Maternity and Neonatal Unit
GUIDELINE:

UMBILICAL CORD CARE, BIRTH AND POSTNATAL

SCOPE:
All midwives, nurses, obstetricians and paediatricians working in maternity and neonatal units.

AUTHOR:
Core Midwife

PURPOSE:
To ensure best practice in caring for the umbilical cord prior to separation.

DEFINITIONS:

Umbilical Cord = the cord containing (usually) two arteries and one vein which connects the fetus to the placenta. Anomalies in the number of cord vessels may be indicative of renal disease, and/or cardiac disease.

Omphalitis = Infection of the cord stump.

A lotus birth is where the cord is not cut, but allowed to separate naturally whilst still attached to the placenta. This is rarely requested, but midwives should be aware of this as a reasonable request in a birth plan. It is advisable that this is only practised if a physiological labour has occurred.

Muka –Harakeke (NZ flax) fibre used for tying the umbilical cord.

GUIDELINE
Birth care of the umbilical cord:

- There are many current studies to suggest that delaying cord clamping for 1 - 3 minutes following birth may promote adequate transfusion to the neonate. This provides the neonate with additional iron and may reduce the frequency of iron-deficiency anaemia in later infancy. Neonatal bilirubin levels are lower after early cord clamping but there is reported to be no significant difference in the incidence of clinically significant jaundice.
- In preterm babies there may also be an advantage to delayed cord clamping which could reduce the incidence of intraventricular haemorrhage.
- If the woman's blood group is rhesus negative, once the cord is clamped (whether practising physiological or active third stage management) the maternal end of the cord should be allowed to bleed freely to reduce the risk of feto-maternal transfusion.
- Cord clamping (following ecbolic/oxytocic administration) is mandatory for active management of the third stage, but the literature suggests that this may be delayed for 1 – 3 minutes following administration of an oxytocic to allow adequate transfusion to the

neonate, **but progress to active management must not be delayed if contraindicated clinically in either mother or baby.**

- It is recommended that the tie/clamp used should be sterile, though no studies have been performed comparing clean with sterile ties.
- Some Maori women may choose to use a 'muka' to tie the cord – each Iwi/Hapu will have their own method of cleaning, it is recommended however that it should have been boiled in water for 10 minutes and then left to dry. The muka is tightened daily until the cord stump falls off (see appendix 1 for supporting guidance from Nga Maia Maori Midwives Aotearoa).
- Regardless of the method of third stage management, the implement used for cutting the cord should be sharp and sterile. A blunt instrument may result in more vessel spasm and less blood loss, but could result in an increased incidence of infection due to increased trauma to the tissues. An aseptic technique, with gloved hands, should be used by the midwife.
- If a member of the family/whanau is cutting the cord it is recommended that they have washed/clean hands prior to cutting the cord.
- Take particular care when cutting the cord to avoid blood splashes. A piece of sterile gauze may be used to prevent splashes.
- Take care to avoid limbs/appendages when cutting the cord, it has been known for neonatal toes/fingers/penis to be cut during this process.
- Beware cutting the incorrect side of the clamp. The cord should be clamped approximately 3-4cm clear of the abdominal wall, as in rare circumstances a portion of the gut may be inside the cord and in case baby needs an umbilical line inserted.
- If cord blood gases need to be obtained, clamp first proximal to mum, distal to baby to optimise cord blood gas results.

<u>Postnatal care of the umbilical cord stump</u>:

- The cord stump should be kept clean and dry.
- During bathing, avoid soaps or cleaning lotions, plain water is ideal. It is recommended that top and tailing be used rather than bathing for the first 24 hours following birth.
- After bathing, pat the area dry with a clean towel.
- Advise the mother to observe the cord stump at each nappy change for redness or flaring. If signs of infection, she should be advised to contact her midwife or General Practitioner who will consider whether a swab should be taken and/or a consultation with a paediatrician as appropriate.
- Early and frequent breastfeeding will provide the newborn with antibodies to fight infections.
- No study has been identified on methods of cleaning the stump should it become sticky or soiled, using clean water is recommended. The application of powders, antiseptic, or alcohol swabs is NOT recommended as they delay cord separation.
- Remove the clamp or other tie when the cord stump is dry, usually in the first 2 - 4 days of birth. Hands should always be washed prior to touching the cord stump, and the nappy (disposable or cloth) should be folded back below the umbilicus to aid the drying process.

