Key principles of management of drug-resistant tuberculosis in pregnant and peripartum people

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The Sentinel Project on Pediatric Drug-Resistant T

Overview

Review challenges facing pregnant and peripartum people living with drug-resistant TB;

Describe best clinical practices for the diagnosis, prevention and treatment of drug-resistant TB in pregnant, peripartum people, and their infants;

Identify consortium of stakeholders willing to advocate for the rights of pregnant and peripartum people for optimal services for diagnosis, treatment, and prevention of DR-TB.

Pregnant People with TB: A Complex and Under-Served Population

- Increased physical vulnerability to all forms of TB;
- Exclusion from studies and, as a result, access to innovation;
- Fear-based infection control practices lead to discriminatory and harmful practices;
- “Limited information” means counseling often creates additional anxiety;
- Result is that pregnant people with TB feels confused, scared, isolated and alone.

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RESEARCH ARTICLE

“Take the treatment and be brave”: Care experiences of pregnant women with rifampicin-resistant tuberculosis

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Abstract

Background

There are few data on the on the care experiences of pregnant women with rifampicin-resistant TB.

Objective

To describe the treatment journeys of pregnant women with RR-TB—including how their care experiences shape their identities—and identify areas in which tailored interventions are needed.

Methods

In this qualitative study in-depth interviews were conducted among a convenience sample from a population of pregnant women receiving treatment for RR-TB. This paper follows COREQ guidelines. A thematic network analysis using an inductive approach was performed to analyze the interview transcripts and notes. The analysis was iterative and a coding system developed which focused on the care experiences of the women and how these experiences affected their perceptions of themselves, their children, and the health care system in which treatment was received.

Results

Seventeen women were interviewed. The women described multiple challenges in their treatment journeys which required them to demonstrate sustained resilience (i.e. to “be brave”). Care experiences required them to negotiate seemingly contradictory identities as both new mothers—“givers of life”—and RR-TB patients facing a complicated and potentially deadly disease. In terms of their “pregnancy identity” and “RR-TB patient identity” that emerged as part of their care experiences, four key themes were identified that appeared to have elements that were contradictory to one another (contradictory areas). These included: 1) the experience of physical symptoms or changes; 2) the experience of the “mothering”

Management of Multidrug-Resistant Tuberculosis in Children: A Field Guide

Sentinel Project on pediatric drug-resistant tuberculosis

Building Expert Consensus for Pregnant People with Drug-Resistant TB

- 17 representatives with collective experience caring for hundreds of pregnant people with DR-TB in all WHO regions of the world;
- Literature review for data to support “best practices”;
- Where data were lacking, consensus reached through processes of discussion, revisions, consultation;
- Hosted by the Sentinel Project on Pediatric Drug-Resistant TB, an international group with successful track record of undertaking similar work for children with DR-TB;
- Focus was on drug-resistant TB, but most practices could also apply to pregnant people with TB as well.

Management of Drug-Resistant Tuberculosis in Pregnant and Peripartum People:

A FIELD GUIDE

First Edition, September 2022

Photo courtesy of Chris Tabu at @TabuCapital

Topic Areas Covered

- Diagnosis and pathways to care;
- Treatment regimen design and initiation;
- Monitoring
- Management during labor and delivery;
- Postpartum management of person who has given birth;
- Postpartum management of neonate
- Infant feeding considerations;
- Family planning;
- Counseling and support;
- Annexes with referral letters, PV forms;
- Selected references

Patient Scenario

FG is a 32 year-old person who is pregnant and in the first trimester when they find out they are living with DR-TB. They have a rapid molecular test that is positive for M. tuberculosis as well as rifampicin-resistance and fluoroquinolone resistance. They have bilateral cavitary disease on chest radiograph and are started on a regimen of bedaquiline, clofazimine, cycloserine and ethionamide. Linezolid is omitted after a baseline hemoglobin is 7.7 g/dL and delamanid is not given because the providers are worried about safety owing to "limited information" on its use in pregnancy. They continue to cough, fail to put on weight and in their second month of treatment, they still have a positive smear and culture. They also report daily vomiting after taking DR-TB treatment.

Recommendations to improve practices in this scenario would include the use of linezolid since its use is associated with improved outcomes and decreased mortality, especially in the setting of fluoroquinolone resistance. Delamanid should also be given since it is likely safe and the benefits outweigh the risks in people who are pregnant and where strains are resistant to the group A drugs. It is preferable to ethionamide, a drug associated with poor treatment outcomes and associated with vomiting, and with neural tube defects in a developing fetus. Pregnant people living with DR-TB should be given the most effective treatment regimens possible, since these regimens are the best chances for keeping the pregnant parent healthy and delivering a healthy infant.

