Guideline for Implementation of 'Gentle Method' Elective Caesarean Sections in NHS Lanarkshire

PRINCIPLES OF GENTLE METHOD CAESAREAN BIRTH

There are 4 core principles to gentle method Caesarean:

1. Promotion of holistic birth experience.
2. Slow delivery of neonate's body, without fundal pressure
3. Optimal cord clamping
4. Early skin-to-skin contact

Improved birth experience

There is increased awareness of the principles of 'gentle method' Caesarean birth (also dubbed 'the natural Caesarean' or 'family-centred Caesarean') amongst lay people and medical staff. This generally refers to one or all of the following; a slow physiological birth of the baby, optimal cord clamping and delivery into skin-to-skin. A version of these adaptations to the traditional Caesarean procedure was first described in BJOG in 2008[1]. Studies conducted to date have shown that this adaptation of the traditional Caesarean section is not associated with any increased rate of complications for woman or baby [2,3].

NICE recommend that women's preferences for birth such as de-medicalisation of the delivery experience should be facilitated where possible [4]. Many women and their partners wish to be actively involved in planning the delivery experience at Caesarean, which include discussing and facilitating the principles of gentle method Caesarean if so desired.

Slow delivery

It is hoped that by allowing a slow delivery of the neonate's body without the use of fundal pressure, a more physiological birth is achieved. As yet, limited data exist regarding the benefits of this practice, but theoretically this practice mimics vaginal birth and aims to achieve a more physiological adaptation to extrauterine life, as well as enhancing the birth experience for the woman and her partner [1].

Optimal cord clamping

The benefits of delayed cord clamping are well-established and include [5–7]:

- Better cardiovascular transition to neonatal life
- Improved iron stores

- General improvements in outcome for preterm and low birthweight infants (reduce intra-ventricular haemorrhage, reduced need for blood transfusion requirements, reduced incidence of late-onset sepsis, reduced incidence of necrotising enterocolitis, improved circulatory stability, fewer days on oxygen and ventilation)
- Improved developmental outcomes
- Transfer of maternal stem cells.

Delaying cord clamping has not been found to increase the maternal risk of post-partum haemorrhage [8].

Further details can be found in the relevant NHSL 'Delayed Cord Clamping' guideline.

Early skin-to-skin contact

Evidence suggests that initiation of early skin-skin contact is associated with improved bonding, infant feeding, breastfeeding outcomes, and infant crying [9]. It may also assist maintaining infant normothermia. A 2016 Cochrane review states:

"Mother-infant separation post birth is common. In standard hospital care, newborn infants are held wrapped or dressed in their mother's arms, placed in open cribs or under radiant warmers. Skin-to-skin contact (SSC) begins ideally at birth and should last continually until the end of the first breastfeeding. SSC involves placing the dried, naked baby prone on the mother's bare chest, often covered with a warm blanket. According to mammalian neuroscience, the intimate contact inherent in this place (habitat) evokes neuro-behaviours ensuring fulfilment of basic biological needs. This time frame immediately post birth may represent a 'sensitive period' for programming future physiology and behaviour. [10]

ANTENATAL COUNSELLING

Offer and briefly discuss the option of gentle method Caesarean birth in the antenatal clinic at the booking appointment for any women who are considering birth by Caesarean section at this point. Gentle method Caesarean should then be discussed again more fully in the third trimester for all women choosing elective Caesarean section. NHSL leaflet 'Gentle method Caesarean birth' with link to antenatal education video should be provided to all women, regardless of planned mode of delivery.

The option of gentle method Caesarean birth may be particularly useful for women who have experienced a traumatic emergency delivery in the past and now contemplating elective Caesarean, or for very anxious women to allay birth fear, but should be made available to all women who are deemed surgically suitable

Women should understand that a gentle method Caesarean birth may not always be possible in entirety even where desired, and it may become apparent during the surgery that continuation is inappropriate.

Whilst promoting an enhanced delivery experience by facilitating gentle method Caesarean birth some woman may choose an alternative approach and this should be supported.

GENTLE METHOD CAESAREAN IN SPECIFIC CLINICAL SITUATIONS

Gentle method CS can be considered in most obstetric situations. Discretion should be used, taking into account the preferences of the woman and couple and operating surgeon.

Emergency CS

Gentle method Caesarean can be considered in the case of emergency caesarean section, e.g. fetal bradycardia that has recovered, concerns re: fetal distress but baby born in good condition.

Provided heart rate is palpated >100bpm, the baby can be delivered into skin to skin and assessed on the mother's chest for neonatal team input if required.

Premature Birth

Gentle method CS can be carried out for preterm infants ≥34 weeks. There are benefits to premature infants of both delayed cord clamping and immediate skin to skin contact [5].

Twins

Delayed cord clamping and immediate skin to skin in theatre can be considered for twin births.

A 2019 randomized controlled comparing immediate versus delayed cord clamping in twins (28-36 weeks' gestation) found no intertwin haemoglobin difference to suggest acute peripartum twin-to-twin transfusion syndrome in monochorionic twins, most of whom were born by CS. No differences were found in rates of hypothermia between the groups. [11]

PROCEDURE

Theatre Preparation

Once in theatre, complete the Gentle method Caesarean birth pro forma (see Appendix B) at the surgical pause. All staff should be aware of their roles in relation to table 1.

At the discretion of anaesthetist, it may be appropriate for a birth partner to be present during the spinal anaesthetic.

Drapes can be down at the start of the procedure, or dropped at the point of delivery depending on preferences of the woman and operating surgeon.

The surgeon may wish to double-glove to help maintain sterility when passing the neonate into direct skin-to-skin with the mother.

