

Paediatric Case Studies

AWACC

October 2011

INH Preventative Therapy in HIV-infected Children

1. Why IPT in Children?

Risk of developing TB disease after LTBI in adults:

- Immunocompetent: 10% lifetime risk
- Co-infected with HIV: 10% annual risk

Children and risk of pulmonary disease

0-1 yrs of age:	43%
1-5 yrs of age:	24%
6-10yrs of age:	25%
11-15yrs of age:	16%

2. How does IPT work?

Tuberculosis exposure



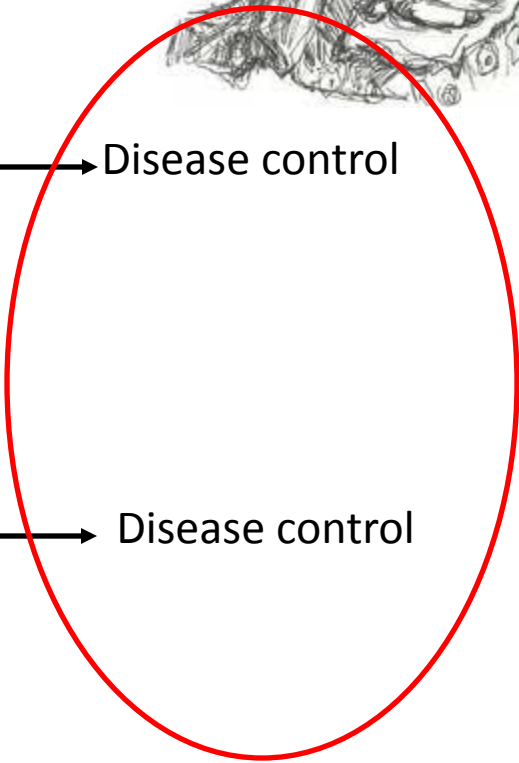
Tuberculosis infection



Active Tuberculosis disease

→ Disease control

→ Disease control



3. What dose of INH to use?

INH at 10 -15mg/kg/day

Pyridoxine (Vit B6) 25mg daily

DOSAGE RECOMMENDATIONS FOR IPT (PRIMARY AND POST-EXPOSURE)

Weight range (kg)	100 mg tablets per dose (total dose 10 mg/kg/d)	Dose given (mg)
<5	0.5	50
5.1 - 9.9	1	100
10 - 13.9	1.5	150
14 - 19.9	2	200
20 - 24.9	2.5	250
>25	3	300

Resources for drug-resistant TB: references 16 and 17.

4. When will IPT NOT work?

Patient has active TB

Patient infected with INH resistant organism

5. IPT or HAART?

Exclude Active TB (Treat with TB treatment if active TB)

But

HAART take precedence over IPT

Case Scenario 1

- Baby NM is a pre-term neonate born at 32 weeks. NM's mother is HIV infected (CD4 count 190cells/ul) and was started on HAART at 24 wks. At 28 wks, she presented with a persistent cough, sputa was AFB positive and was started on Anti-Tuberculosis treatment.
- On examination:
- NM is small for gestational age, has generalized lymphadenopathy and a 4 cm soft hepatomegally

- How will you manage Baby NM?

- When will you do a DNA Pcr on Baby NM?
- How would you treat Baby NM?

- What Infection control measures will you put in place when the mother is admitted?
- Would you separate mother and baby?

- Mothers Sputa has been repeated. She is still AFB positive and the GeneXpert is INH and Rif resistant. How will your management change?

Case 2

- 6 year old Thandi has been on HAART for the past 2 years. She is clinically well and gaining weight.
- Her CD4 count is 956 cell/ul and viral load is < 25 copies/ml
- On history Thandi's mother has been diagnosed with TB 2months ago and was started on TB treatment.

