British HIV Association BHIVA

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COMPETING INTEREST OF FINANCIAL VALUE ≥ £1,000:	
Speaker Name	**Statement**
Prof Rob Miller	Professor Rob Miller is Editor in Chief of British Journal of Hospital Medicine, for which he receives an honorarium.
Date	**November 2013**

HIV-associated Chronic Lung Disease
BHIVA Best Practice Management

Rob Miller

15 November 2013

Outline of talk

- Summarise what is known about the effects of HIV itself on PFTs
- Define chronic lung disease (CLD) syndromes
- Describe the clinical features of some CLD

Interstitial Lung Disease in HIV

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KEYWORDS

• HIV • Interstitial pneumonitis • Pulmonary fibrosis • Idiopathic lung disease • Antiretroviral therapy

KEY POINTS

- Interstitial lung diseases, such as nonspecific interstitial pneumonitis and lymphocytic interstitial pneumonitis, may be less frequent in the HIV-infected population since the introduction of antiretroviral therapy.
- Other interstitial lung diseases, such as sarcoidosis, may actually be increasing since the introduction of antiretroviral therapy, possibly from renewed immune function.
- Treatment of interstitial lung disease is similar to that in the HIV-uninfected population.
- Many of the interstitial lung diseases have nonspecific presentations and other conditions, such as infections and malignancy, should be ruled out.

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Causes of Chronic Lung Disease

Bronchiectasis

Chronic obstructive pulmonary disease

- Asthma
- Chronic bronchitis
- Emphysema

Chronic IRIS respiratory disease

Chronic thrombo-embolic disease

Cryptogenic organising pneumonia

Hypersensitivity pneumonitis

Lymphocytic interstitial pneumonitis

Non-specific interstitial pneumonitis

Obliterative bronchiolitis

Sarcoid

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Non-specific interstitial pneumonitis

- Chronic dyspnoea/fever/cough
  (mimics PCP)
- ± crackles
- CD4 (m) 490 vs 60 (PCP)
- PaO_2 =N or ↓, A-aO_2 =↑
- CXR: interstitial/alveolar infiltrates
  ground glass shadowing (GGS)
- Diagnosis: BAL = unhelpful
  Video-assisted Thoracoscopic (VATS)/open biopsy
- Rx: self-limiting vs stable months/years
- responds to ART

Lymphocytic interstitial pneumonitis

- Non-productive cough/progressive dyspnoea
- fevers/weight loss/fatigue
- Strong association with black African/Afro-Caribbean
- ± part of CD8 lymphocytosis syndrome (DILS)

- Fine bibasal crackles ± wheeze
- CD4 N/ >350
- PaO_2 =N or ↓, A-aO_2 =↑
- CXR: fine reticulonodular infiltrates (basal)
  - mimics miliary TB
  - alveolar consolidation

Lymphocytic interstitial pneumonitis

- PFTs: restrictive pattern
  chronic disease – obstructive pattern
- Diagnosis: BAL CD8 lymphocytosis
  ± ↑ eosinophils/Φ
  VATS/open biopsy
- Rx: ART
  steroids
  ?rituximab

Cryptogenic organizing pneumonia

- Previously called bronchiolitis obliterans organising pneumonia (BOOP)
- Presentation mimics PCP

  Many cases “empirically diagnosed PCP” – gets better with co-trimoxazole & **steroids**

  May occur as IRIS following Rx PCP
- Non-productive cough/fevers/dyspnoea
- Bi-basal crackles (widespread)
- CD4 any
- Raised CRP/ESR ± neutrophilia
- PaO_2 =N or ↓, A-aO_2 =↑

Cryptogenic organizing pneumonia

- PFTs: restrictive defect
- CXR: consolidation uni/bilateral
- Diagnosis: BAL =CD8 lymphocytosis

  VATS/open biopsy
- Rx: steroids

  Prednisolone 1mg/kg od tapering over 6-10 weeks

  cf PIs

Sarcoid

- Cough/exertional dyspnoea
  ± fever/night sweats
- Extra-pulmonary features: uveitis/rash/LN↑
- Chest clear or bibasal crackles
- CD4 > 200
- CRP/ESR/sACE↑
- PaO_2 =N or ↓
- PFTs: restrictive pattern

Sarcoid

Diagnosis: BAL lymphocytic

TBB yield =good cf pneumothorax

VATS/open biopsy

EBUS (mediastinal LN)

Rx: self-limiting

steroids if PFTs↓ or symptoms↑

NB increasingly recognised as an IRIS

Chronic lung disease

Clinical feature	**NSIP**	**LIP**	**COP**	**Sarcoid**
Dyspnoea & cough	+/-	+	+	+/-
fever	+/-	+	+	+/-
CD4 count	<200-500	>350	Any	>200

