COMPLICATIONS OF PREGNANCY

Key words: HIV, Zidovudine, AZT, antiretroviral therapy

HIV POSITIVE : MANAGEMENT OF THE WOMAN AND HER NEONATE

Key points
Antenatal management
Intrapartum management
Recommended medication for the neonate

Note: Click on the above individual subjects; the hyperlink will then take you to that section in the document.

KEY POINTS

1. HIV testing is offered to all women attending antenatal care and must be accompanied by appropriate counselling.
2. Antiretroviral therapy (ART) is indicated in pregnancy for HIV positive women. The majority of perinatal transmissions of HIV appear to occur during labour.
3. Strategies to reduce risk of perinatal transmission include antenatal maternal antiviral therapy, shortened duration of membrane rupture, avoidance of intrapartum invasive fetal interventions.
4. Zidovudine (AZT) is compatible with oxytocin, Magnesium Sulphate, Ranitidine, Morphine and many antibiotics.
5. Zidovudine is no longer recommended for women delivering with an undetectable viral load and who are established on an antiviral regimen with no concerns regarding adherence to the regimen. This is regardless of the mode of delivery. For women delivering with a detectable viral load or who have not been adherent to an antiretroviral regimen, IV Zidovudine should be commenced as soon as a diagnosis of labour is made, or 4 hours prior to an elective caesarean birth.
6. Antiretroviral therapy for the infant is commenced as soon as possible after birth and always with 4 hours.
7. Breastfeeding or use of the maternal breastmilk is contra-indicated.
ANTENATAL MANAGEMENT

SCREENING

All antenatal women should be given the opportunity to be tested for HIV. If a woman chooses to have testing pre and post testing counselling should be done regardless of the result.

Screening for HIV is conducted by an initial ELISA for HIV antibody and if positive, the result is confirmed by a Western Blot.

Notification to the Health Department for newly diagnosed HIV positive women

Complete the ‘Notification of HIV infection or AIDS or death in a person with HIV infection’ Government of Western Australia Department of Health form found at: http://www.public.health.wa.gov.au/3/309/3/hiv_human_immunodeficiency_virus.pm

MANAGEMENT

1. All women diagnosed HIV positive are referred to the GOLD OBSTETRIC TEAM for management.

2. A written referral from the Consultant shall be sent to the Immunology Combined Immunodeficiency Clinic at PMH via the Immunology Clinical Nurse Specialist (CNS) available on page 8311/ext 7406.
   - The PMH Immunology CNS will liaise with the obstetrician, adult physician, paediatrician, neonatologist, social workers and other multi-disciplinary staff to discuss issues including obstetric history, maternal health (e.g. high viral load), maternal antiretroviral medication, maternal compliance and social environment, and provide feedback to the HIV paediatric team.
   - A Paediatrician will be assigned to manage the newborn. The Immunology CNS will arrange a meeting with the parents and the assigned Paediatrician. Discussion will include issues regarding infant management, medications, HIV testing, feeding, immunisations, and follow-up.
   - An infant anti-retroviral regimen is formulated and documented on an “MR409 Antiretroviral Regimen and Management Plan for the Neonate form” and circulated to the Multidisciplinary Pregnancy Team one month prior to the expected date of delivery. The KEMH CMS for the Gold Team will insert the completed form in front of the correspondence section of the mother’s KEMH medical record with the protocol for management of infants born to HIV positive women.

3. As HIV Proviral DNA is the preferred test in neonates, a sample of HIV Proviral DNA (0.5mL EDTA) should be collected from the mother to ensure a maternal sample can be amplified.
   - If the mother returns a negative HIV Proviral DNA, the test should be repeated. If the mother returns a second negative test, the infant will require HIV RNA PCR (viral load) testing for the presence of HIV.

4. Accurate pregnancy dating should be confirmed as soon as possible.

5. Antiretroviral therapy (ART) is indicated for all HIV positive women. The HIV physician will create the ART regimen for each woman, tailored to her viral resistance studies and lifestyle. If the woman is not on ART prior to conception, this will be commenced by the HIV physician at the end of the first trimester. There is still limited data on the long-term effects of ART on the fetus and neonate.

6. Prenatal diagnostic tests such as CVS/amniocentesis may be offered as appropriate, however such procedures do appear to increase risk of perinatal transmission viral rate and their conduct should be performed only after full discussion with the woman.
INTRAPARTUM MANAGEMENT.