Format

- Review of evidence;
- Recommended best practices;
- Tables with practical information;
- Summary points;
- Patient review scenarios with management improvement strategies;
- Attempted to use inclusive language throughout

Key “Top-Line” Recommendations: Pregnant People Have the Right to:

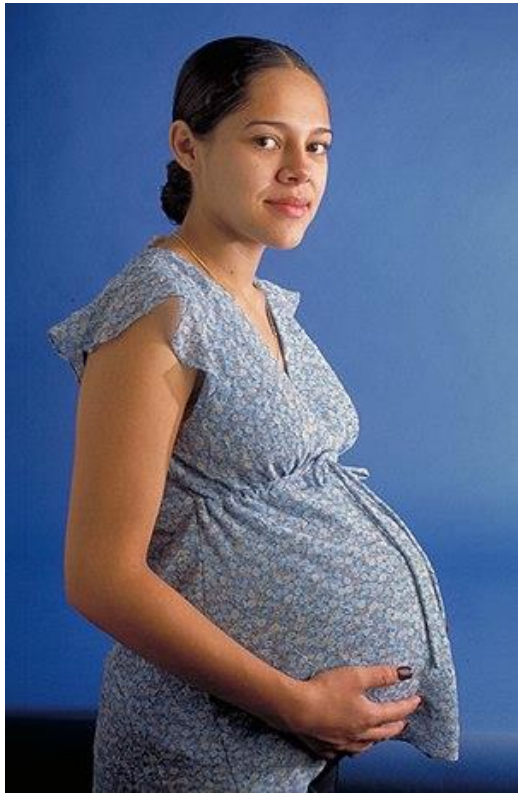
- Free family planning services at all stages of DR-TB diagnosis and treatment so that people can be in control of their reproductive lives while working to regain their health from their DR-TB;
- WHO recommended diagnostic tests, including rapid molecular tests and chest radiography as well as to routine screening for DR-TB given the heightened risk of developing TB during pregnancy;
- Compassionate counseling and support for either continuing or terminating a pregnancy when the person is also living with DR-TB, depending on the preferences and needs of the pregnant person;
- Effective treatment (including with newer drugs such as bedaquiline, delamanid, linezolid and the third-generation fluoroquinolines), even if specific data on pregnant people are lacking due to their limited inclusion in studies (although drugs that are known to cause reproductive toxicity such as pretomanid or clear damage to the developing fetus such as the injectables should be avoided if possible);

Key “Top-Line” Recommendations: Pregnant People Have the Right to:

- Routine monitoring to ensure treatment is progressing well and that side effects are being assessed, managed, and minimized;
- Skilled medical care and support during all phases of pregnancy—including delivery—without unnecessary and discriminatory infection control practices being enforced beyond what is provided to other pregnant people (with some rare exceptions for people who are only recently started on DR-TB treatment);
- Their newborn child and the right to feed that child in a way that promotes the health of the newborn and the postpartum parent and aligns with the parent’s values, preferences and needs around feeding;
- Support to remain on therapy for DR-TB with practical information about the risks and benefits of all aspects of treatment provided by informed and compassionate staff.

Regimen Design for RR/MDR-TB in Pregnant People

- Use of Group A and B drugs should be prioritized;
- All-oral, shorter regimens should be given;
- Avoid drugs with clear harms during pregnancy such as amikacin, ethionamide, or PAS, unless they are needed to save the pregnant person's life;
- Inclusion in operational and clinical trials research is important (at the very least allowing continuation in trial if becomes pregnant);
- No clinical reason why shorter regimens cannot be considered.



Challenges

Initially overwhelmed then helpless and lonely. Should they keep the baby? What will these pills do to the baby? Who can they talk to?

Experiences nausea and fatigue, not sure if due to pregnancy or medications. Worries this pregnancy 'feels different' from prior ones. Misses several doses as worried about the effect on baby and enough food to take medications on some days either. Too afraid to tell the clinic since the nurses scolded on last visit

Rushed to hospital for delivery and kept there for a week. Hospital does not have the TB medications and none of the nurses come to check on patient or baby. Doctor says they might even take the baby away

Feels exhausted and baby not sleeping well. May experience postnatal anxiety/depression. Is the TB worsening or back? Does the baby have TB?

Too frightened to return to clinic for family planning or other health care for self or children

TB diagnosis
TB Treatment started

Month 1 | Month 4 | Month 6 | Month 9 | Month 12 | Month 15 | Month 18

4-month drug-susceptible TB regimen done

6-month drug-susceptible TB regimen done

Most shorter drug-resistant TB regimens done

Most longer drug-resistant TB regimens done

Best practices

Provided with supportive counseling and care, including discussion of wishes to continue pregnancy. Reassurance provided and food parcel given as well as prenatal vitamin

Support and encouragement for adherence given, as well as strategies for managing side effects. Safety laboratories done. Reassuring signs reviewed and plans made for enlisting mother and partner in support. Delivery planning reviewed and "emergency" supply of medications given as well as a referral letter and transportation voucher

Joint visit with TB care provider and maternal/child health services to review infant care plan and feeding plan. Health workers follow universal precautions and since the parent stays on therapy, no additional infection control measures needed. Baby has normal weight and exam and is stated on preventive therapy. Nurse visits parent-infant pair at home to assess how they are and to encourage breastfeeding. Additional food parcel given for family along with baby clothes

Parent and baby seen monthly at clinic and transportation vouchers given. Baby growing well. Family is supportive and helps care for baby so parent can rest Parent is screened appropriately for mental health symptoms

Parent encouraged to attend clinic for routine follow up and has trusting relationship with providers. Starts depo medroxyprogesterone contraception. Brings baby for routine vaccination and growth monitoring

Additional Tools Needed

- Inclusion of pregnancy data in NTP/WHO reporting
- Short “policy briefs” that can be used at national and international levels;
- Training modules on best practices for providers at all levels:
- Developing counseling tools and materials for pregnant people impacted by TB;
- Advocacy!

Thank you!