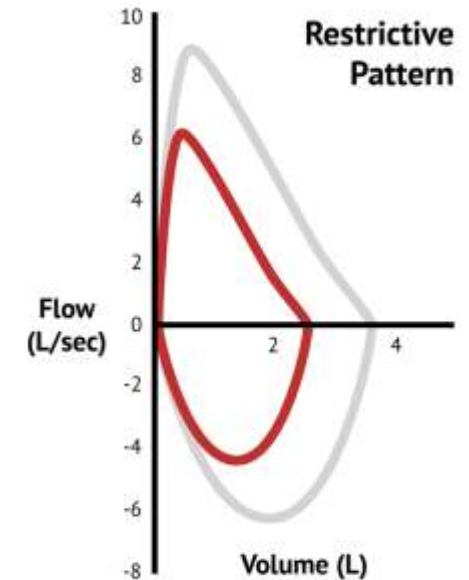
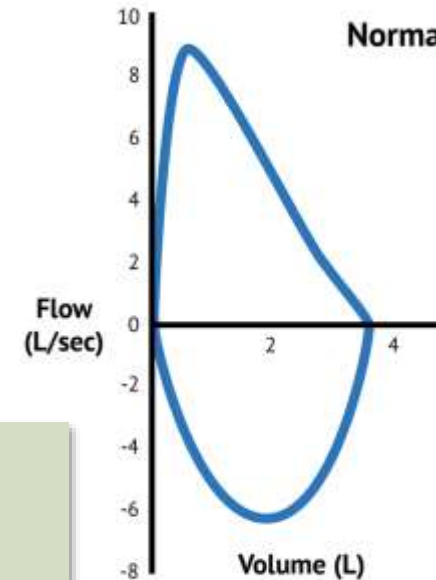
CLINICAL  
PRESENTATION

EXAMINATION

RADIOLOGY

PULMONARY  
FUNCTION

- Restrictive ventilatory defect
  - FEV1 & FVC – Decreased
  - FEV1 : FVC – Normal / Increased
- Small Lung Volumes
- Reduced Gas Transfer (DLCO)



# COMMON CLINICAL FEATURES

## CLINICAL PRESENTATION

- Dry cough
- Exertional Dyspnea
- Features of other diseases

## EXAMINATION

- Clubbing
- Cyanosis
- Crackles
- Cor-Pulmonale

## RADIOLOGY

- Small lung volumes
- Ground – glass shadows
- Reticulonodular shadows
- Honey-combing
- Traction bronchiectasis

## PULMONARY FUNCTION

- Restrictive ventilatory defect
  - FEV1 & FVC – Decreased
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- Small Lung Volumes
- Reduced Gas Transfer (DLCO)



# COMMON PATHOLOGICAL FEATURES

- Chronic inflammation
- Hyperplasia of type II epithelial cells or type II pneumocytes
- Fibrosis and remodeling of the interstitium

# CLASSIFICATION

3 Categories

## Known Causes

- Occupational/environmental
- Drugs
- Hypersensitivity reactions
- Gastro-oesophageal reflux

## Systemic Disorder

- Asbestosis, Berylliosis, Silicosis, Byssinosis (Cotton worker's lung)
- Nitrofurantoin, Amiodarone, Bleomycin, Sulfasalazine, Busulfan
- Hypersensitivity pneumonitis (Extrinsic allergic pneumonitis – EAA)

## Idiopathic

# CLASSIFICATION

## 3 Categories

### Known Causes

- Occupational/environmental
- Drugs
- Hypersensitivity reactions
- Gastro-oesophageal reflux

### Systemic Disorder

- Sarcoidosis
- Rheumatoid arthritis
- SLE
- Systemic sclerosis
- Mixed connective tissue disease
- Sjogren's syndrome
- Ulcerative colitis
- Renal Tubular Acidosis

### Idiopathic

- Idiopathic pulmonary fibrosis (IPF) – most common (Usual Interstitial Pneumonia (UIP))
- Cryptogenic organizing pneumonia (COP) -
- Non-specific interstitial pneumonitis (NSIP)
- Acute Interstitial Pneumonia (AIP)
- Desquamative interstitial pneumonia (DIP)
- Lymphocytic Interstitial Pneumonia (LIP)

# INVESTIGATIONS

## Laboratory

## Radiology

## Pulmonary Function Test

## Bronchoscopy

## Video assisted Thoracoscopic Lung Biopsy (VATS)

- Full blood count: eg lymphopenia, eosinophilia, neutrophilia
- $\text{Ca}^{2+}$  : sarcoid
- Lactate dehydrogenase : Alveolitis
- Serum angiotensin-converting enzyme
- Erythrocyte sedimentation rate and C-reactive protein
- Autoimmune screen

# INVESTIGATIONS

## Laboratory

## Radiology

- Chest X-ray
- High resolution Computed Tomography (HRCT) Chest

## Pulmonary Function Test

## Bronchoscopy

## Video assisted Thoracoscopic Lung Biopsy (VATS)

# INVESTIGATIONS

**Laboratory**

**Radiology**

**Pulmonary Function  
Test**

**Bronchoscopy**

**Video assisted  
Thoracoscopic  
Lung Biopsy (VATS)**

- Restrictive ventilatory defect
  - FEV1 & FVC – Decreased
  - FEV1 : FVC – Normal / Increased
- Small Lung Volumes
- Reduced Gas Transfer (DLCO)

# INVESTIGATIONS

**Laboratory**

**Radiology**

**Pulmonary Function  
Test**

**Bronchoscopy**

**Video assisted  
Thoracoscopic  
Lung Biopsy (VATS)**

- Broncho-alveolar Lavage (BAL)
- Transbronchial biopsy
- Bronchial biopsy

# INVESTIGATIONS

**Laboratory**

**Radiology**

**Pulmonary Function  
Test**

**Bronchoscopy**

**Video assisted  
Thoracoscopic  
Lung Biopsy (VATS)**

- In selected cases
- Allows pathological classification



# DIFFERENTIAL DIAGNOSES

## Infections

- Viral pneumonia
- Pneumocystis jirovecii
- Mycoplasma pneumoniae
- Tuberculosis
- Parasite, e.g. filariasis
- Fungal infection

## Malignancy

- Leukaemia and lymphoma
- Lymphangitic carcinomatosis
- Multiple metastases
- Bronchoalveolar carcinoma

## Pulmonary Oedema

## Aspiration pneumonitis

# Last Second Medicine



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