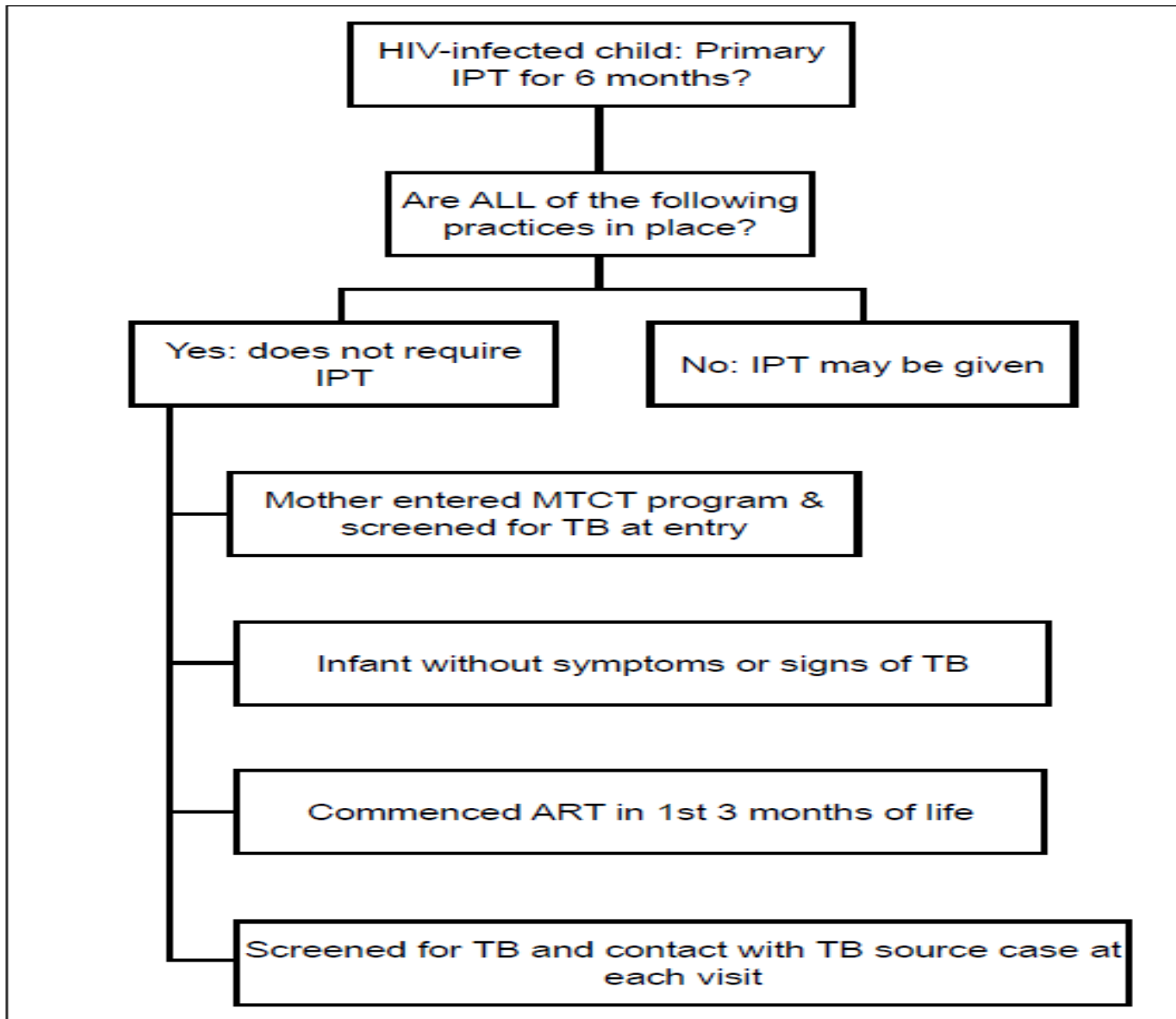
- What investigations will you perform on Thandi?
- How will you manage Thandi?

- If in a year Thandi is again exposed to a contact with TB. Can the INH prophylaxis be repeated?

Case 3

- A 1 year 6 month old infant is seen at the ARV clinic. He was start on HAART at 9 months of age. At initiation of HAART his CD4 count was 15% and he was WHO stage 3 (↓weight).
- His weight has now increased to normal and is developing well. No contact with TB was noted.

- Should this infant be started on INH preventative therapy (IPT)?
- What questions will you ask before starting IPT



- How often will you repeat the INH preventative therapy