

Tuberculosis in Pregnancy

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Overview of Session

- Background
- Maternal mortality and the Saving Mothers Report
- Mortality in eThekweni with case studies

Overview

- TB epidemic in women
- Epidemiology of TB in pregnant women
- Maternal, perinatal and neonatal outcomes

Background (1)

- Global TB report (2016):
 - Estimated 10.4 million incident cases (range: 8.7-12.2 million)
 - 34% women*, 10% children*
 - Gap between notifications and estimated incidence

* KEY populations and under estimated

Background (2)

- Concerns specific to women:
 - Exact incidence in pregnancy not known
 - Exact incidence of DRTB/ DSTB (pregnancy)
 - Impact on obstetric, perinatal and neonatal outcomes inconsistently documented
- Disaggregate data for children

EPIDEMIOLOGY IN PREGNANT WOMEN

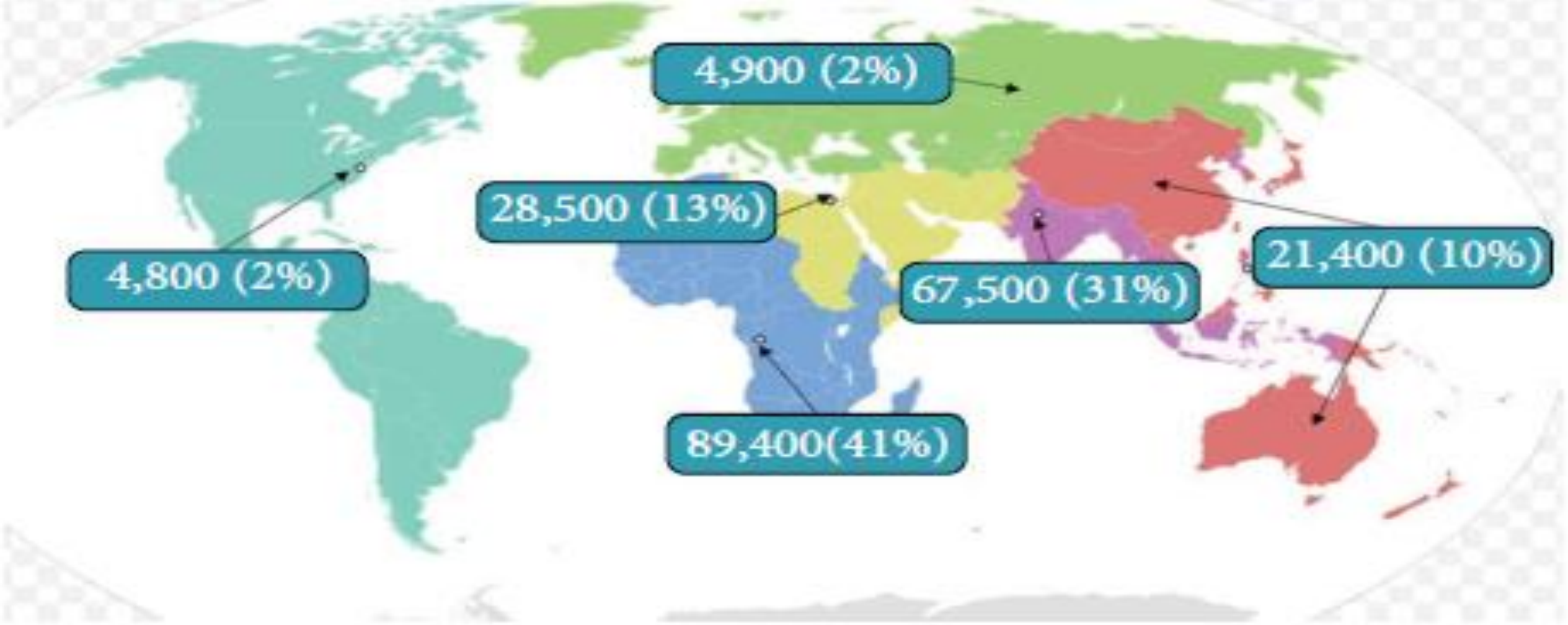


FIGURE 4: Epidemiology of active TB in pregnancy [2].

