# MANAGEMENT OF BREAST MILK ERRORS

## Indications

- To assess and respond to the possibility of the transmission of a blood borne pathogen to an infant who would have inadvertently ingested breast milk from another mother (Donor)

## Definitions

- **Donor mother** refers to the non-biological mother, who's EBM, was fed to another mother's infant.
- **Recipient infant** is the infant who received incorrect EBM from the donor mother.
- **Recipient mother** is the biological mother of the infant who was fed the incorrect EBM from the donor mother.
- **Donor infant** is the donor mother's biological child who is not implicated in the EBM incident

## Key points

- Some viruses may be transmitted by breast milk
  - Cytomegalovirus (CMV), Human Immunodeficiency Virus (HIV) and Human T-cell Lymphotronic Virus type 1 (HTLV-1) are known to be transmitted via breast milk from infected mothers to their own infants
  - Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Human T-cell Lymphotropic Virus type 2 (HTLV-2) are found in breast milk but transmission from mother to child has not been documented
  - Transmission from a single inadvertent feeding of an infant with breast milk from another infant's mother has not been reported. Although there is a potential risk, it is suspected to very low

## Procedure - Disclosure

### When?

- As soon as possible

### Who?

- The physician must disclose the incident with both families in a confidential manner

### What?

1. Provide information on what happened and what will be done
2. Reassure the parents that all health information for each family will remain confidential.
3. Request permission from the donor mother for virus testing
4. Inform the parents that the test results will be released to both families without disclosure of identities

# Procedure – EBM Serology blood testing

- Contact the Infectious Diseases consultant who will take into consideration the virus concerned, the gestation and actual age of the recipient infant and the likelihood of prior postnatal acquisition of the virus by the recipient infant.

| | Indications | Serology tests required |
|---|---|---|
| **Donor mother** | HBsAg & HIV tested in antenatal screening:<br>Obtain screening results STAT;<br>Results required within 24 hours | |
| | No antenatal screening<br>or antenatal test results not available within 24 hours | HBsAg & HIV STAT<br>(Results required in 24 hours) |
| | All | HBsAg, HIV, HCV, HTLV 1,<br>HTLV 2 (not required STAT) |
| | Recipient infant: less than 32 weeks gestation, or birth weight less than 1500 g | CMV IgG |
| **Recipient mother** | Donor mother results available within 7 days<br>and Infant remains hospitalized<br>and Donor mother tests all negative | None |
| | Donor mother not tested<br>or Donor mother results not available within 7 days<br>or infant will be discharged before 7 days | 7 ml blood "on hold" |
| | Donor mother positive on any test | Specific tests on the blood "on hold" may be requested by the Infectious Disease consultant |
| **Recipient infant** | Donor mother tests all negative | None |
| | Donor mother not tested | Minimum 1 ml blood "on hold" |
| | Donor mother HBsAg positive<br>or not tested and recipient's mother known to be immune to HBV | Anti- HBsAg antibody STAT |
| | Donor mother positive on any other test | Specific tests on the blood "on hold" may be requested by the Infectious Disease consultant |

NOTE:
• On the Virology requisition signed by Infection Disease consultant or Neonatologist write *"Serology for breast milk administration error".
• For "on hold" write *"Serology for breast milk exposure - please hold" on the signed Virology requisition.
A complete analysis requires 7 ml of blood in a red stopper tube.

## Procedure – Prevention of HBV and HIV infection (URGENT ACTION)

- Consult Infectious Diseases immediately to ensure appropriate counseling is offered and prophylaxis initiated if indicated

| Donor mother's results | Recipient infant care | |
|---|---|---|
| HBsAg Negative | None | |
| HBsAg Positive or not tested | Give HBV vaccine (first dose) & HBIG as soon as possible i.e., preferably within 24 hrs and no later than 7 days post exposure | NO HBIG needed if: Recipient's mother known to be HBV immune and Recipient infant tests positive for anti-HBsAg antibody |
| HIV Positive | Indications for post-exposure antiretroviral therapy to be discussed on a case-by-case basis | |

## Procedure – Documentation

- When?

- As soon as possible

- Who?

- By the nurse in charge of the baby

- What?

1. **Two incident reports** that contain the details of the incident should be completed:
   - Incident report no.1: RECIPIENT INFANT
     - *Breast milk of DONOR MOTHER on incident report no 2 was given to baby (write number of incident report). Place copy of the incident report in the medical record of the recipient*
   - Incident report no 2: DONOR INFANT
     - *Breast milk of this baby's mother was given to baby on incident report no 1 (write number of incident report)*
2. All **documentation in the chart** should include disclosure, testing acceptance and/or refusal, testing information and test results. Document carefully, referring to Incident report numbers **not individual names.**
   - RECIPIENT INFANT'S CHART:
     - *Breast milk of DONOR MOTHER was given to baby on incident no 2 (write number of incident report). Please comment on Blood test results and document disclosure on the appropriate form*
   - DONOR MOTHER'S CHART:
     - *If the donor mother is to be tested, open a chart under her name.*
     - *Document in the chart: "breast milk given to baby on incident report no 1 (write number of incident report)…"*
     - *Document discussion about testing, and file results when available. (The donor mother may later want or need official copies of test results and this facilitates access for her)*
   - RECIPIENT MOTHER'S CHART
     - *If the recipient mother is to be tested, open a chart under her name.*

## Follow-up Care

- Mothers' follow-up

- If either the donor or the recipient mother is found to be positive for HBsAg, HIV, HCV, HTLV-1 or HTLV-2 and not already followed by a physician for this condition, refer her to an appropriate physician or clinic for ongoing care, unless she does not wish this to be done

- Recipient infant follow-up

| Donor mother's results | Recipient infant follow-up care | | |
|---|---|---|---|
| Negative for all | None | | |
| HBsAg + or not tested | Give HBV vaccine dose #2 @1 mo after the first dose | Give HBV vaccine dose #3 @ 6 mo after the first dose | HBsAg test just before giving the 6 month HBV vaccine<br>Unless HBsAg test positive, test AntiHBsAg antibody @ 1-2 mo after the 6 month HBV vaccine |
| CMV + | None routinely | If recipient of < 32 wk gestational age or < 1500 g birth weight and<br>if symptoms of CMV infection occur ( e.g. hepatitis, bone marrow suppression, sepsis): Blood CMV PCR, urine virology | |
| HIV + or not tested | Test for HIV antibody @ 6 wks, 3 mo, 6 mo post event | | |
| HCV + or nor tested | Test for HCV antibody @ 6 mo post event | | |
| HTLV-1, HTLV-2 + or not tested | Test for HTLV-1, HTLV-2 antibody @ 6 mo and 12 mo post event.<br>(Further testing may be required as per Infectious Disease Consultant) | | |
| Sero-conversion of recipient infant | Test recipient mother's baseline serum (on hold) and if indicated infant's baseline serum (on hold) for the specific virus of concern | | |
| | Arrange for appropriate infant follow-up, and for treatment if needed. | | |

## Post discharge or transfert

- The treating MCH physician will ensure that the discharge summary, EBM error protocol, follow-up care needed and MCH contact persons are sent to the hospital the infant is transferred to or to the primary physician who will follow the recipient infant upon discharge.
- If the recipient infant is discharged before follow-up is complete, follow-up care will be arranged with:
  - At MCH: the Infectious Diseases clinic, in conjunction with Newborn Follow-up clinic if appropriate.
  - For patients who live far from Montreal: the primary community physician. The primary MD must be made aware of the EBM protocol and follow-up care needed.