- Separation of the cord occurs by necrosis (dry gangrene). The stump is rapidly colonised, and necrosis and separation occur within 5 - 15 days of birth. Delayed separation should be discussed with a paediatrician.
- It is reported that babies born by caesarean section may have a delay in separation of the cord stump, though the reason for this is unclear.

Infection, bleeding or abnormalities of the umbilical cord stump:

- Monitor for offensive smelling cord stumps or redness of the surrounding area as neonatal septicaemia from staphylococcus aureus, E.coli, tetanus, pseudomonas or Group B Streptococcus infection can rapidly occur and the baby may become quickly unwell.
- However often there are no outward signs of infection and the index of suspicion of systemic infection should be high with symptoms such as fever, lethargy or poor feeding. In one study up to one third of neonates at autopsy had no obvious external signs of infection. Where babies are 'rooming in' with their mother or at home, infections are much less likely to occur.
- Omphalitis should be treated with systemic antibiotics. However if there are systemic signs of infection, intravenous antibiotics are preferable.
- Some odour and a small amount of blood ooze are normal prior to separation.
- A cord stump that is bleeding more than normal, or oozes fresh blood, may be a sign of a bleeding disorder of the newborn and should not be ignored.
- A cord stump oozing faecal matter with associated irritant dermatitis, or intermittent mucous discharge, is likely to be a sign of complete or partial failure of obliteration of the omphalomesenteric duct from the digestive tract.
- A stump oozing urine with mild irritant dermatitis is likely to be a sign of complete patency of the intra-abdominal portion of the allantois from the umbilicus to the vertex of the bladder.

If any of the above abnormalities occur, urgent referral to a paediatrician is advised.

- A two vessel cord should only prompt referral for paediatric review prior to discharge if a mother had poor antenatal care, no antenatal ultrasounds and/or inadequate imaging, or if the newborn examination reveals any other abnormalities.

ASSOCIATED DOCUMENTS

Maternity Unit Rhesus negative guideline
Maternity Unit Bathing babies guideline
Maternity Unit Postpartum haemorrhage guideline
Fetal Surveillance A Practical Guide (2010)

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Authorised by

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HOD Obstetrics

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HOD Paediatrics

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Clinical Care Manager, Woman, Child and Youth

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APPENDIX 1

Reclaiming our ties - Muka whitau

Reclaiming our ties:

Nga Maia have become aware of an increasing number of birth plans implementing Muka or Whitau (*Flax fiber)* for Pito *(umbilical cord)* tying in the third stage of labor. We are certainly heartened by the uptake of these traditions and acknowledge the role of skilled and experienced practitioners in maintaining this taonga tuku iho *(protected custom*) for Maori. Nga Maia believe that when we observe tikanga Maori in birth, connections are made with the past, further enriching the Midwifery Partnership relationship. Thus, Nga Maia ki Waikato have prepared this information resource for Midwives. However, this is not a "how to" document. This korero was collated to accompany the objective Midwifery assessment. We also promote your participation in Turanga Kaupapa training if required.

The purpose of this document is:
- to reduce the inappropriate variations in practice and ensure a higher quality of skilled practitioner when observing tikanga Maori in umbilical cord tying,
- to take responsibility for the protection of Muka as taonga tuku iho and thus ensuring Muka's future and permanent use in all Midwifery settings,
- to normalise tikanga Maori within Midwifery Practice.

About Muka - Whitau

WHAT IS MUKA?
Muka or Whitau is a very strong fiber extracted from Harakeke *(flax)*. Muka ties are common & a preferred method of Pito tying at birth.

