CLINICAL PRACTICE GUIDELINE

Expressed Breastmilk
-Antenatal Expression of Colostrum

SCOPE (Area): Maternity Unit
SCOPE (Staff): Medical, Midwifery & Nursing

BACKGROUND/RATIONALE

Colostrum is the optimum source of nutrition for the newborn as it is antibody rich, has high bioavailability, increases gut peristalsis and aids the passage of meconium. Colostrum also aids in the activation of early protective immunological responses in the infants gut and therefore should be the first food given to infants. However, some infants are at risk of receiving infant formula before colostrum in the first few days after birth due to a number medical conditions and barriers to early breastfeeding. Antenatal expression and storage of colostrum during pregnancy can reduce the need for and/or amount of infant formula given to at risk infants after birth and ensure that the first food is colostrum.

Infants who are at risk of hypoglycaemia in the first few hours after birth are at significant risk of being given infant formula to stabilise blood sugar levels. Infants of mothers with diabetes are particularly at risk of hypoglycaemia in the first few hours after birth and colostrum can be useful in this period to stabilize the infant. Also infant formula contains bovine serum albumin which is associated with generating an auto-immune response linked to an increased risk of Type 1 diabetes mellitus particularly where there is a strong family history of diabetes.

Other situations which may negatively impact on early breastfeeding or which may impair or delay the early production of breastmilk include: un-well infant/mother, feeding difficulties, infant abnormalities or pregnancy complications including diabetes or other maternal medical conditions. The availability of colostrum for early feeds is also valuable in these situations.

DESIRED OUTCOME/OBJECTIVE

- Antenatal expression of colostrum will allow storage of colostrum which will reduce the use of infant formula in at risk infants.

- Antenatal expression of colostrum will increase the mother’s awareness of how her breasts function and increase confidence with breastfeeding.

DEFINITIONS

Colostrum - is the fluid produced by the breast at the end of pregnancy and in the early post-partum period. It is thicker and more yellow in colour than mature milk, reflecting a higher content of proteins, many of which are immunoglobulins, fat-soluble vitamins and some minerals.
INDICATIONS

- Antenatal risk factors:
  - Women with diabetes in pregnancy
  - Infants with antenatally diagnosed cleft lip and/or palate and congenital conditions (e.g. Downs syndrome, cardiac conditions)
  - Infants of mothers having an elective LUSCS
  - Established premature labour where birth is expected to proceed.
  - Infants with intrauterine growth restriction.
  - Women with breast hypoplasia.
  - Women with hyperandrogenesis (polycystic ovarian disease)
  - Women who have had breast surgery.
  - Women with multiple sclerosis
  - Strong family history of dairy intolerance or inflammatory bowel disease.

CONTRAINDICATIONS

- The antenatal expression of colostrum is contraindicated in the following circumstances;
  - History of threatened/actual premature labour.
  - Current threatened premature labour where the mother is having tocolytic/suppressive treatment.
  - Cervical incompetence.
  - Cervical suture insitu.
  - Multiple pregnancy.

ISSUES TO CONSIDER

- Nipple stimulation and its effect on uterine contraction.
  - Nipple stimulation at term may assist with cervical ripening (up to 45 mins 3 x day).
  - Nipple stimulation will not augment labour.
  - Women successfully tandem breastfeed whilst pregnant.
  - There is no significant relationship between nipple stimulation and inducing labour.

- In recognition that nipple stimulation can cause uterine contraction it is recommended that women;
  - Commence daily expression at 36 weeks gestation.
  - Start with 3-5 minutes on each breast.
  - The total time expressing when proficient should only be 5-10 mins.
  - Stop expressing if having uterine contractions associated with expressing.

- Expressing can be commenced after admission to hospital (e.g. mother admitted in established preterm labour which is expected to proceed) unless there are contraindications as above.

EQUIPMENT

- When teaching how to hand express;
  - Knitted breast
  - Diagram of the breast

- For the storage of colostrum at home;
  - 1ml-5ml syringes
  - Zip-lock bags
  - Labels
PROCEDURE

Patient Education – How to hand express and store colostrum.

1. Provide the woman with the pamphlet “The Antenatal Expression of Colostrum”.
2. Wash hands before beginning.
3. Ensure mother is sitting comfortably and upright. Ensure privacy.
4. Apply warmth to breast.
5. Gently stroke the breast towards the nipple to stimulate the let-down reflex.
6. Place the fingers underneath the breast, so the first finger is just below and the thumb is just above the areola.
7. Gently squeeze the fingers and thumb pads (not fingertips) together, back towards the chest wall into the breast tissue, and then release the pressure.
8. Fingers should be well back from the nipple.
9. Don’t squeeze or pinch the nipple.
10. Repeat the action in a rhythm similar to baby’s sucking.
11. When colostrum drips/flows easily start collecting in syringe.
12. When milk ceases to flow, rotate the position of the fingers and thumb around the areola and repeat the expressing action.
13. Swap to the other breast when flow slows down.
14. Use both breasts at least twice each session.
15. Colostrum can be collected 2-3 times on the same day and stored in the same syringe. The syringe should be refrigerated between use.
16. At the end of the collecting day the colostrum can be frozen in a zip lock bag. Ensure labeled with name and date of expressing.
17. The frozen colostrum can be stored for 3 months in the freezer or 6-12 months in a deep freezer.
18. Instruct the mother to bring frozen colostrum in to hospital when she is admitted for the birth of her baby and hand to staff as soon as she is admitted for storage.
19. Store labeled colostrum in Special Care Nursery freezer and communicate this to nursery staff

RELATED DOCUMENTS

Internal
Expressed Breast Milk – Methods of Expressing – CPG/E017
Expressed Breast Milk – Storage, Transport & Checking Procedures – CPG/E047
Pamphlet – The Antenatal Expression of Colostrum

REFERENCES

Cairns Health Service District (2008) Protocol - Antenatal expression of colostrum for mothers with diabetes and other mothers whose babies are likely to have feeding difficulties. Accessed on 31/5/10 at http://home.ca.inter.net/%7EJfisher/docs/Appendix%201%20Antenatal%20Expression.pdf


Riordan, J. (2009), Breastfeeding and human lactation (3rd Ed.). Jones and Bartlett: Boston

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