Birth of Baby

At the point of uterotomy, the surgeon will deliver the baby's head as usual. No fundal pressure will be applied at this point. The posterior shoulder should be delivered. The baby's head can be dried with a clean swab at this point to help maintain normothermia. The body will be delivered by the force of uterine contractions, generally commencing a moment or so after the uterotomy. Allow slow delivery of the body without fundal pressure.

Assess the neonate at birth. Palpate cardiac apex and ensure heart rate is >100bpm. Neonates who do not breathe spontaneously should initially be stimulated by rubbing the back, drying with a clean swab.

Following the delivery of the baby, he/she can be passed into direct skin contact with the mother. There are two options for achieving this:

1. Passing the baby over the drape onto the mother's chest. The midwife then helps settle the baby into direct skin to skin contact, warmed and dried with towels.
2. Passing the baby under the drape by unsticking the operative window in the drape. The midwife or woman herself reaches for the baby and settles the baby's head between the mother's breasts, with the legs in a frog-legged position at the top of the mother's abdomen. The additional sterile drape (See appendix B) is then applied back over the operative field to maintain sterility. The advantage of this method is that the baby adopts a much more natural and comfortable position on the mother's chest, rather than sliding down towards her neck as with option 1.

Following delivery, the drapes are re-elevated to allow the operation to continue without compromising sterility.

Optimal cord clamping

Provided the neonate is in good condition with HR >100bpm, cord clamping should be delayed until at least one minute or until the cord stops pulsating for healthy term neonates or for up to three minutes in preterm neonates born in good condition.

Syntocinon can be given at the point at which the cord is ready to be cut. Administering syntocinon prior to this may cause separation of the placenta, and as the placenta is unable to be expelled from the uterus spontaneously during a CS, the uterus will be unable to contract to control bleeding from the placental bed whilst it remains in situ.

The effect of intravenous oxytocin on placental transfusion is unknown. The use of intramuscular uterotonic drugs before cord clamping is unlikely to have a major effect on placental transfusion [7].

There are no data on the effect of gravity on placental transfusion at Caesarean section. At vaginal birth, placing the baby on the mother's abdomen or chest has not been found to impact the volume of placental transfusion [7]. In light of this, the baby can be passed directly into skin-to-skin on the mother's chest, and need not be placed on her thighs at CS birth.

Partner cord cutting should be supervised by the midwife and surgeon. It is unnecessary for the midwife to routinely scrub unless neonatal resuscitation is anticipated ahead of delivery. Where any breach of sterility occurs, this should be rectified immediately to maintain the operative field.

The named midwife should not leave theatre until completion of the procedure, to ensure responsibility for the baby. Communication between the anaesthetist and midwife is important post-delivery to ensure adequate monitoring of baby (e.g. if midwife to leave theatre in order to check the placenta).

There are important exceptions to the principles where discretion is needed. If delivery complications are encountered or the neonate requires immediate medical attention, the baby should be transferred to the resuscitaire. In practice these cases will be rare.

All members of the multidisciplinary team should share in the same values, recognising that all staff play an essential role in supporting the desired birth experience.

At the theatre sign-out please complete the audit pro forma.

AUDITABLE STANDARDS

The following are areas of identified audit:

Compliance with antenatal counselling proforma

Uptake of Gentle method Caesarean birth

Patient experience and satisfaction

Rates of neonatal hypothermia with early skin-skin

Rates of surgical site infection

Mean blood loss

Implementation of the 4 core principles of Gentle method Caesarean birth

Appendix A: Antenatal Counselling of elective Caesarean birth

To be completed by booking Obstetrician at 36 week antenatal appointment

Counselling checklist	Tick
'Gentle method' Caesarean section discussed if appropriate (most uncomplicated cases – if doubt confirm with senior obstetrician)	
Patient information leaflet given	
Need for maintaining sterile field explained	
Manoeuvres explained: - Those associated with breech delivery - Possible use of Caesarean forceps	
Delayed cord clamping outlined	
Partner to cut cord if desired	
Possible need for resuscitation explained and that baby would need to go to resuscitaire	

Further comments and woman's wishes for birth:

Signed by doctor

Name

Grade

Date

Appendix B: Theatre checklist for Gentle method Caesarean birth

To be completed by midwife in charge after patient check completed

Before birth (to be completed at surgical pause)

	Tick
No contraindication identified by MDT If contraindication specify:	
Woman aware early skin-skin may not be possible if baby needs immediate attention	
Birth partner offered option of being present for spinal (at discretion of anaesthetist)	
Arm slipped out of theatre gown	
ECG leads placed on the back of mothers shoulders (red and yellow electrodes)	
Drapes to be dropped at point of delivery and clean sterile drape available if required.	
Warm towel ready to place over baby	
Cord scissors ready if partner cutting cord	
Table tilted to enable mother to see delivery (if wishes)	
Screen position clarified (down if desired)	
Optimal cord clamping? If not delayed please specify reason:	

After birth (prior to transfer out from theatre)

	Tick
Delivered onto maternal chest for early skin-skin and maintain until transfer to trolley	
Keep baby warm using warm blanket	
Screen replaced	
Maintain sterility	
Temperature, vitamin K, name band labels and measurements completed at bedside	

Components of Gentle method CS used	Yes/No
Slow delivery of baby	
Baby passed in to skin to skin contact with mother by surgeon	
Optimal cord clamping	

Maternal blood loss:

Document any variances:

Signed by Operating Surgeon or Midwife:

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Originator:	Drs J Ritchie, H Sunter, C Willocks and L Kellison (Patient feedback by Julie Keys)
Date:	November 2022
Ratified:	Maternity Clinical Effectiveness Subgroup (January 2023)
Review Date:	January 2025