WHERE CAN I GET MUKA?
Local weavers can very cheaply and easily extract Muka from Harakeke. We encourage mothers to make connections with the weavers within her whanau (or region) in the first instance. Ensuring the tikanga (customs) are observed as well as allowing the knowledge of Muka extraction be passed down for future use. Careful protocols are observed when harvesting Harakeke, which vary region to region, again we recommend you refer to your weavers.

Nga Maia ki Waikato detest the sale and purchase of Muka, particularly to hapu mama. The cultural reclamation of traditional birth practice is the birthright of Maori. Therefore, Nga Maia ki Waikato members are working hard to provide Muka to Midwives via the primary units on the condition that the practitioner is skilled in its use. Families adding decorative beads or small

pounamu to Muka should be reminded of the potential choking hazard, especially with toddlers in the home.

GETTING FAMILIAR WITH HANDLING MUKA

Midwives must trust that the Muka can perform the task of blood vessel occlusion at the umbilicus. Therefore, it is ideal that the user is proficient in Korari harvest and Muka extraction. Failing this getting familiar with handling Muka will help the practitioner to use their discretion when determining if the prepared Muka is fit for purpose. A poorly prepared tie, could cause blood loss from the umbilicus. If in doubt clamp with consent.

WHEN IS IT INAPPROPRIATE TO USE MUKA?

It should be discussed in the Antenatal period that some clinical scenarios may require a clamp. For example: during active management of the third stage, in the absence of delayed cord clamping (e.g. for cord bloods) or when the Midwifery team are managing an emergency. Large or thick cords can be chunky and full of *Wharton's Jelly* which can challenge the Muka. The jelly may suspend the blood vessels and hinder blood vessel occlusion. It is recommended that the time is taken to milk of empty large or full cords before tying. *If in doubt clamp with consent.* It should also be acknowledged that in some cases very full and thick umbilicus can respond better to Muka ties than the clamp, due to the ability of Muka to adapt to the cord. Delaying the use of Muka: In a Cesarean Section, a clamp can be placed away from the abdomen of the baby. This will allow space for the whanau to apply the Muka once it is clinically appropriate. You may need a single use clamp cutter and a sterile scissors when adding Muka some hours later.

ANTENATAL CONSIDERATIONS:

- When sourcing Muka, recommend the whanau reconnect with weavers in the first instance. The fresher the Muka, the better.
- Suggest the whanau arrange for a designated person to be responsible for bringing the Muka in labour.
- Prepare the whanau for the possible use of a plastic clamp if clinically indicated.

Intrapartum considerations

- INFECTION CONTROL: A sterile cutting tool or implement, such as Pounamu, is pertinent to minimising the risk of infection to the neonate via the Pito. An appropriately prepared and adequately tied Pito with Muka does not increase the risk of infection to the neonate. After all we do not sterilise the nappy or the clothes pepe is wearing. Also noteworthy a plastic clamp is not always sterile, unless it has been autoclaved with the birth pack.
- A physiological third stage with delayed cord clamping is ideal when using Muka. If in doubt clamp with consent.

POSTNATAL CONSIDERATIONS

- The most important aspect of care in the postnatal period is to check, to check and to check the Muka routinely during the postnatal period.
- Recommend the whanau check the Muka tie at each nappy change, especially in the first 24 hours. Whanau should be made aware that, while uncommon, the consequences of neonate blood loss can be serious.
- Make all responsible practitioners aware that Muka has been applied on admission so that they know to CHECK the muka while pepe is admitted to the facility.
- Document the last time it was checked.

Disclaimer: While all efforts have been made to verify the information in this document, responsibility for the interpretation of the contents and Muka use rest with the user. This information was prepared to address the increased popularity of Muka and whakaiti the profit & sale of Muka. This is not a “how to” guide. Last updated Sunday, 25th November 2018. Mehemea he korero au tena tuku i-mera mai kia matou ngamaiakiwaikato@gmail.com