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Chronic lung disease

Clinical feature	**NSIP**	**LIP**	**COP**	**Sarcoid**
CXR	N in 50% Alveolar or interstitial infiltrates	Reticulo-nodular shadowing (miliary)	Consolid^{n}	Hilar LN↑ Reticulo-nodular shadowing
Rx & prognosis	Self-limiting ART	ART Steroids	Steroids	Self limiting Steroids

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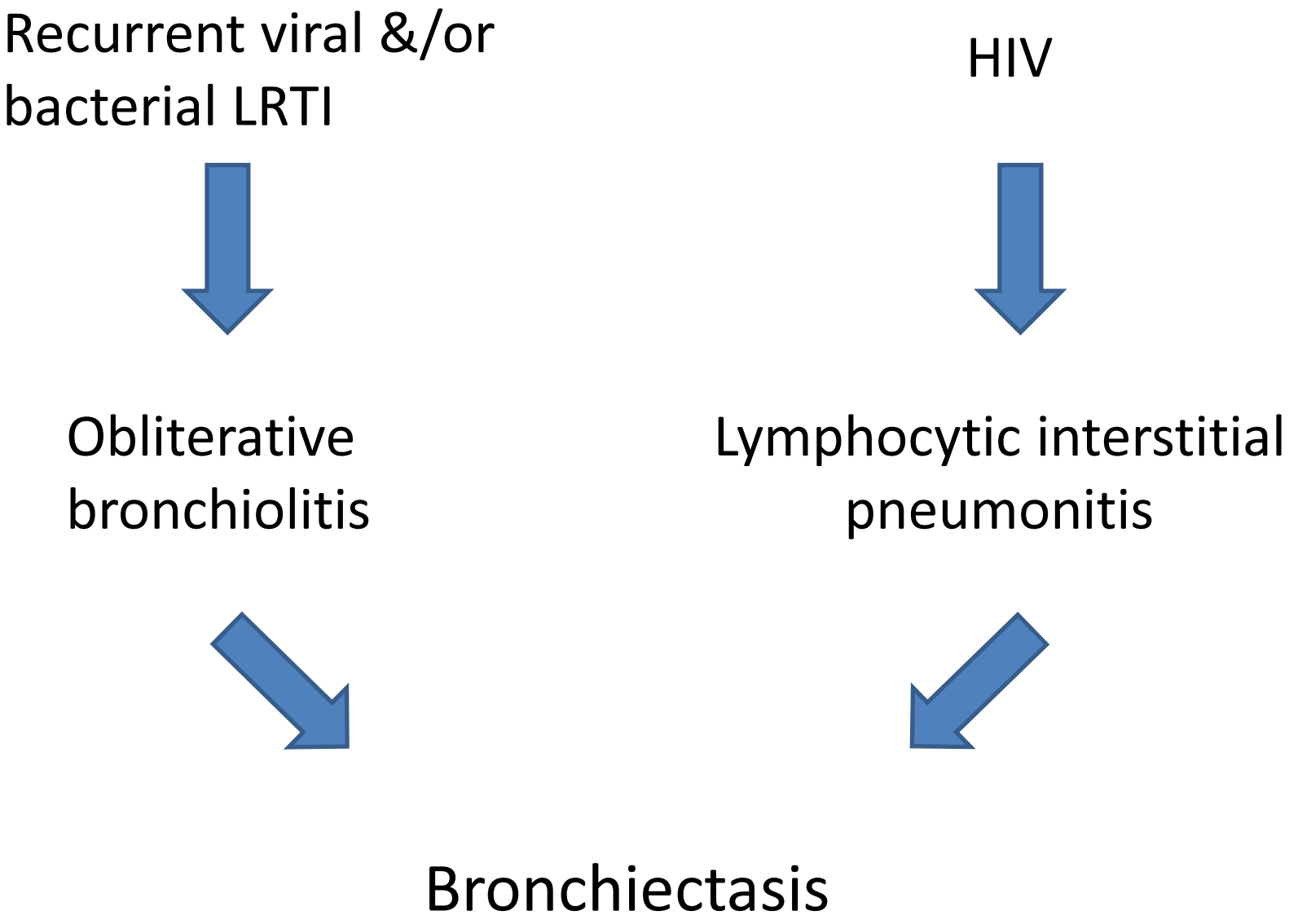
Recurrent viral &/or bacterial LRTI
HIV
Obliterative bronchiolitis
Lymphocytic interstitial pneumonitis
Bronchiectasis

Bronchiectasis

Cumulative – reccurrent LRTIs (PCP)

cigarette smoking

Chronic cough/variable sputum

Coarse crackles ± wheeze ± clubbed

Sputum: mixed growth/ *S pneumoniae*/*H influenzae* → *S aureus*/*P aeruginosa*

Rx: refer to specialist

Summary

- Effects of HIV itself on PFTs
- Chronic lung disease (CLD) syndromes
- Clinical features of some CLD