ADMISSION

1. **A booked women with HIV**
   Inform:
   - the Labour and Birth Suite Co-ordinator
   - Registrar/Senior registrar who will liaise with the Gold Obstetric Registrar/Consultant.

2. **An Unbooked women presenting with HIV, and no involvement of the Paediatric HIV team or the Multidisciplinary pregnancy group**
   1. Inform the Co-ordinator of the labour and birth suite.
   2. Inform the Team Consultant on duty for labour and birth suite.
   3. Contact the On-Call Paediatric Immunology Consultant via PMH switchboard immediately.

3. **Admission of a woman with an unknown HIV status, but thought to be at high risk for HIV**
   Contact the Clinical Microbiologist and Paediatric Immunologist on call from Princess Margaret Hospital.

MATERNAL ZIDOVUDINE (AZT) REGIMEN

See Pharmacy Guideline Zidovudine

<table>
<thead>
<tr>
<th>Preparation</th>
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<tr>
<td>Withdraw 100mLs of 5% glucose or Hartman’s from a 1000mL bag of this solution. Add 1000mg of Zidovudine (AZT) (5 vials AZT 200mg / 20mLs) to the bag. This equates to a total volume of 1000mLs of fluid for administration, giving a concentration of 1mg per mL.</td>
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<tr>
<th>Administration dosage</th>
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<tr>
<td>A <strong>Loading</strong> dose of 2 mg/kg maternal body weight for <strong>one</strong> hour then Maintenance dose of 1 mg/kg maternal body weight until birth of the baby.</td>
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<tr>
<th>Vaginal Birth</th>
<th>Elective Caesarean Section</th>
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<tr>
<td>Zidovudine is no longer required for women receiving ART with an undetectable viral load in whom there are no concerns regarding adherence.</td>
<td>IV Zidovudine is no longer required for women receiving ART with an undetectable viral load in whom there are no concerns regarding adherence who are scheduled for an elective caesarean birth. For women with a detectable viral load of who have not received antiretroviral therapy antenatally, Zidovudine will be required. Commence treatment regimen four hours prior to anticipated birth. Continue the infusion until birth of the baby and clamping of the umbilical cord.</td>
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Note: the solution is stable for 24 hours at room temperature, or 48 hours if refrigerated.
If the above strategies are followed, perinatal transmission rates of $\leq 2\%$ are expected.

*Medications compatible with Zidovudine (AZT) at Y site*

Ampicillin, ceftriaxone, clindamycin, cloxacillin, dexamethasone, erythromycin, gentamycin, heparin, insulin, magnesium sulphate, metoclopramide, metronidazole, morphine, oxytocin, ranitidine, vancomycin

**AT BIRTH**

**Notify**
- Oncall Consultant neonatologist / Senior Registrar KEMH
- Paediatric Consultant for HIV

**During working hours:** contact the allocated Paediatric Consultant via the PMH switchboard.
**After hours and at the weekend:** Contact the on-call PMH Immunologist via the PMH switchboard (if there any concerns). Otherwise on the following day notify the allocated PMH Paediatric Consultant, or on call PMH immunologist if on the weekend.

- Refer to the neonates’s antiretroviral Regime and Management Plan for Neonate form (MR409) in the correspondence section of the mother’s medical chart regarding bloods and medications required for the infant. This form must be transferred to the neonate’s chart with the neonate’s UMRN label attached.
- The neonate must be bathed in the Labour and Birth Suite *before* the administration of any injections.
- If any injection is necessary prior to bathing, the site must be thoroughly cleaned beforehand.

**RECOMMENDED MEDICATIONS FOR THE NEONATE.**

See Clinical Guideline *Management of Infants born to HIV Positive Women (PMH)*

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**REFERENCES (STANDARDS)**


*Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to reduce Perinatal HIV Transmission in the United States.*

National Standards – 1.7.2 Clinical Care

Legislation - Nil

Related Guidelines / Policies – QRG *Management of the HIV Positive Woman and her Neonate*

QRG *Management of the Neonate of an HIV Positive Woman*

Other related documents – Nil

RESPONSIBILITY
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<th>Policy Sponsor</th>
<th>HoD Maternal Fetal Medicine</th>
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<tr>
<td>Initial Endorsement</td>
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