IMPORTANT CONSIDERATIONS

TB-HIV co infection in pregnancy

- Unusual presentation
- Synergism:
 - CMI with HIV increased with TB
 - TB accelerates HIV progression
- TB and HIV independent risk factors for maternal deaths

Transmission from mother to child

- Transplacental through umbilical veins to fetal liver and lungs
- Aspirate or swallowing infected amniotic fluid in utero or intra partum
- Contact post delivery



MATERNAL, PERINATAL AND NEONATAL OUTCOMES

1. Antenatal TB

- 0.1% to 0.6% increase in TB case load (PTB*/ EPTB)
- Diagnosis based on microscopy/ culture, CXR and histology
- Last 3 mths of pregnancy
- 72% HIV infected
- TB prevalence 10 fold higher in co infected women

Pillay T SAMJ 2000

2. Maternal morbidity

- PTL
- Higher risk of obstetric complications (PROM, recurrent abortions)
- EPTB (pleural effusions, abdominal and TBM common) required hospitalisation for longer periods

Figueroa-Damian 1998, Jana NEJM 1999

Maternal and Neonatal TB

- Initial report in neonatal TB in SA:
 - 11 culture confirmed of 77 neonates over 1 year:
 - Gastric aspirates
 - 6 classified as congenital TB
 - Progressive pneumonia and fever
 - Maternal history (n=11):
 - 6 of 11 HIV co infected
 - 6 mothers had active TB/ history of TB
 - 3 peripartum TB
 - 1 neonatal (3mths) and 2 maternal deaths

Adhikari M IJTL 1997

3. Maternal Mortality

- Zambia
- SA (2)
- Mozambique

Ahmed IJTLD 1999, Menendez PLoSMed 2008, Black Obstet Gynecol 2009, Khan AIDS 2001

4. Perinatal and neonatal outcomes

AE higher if maternal TB advanced, diagnosed late in pregnancy, non compliant

- Prematurity
- LBW
- SGA
- Perinatal death rate 6.4 fold and 3.1 fold higher in TB infected mothers
- LBW and low Apgars: maternal EPTB

5. Congenital TB (1)

- Rare or impression
- DSTB and DRTB
- Median age of presentation: 24 days (1-84)
- Management dilemmas:
 - BCG
 - Diagnostic challenge
 - Differential diagnoses
 - Prophylaxis
 - Breastfeeding

Panel 2. Clinical features in perinatal tuberculosis

Prematurity

Low birthweight

Persistent pneumonia

Lymphadenopathy

Hepatomegaly

Splenomegaly

Jaundice

Seizures

Skin lesions

Ear discharge

Paravertebral abscess

Chorioretinitis

Haematological abnormalities: anaemia, thrombocytopaenia,
disseminated intravascular coagulopathy

**Non
specific**

Pillay T Lancet Infectious Dis 2004

POSTPARTUM TB

TB in post partum period

- India 2002- 2005:
 - 715 co infected women followed for 1 year post delivery
 - 24 developed TB (incidence 5 cases/ 100 p yrs)
 - 3 maternal deaths, 2 infants developed TB and 4 infant deaths
 - Predictors of maternal TB:
 - Baseline CD4<200, VL > 50 000 copies/ ml, (+) TST

Gupta A CID 2007

DRTB IN PREGNANCY, NEONATES AND CHILDREN

MDR in pregnancy/ post partum (1)

- **Limited**
- Case series or case reports
- Approximately 73 published (English)
- MTB and one *M Bovis*
- Largest cohort 38 (Peru) over 10 years
- Acceptable foetal outcomes in several small studies