

Respiratory manifestation of HIV/AIDS

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Epidemiology

- ▶ 60% of PLWAs have at least one episode of respiratory disease during the course of the disease
- ▶ One of the commonest

Pneumonia Aetiology

- ▶ Bacterial pneumonia
 - ▶ *S. pneumoniae*
 - ▶ *H. Influenzae*
- ▶ PCP
- ▶ Mycobacterium
- ▶ Fungal infections
- ▶ Non-specific pneumonitis

Bacterial pneumonia

- ▶ Patient with HIV at an increased risk of frequent infection with capsulated organisms (S. pneumonia or H. Influenzae)
- ▶ Baseline CD4+ at first episode of pneumococcal pneumonia =300/ml

PCP

PCP

- ▶ Pre-HAART, PCP occurred in approximately 80% of infected patients
- ▶ MOT: aerosols, environmental reservoirs, or perinatal
- ▶ Exist as trophozoite to precyst to cyst
- ▶ Trophozoite proliferates in alveoli and cause hypoxaemia

Risk for PCP

- ▶ Oral thrush
- ▶ Unexplained prolonged fever
- ▶ Poor compliance
- ▶ Prior PCP
- ▶ Less than 200 CD4+

Presentation

- ▶ Non productive cough
- ▶ Increasing dyspnoea
- ▶ Retro sternal also chest pain
- ▶ Fever and night sweats
- ▶ Cyanosis

PCP diagnosis

▶ CXR

- ▶ Normal
- ▶ Faint bilateral infiltrates
- ▶ Lobar infiltrates
- ▶ Pleural effusion
- ▶ Pneumothorax
- ▶ Apical cavitory disease in those pentamidine aerosol

▶ Antigen isolation

- ▶ Sputum
- ▶ Sputum induction
- ▶ BAL
 - ▶ IMF
 - ▶ Silver methanamine
 - ▶ H/E

Rx

- ▶ Hydroseptrin TMP with SMX
- ▶ TMP with pentamidine
- ▶ Dapsone
- ▶ Clindamycin and primaquin
- ▶ Atovaquone

- ▶ Severe respiratory compromise
 - ▶ PaO₂ <70mmHg
 - ▶ PDN of systemic steroids (prednisone)
 - ▶ Oxygen

Prevention

▶ Cotrimoxazole

▶ Dapsone

TB

Epidemiology

- ▶ Increases in prevalence with increase in HIV infection
- ▶ Risk of TB increases after seroconversion which can occur at any time between 2/7 to 3/12
- ▶ HIV increases the risk of active TB by 10%
- ▶ Accelerates the progress of HIV to AIDS
- ▶ Leading cause of mortality in PLWAs
- ▶ TB in PLWAs is a diagnostic dilemma, with increase in sputum negative TB with atypical presentation due to low CD4+ (type IV hypersensitivity is reduced) hence reduced classical radiological features, negative tuberculin test, not open TB -- paucity of bacilli

Presentation

- ▶ Cough
- ▶ Night sweats
- ▶ Fever
- ▶ Weight loss
- ▶ Malaise
- ▶ Chest pain
- ▶ Haemoptysis

Diagnosis

- ▶ Gold standard -- nucleic amplification test (NAAT) using Xpert MTB/Rif
- ▶ ZN stain
- ▶ LJ culture
- ▶ liquid culture
- ▶ Mantoux
- ▶ CXR

Rx

▶ Check Kenya guidelines

Px

▶ ART

▶ IPT

▶ Vaccination

▶ Pneumococcal

▶ Flu

▶ Nutrition

▶ Infection prevention

▶ Check:

▶ Bronchogenic

▶ NHL