



HIV/AIDS QUALITY OF CARE INITIATIVE (HAQOCI)

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HAQOCI

HIV/AIDS Quality of Care Initiative



Clinical Epidemiology Resource & Training Centre - University of Zimbabwe Medical School

Opportunistic Infections (OIs) in HIV Disease

TB Issues in the Era of Antiretroviral Drugs

Since the advent of the HIV pandemic, the incidence of TB has mushroomed worldwide and it is now the largest killer disease worldwide. Up to 80% of TB patients are HIV positive and there is a strong relationship between the two infections.

Data suggests that pulmonary TB might act as a potent stimulus for HIV cellular level replication.

The 1 year mortality rate for treated HIV related TB ranges from 20-35% and shows little variation between industrialized and developing countries. For HIV positive TB patients, the mortality is four times that for HIV negative TB patients.

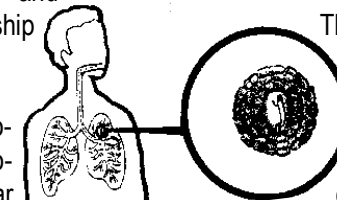
The time for conversion from sputum positivity to negativity in pulmonary TB (PTB) is not different between HIV positive and negative patients.

Approach and Policy Considerations.

In advanced HIV disease, TB is likely to be atypical and may co-exist with other opportunistic infections (OIs) and

should be actively sought.

All patients with confirmed TB should have Voluntary Testing and Counselling (VCT) for HIV as soon as possible after diagnosis.



The range of available anti TB drugs should be widened in view of increasing use of anti retroviral drugs (ARD) in the country. Some TB drugs especially Rifampicin are potent enzyme inducers and reduce the effectiveness of certain protease inhibitors and nonnucleoside reverse transcriptase inhibitors (NNRTI) like saquinavir, nelfavir, indinavir and lopinavir/ritonavir. Rifampicin can be used with ritonavir, ritonavir plus saquinavir efavirenz and possibly nevirapine. An alternative drug rifabutin should be available for specific use in HIV patients on antiretroviral drugs. Rifabutin should not be used with saquinavir (hardgel)

Assays of CD4 and CD8 cell counts should become more available and routinely used on TB and HIV patients on ARD. Further research on low technology monitoring of ARD treatments should be expected.

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An annual tuberculosis skin test (TST) like mantoux should become routine management policy for all HIV positive patients. Anergic patients can be further assessed if there is clinical indication.



All children of HIV positive mothers should be given PCP prophylaxis from 6 weeks of age.

In adults if CD4 count is done and less than 200/ ul, PCP prophylaxis should be given.

All children of HIV positive mothers should be given PCP prophylaxis from 6 weeks of age and those who are HIV negative will be discontinued but those whose

status is indeterminate or HIV positive to continue to a year of age. This may include HIV negative babies but in view of the difficulties of the ELISA assay at this but age, this is the safer approach.

Children over 1 year who have had proven PCP should be on prophylaxis for life to prevent recurrence. The recommended prophylactic agent is trimethprim-sulphamethoxazole (TMP-SMZ) one double strength tablet daily, but a three times a week regimen is also effective.

The daily dose also confers protection against toxoplasmosis and common bacterial infections.

If patients develop adverse reactions to TMP-SMZ, treatment should be continued if possible. Also reintroduction of the drug at a lower dose after recovery from the adverse event is effective and gradually increasing the dose (desensitization) can be tolerated by up to 70% of patients.

An immune reconstitution syndrome has been described in HIV patients after starting ARD and this may include reactivation of latent TB or conversion of TST from anergy. One approach would be to repeat TST on anergic HIV patients three monthly after starting ARD. Those whose TST converts can be considered as latent TB and treated accordingly.

Pneumocystis Carinii Pneumonia (PCP)

Patients with PCP can be nursed in hospital with other patients. There is no evidence that isolation reduces transmission.

Up to 30% of pneumonia in HIV positive children less than 1 year is due to PCP

Indication for Prophylaxis

In settings where CD4/ CD8 counts are not available, patients with oropharyngeal candidiasis an AIDS defining illness or a lymphopaenia of less than 14% in adults should be put on PCP prophylaxis.



Alternatives to TMP-SMZ include dapsone plus pyrimethamine plus Leucovorin, aerosolised pentamidine using the Respigard II nebuliser and atovaquone. Some of these are available in Zimbabwe.

If CD4+ T cell count is above 200 cell/ ul for 3 months on ARD, primary PCP prophylaxis can be discontinued. This is important to reduce pill burden and drug toxicity.

Patients who had PCP should have PCP Prophylaxis (secondary prophylaxis) for life unless they have responded to ARD as above.

Toxoplasmosis (Tx)

Most adults in Zimbabwe have been exposed to toxoplasmosis and have positive immunoglobulin G to toxoplasma in the blood. Exposure to raw or undercooked meat can predispose to Tx. Also exposure to certain pets e.g. cats can predispose HIV patients to Tx.

Prevention of Tx

When CD4 counts are lower than 100 cell/ ul, prophylaxis as far as PCP with TMP-SMZ double strength tablet should be given daily. The 3 times per week TMP-SMZ does not protect against Tx.

An alternative is dapsone-pyrimethamine. The same guideline for discontinuing prophylaxis on good response to ARD are as for the other OI.

TMP-SMZ should be given in pregnancy

in HIV positive women at risk of Tx.

Cryptosporidiosis (CS)

Faecal contamination is important in its spread and it can also occur as epidemics with contaminated municipal water. The drugs for prevention of CS are macrolides (clarithromycin) but their effect is not known.

CS infected persons should not work as food handlers and this should be part of screening of food handlers. The role of hand washing in reducing contamination at all levels is important.

Other Common Infections

These can be reduced with daily TMP-SMZ prophylaxis. Streptococcal pneumonia and haemophilus influenzae are important pathogens in the community and can be reduced by immunisation.

When CD4/ CD8 counts are low 23 valent polysaccharide pneumococcal vaccine should be given to all patients. Some studies seem to suggest that this predisposes to pneumonia.

In Zimbabwe, serious consideration should be given to routine immunisation of children against haemophilus influenzae.