

SI: HIV & Lung (Adults)

most complications of HIV = in lung

Atypical Radiographic features of HIV & TB

(* = not only TB does it) → lesions on skin
 → HIV + TB = look diff on CXR

What considerations if HIV

- Stage (CD4 count)
- non-Resp S&S
- concomitant ARV therapy
- 1° / 2° prophylaxis
- dual pathologies

Resp symp.
 HIV
 Date Duration Adherence

- Atypical site (not upper lobe)
- Atypical Appearance (no cavities)
- Lower consolidation
- interstitial infiltrates
- Simultaneous parenchymal + pleural Disease
- Hilum + paratracheal LN
- Miliary TB
- Chest CXR
- pulm/pleural + pericardial effusion

pulmonary cryptococcus
 → usually with meningitis
 → unlikely to occur in Immunocompetent
Miliary picture
Treatment:
 Amphotericin B } classical
 Fluconazole } Anti-Fungals

HIV Resp Disorders:

Infectious - Bacterial (TB)

- Fungal (PJP / Aspergillus / Histoplasmosis / candidiasis / cryptococcus)
- viral (CMV + other Herpes)

Non-infectious

- malignancy (NB)
 Lung carcinoma
 Kaposi Sarcoma
 Lymphoma

Utility of Sputum staining for AFB

↳ Diff to find org.
 → Dx = difficult
 → sputum may be (↳) esp miliary TB

- Interstitial processes
 Lymphocytic interstitial pneumonia
 non-specific interstitial pneumonia
 Lymphocytic Alveolitis

→ other dx modalities may be used:
 → GeneXpert (NB)
 → BAL (bronchoalveolar lavage)

pulmonary CMV (HIV)

almost only ever in immunosuppressed
 → must demonstrate disease
 → CMV Retinitis (ketchup on clock)
 → Micronodular infiltrates (CXR)



Must demonstrate this for Dx

- CMV - other:
- encephalitis - Hepatitis
 - colitis (bowel) - Adrenitis

Lung infarct due to HIV

Infectious complications:

- PTB - Bacterial pneumonia
- pneumocystis pneumonia
- cryptococcosis
- CMV
- candidiasis / Histoplasmosis

Clinical course of HIV-TB:

- Early mortality high
- Advanced immunosuppression - early mortality higher!
- Adverse Drug Reactions with ARVs
- Fungus that look like protozoan

CMV tx

Ganciclovir
 (in exam given ARV & see if we use for Bacterial/Fungal/virus)
 CMV - owl's eye

Pulmonary TB

Associated symp:

- weight loss - night sweats
- prod. cough (= haemoptysis)

Signs:

- pericardial effusion
- lymphadenopathy
- hepatosplenomegaly
- meningitis

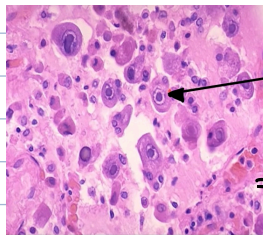
→ Scrofula: TB cause symp. outside (NB) of lung (usually tubercles) (usually neck & Axilla)

PJP (Pneumocystis jirovecii pneumonia)

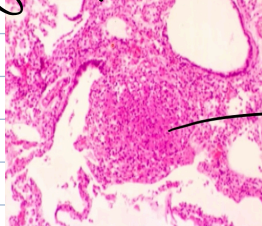
↳ Almost exclusively in immunosuppressed (HIV)

- Ground glass CXR "white out"
- Radiology can also be normal.
- causes no extrapulmonary Disease
- Resp Distress with minimal chest signs
- ↳ grow in Backs Alveoli

develop into "white out" → not lobar



When CMV infects cells = owl's Eyes



Management of PJP/PCP:

Mild → Moderate: PaO₂ > 9kpa (room air)

- Bactrim (co-trimoxazole) OR 21
- TMP (trimethoprim) + Dapsone OR Daps
- Clindamycin + Primaquine

Severe: PaO₂ < 9kpa (room air)

- Bactrim (co-trimoxazole) OR + prednisone
- TMP (trimethoprim) + Dapsone OR (21 Days)
- Clindamycin + Primaquine

Invasive pulmonary Aspergillosis:

- In HIV(+) almost always fatal!
- Eats into lungs = massive Haemoptysis
- ⇒ Broad non-septate Hyphae

Bacterial pneumonia (SIMSSKP)

- S. pneumoniae
- H. influenzae
- S. aureus
- K. pneumoniae
- Neisseria catarrhalis
- P. aeruginosa - bacteria
- MTB
- NOTB (Avium Intracellulare) (M. kansasii)

Lymphocytic Interstitial pneumonia

Lymphoproliferative disorder

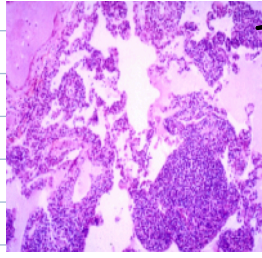
Related to - HIV

- EBV

- Human T-lymphotropic virus 1

Tx: Anti-retroviral tx (ARV'S)

→ more common in children



notice lots of lymphocytes

Symp:

cough

wheeze

Dyspnoea

Clinical features:

parotidomegaly (swelling of parotid gland)

clubbing + lymphadenopathy

crackles + wheeze

Hepatosplenomegaly

Imaging Findings:

Bilateral basal opacity

lung cysts + lymphadenopathy

Kaposi's Sarcoma:

→ blood vessels not form properly

→ tumour of vasculature tissue

→ Human Herpes Virus - 8 (HHV-8)

↳ classic tumour of immunosuppression

Presentation: (if in airways)

- wheezing - Haemoptysis - pleuritic chest pain

CXR:

Interstitial, nodular, haemorrhagic pleural effusion

Tx:

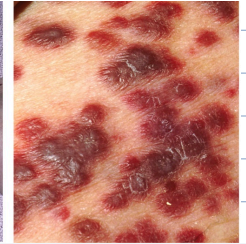
Radiotherapy / chemotherapy

[HIV + HHV-8 = Kaposi's sarcoma]

→ predilection to go to oral cavity

Cutaneous presentation:

- Red/purplish nodules/plaques



Conclusion:

- HIV + Dyspnoea: Dx Dilemma
- Lots of considerations related to HIV
- Infectious & non-infectious complications!