TWIN PREGNANCY – INTRAPARTUM VAGINAL BIRTH

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP. The use of this LOP is optional according to physician preference as the evidence of neonatal benefit is under debate.

1. AIM

- Appropriate intrapartum management of a woman with a twin pregnancy

2. PATIENT

- Woman with a twin pregnancy in labour

3. STAFF

- Medical, nursing and midwifery staff

4. EQUIPMENT

- 16-gauge intravenous (IV) cannula
- Cardiotocograph (CTG) machine
- Ultrasound machine
- 5 umbilical cord clamps
- Amnihook
- Ventouse and forceps for instrumental birth (if needed)
- Episiotomy scissors

5. CLINICAL PRACTICE

- Notify obstetric medical team of admission, and request attendance to review
- Discuss with woman, on admission to Birth Unit (BU), her expectations for intrapartum care and birth, considering the birth plan discussed in the multiple pregnancy clinic or any previous obstetric consultations
- Notify Newborn Care of twin pregnancy admission (as attendance of neonatal team member at birth is required)
- Confirm fetal lie and presentation with palpation and ultrasound
- Recommend:
  - IV access, full blood count, and group and hold
  - Continuous electronic fetal monitoring for both twins
  - Epidural block in first stage labour to facilitate timely assisted delivery of the second twin
  - 10 units oxytocin in 500mLs sodium chloride, for augmentation in case of uterine inertia after the birth of the first twin
- Call senior obstetric staff and neonatal team to attend for the delivery of both twins
- Inform anaesthetic registrar on call for BU when twin birth anticipated
- Assess epidural effectiveness for second stage of labour through usual testing of dermatomes (as per obstetric epidural chart)
- Double clamp and cut cord following the birth of the first twin but do not deliver the placenta
- Label first neonate as twin one as soon as possible

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- Identify appropriate pathway for the birth of the second twin:

Pathway 1- Stabilisation of lie active Maternal effort	**Pathway 2** – Immediate breech extraction
1. Assess fetal lie and presentation of second twin with ultrasound. Ask for assistance to stabilise the lie as required 2. Await uterine activity 3. Assess fetal heart rate pattern, contractions and need for oxytocin augmentation as required 4. Perform amniotomy with a contraction for twin two when presenting part is engaged and lie is stabilised 5. Encourage maternal effort with pushing to deliver twin two 6. Assess need for instrumental birth or breech extraction if required (internal podalic version if required) 7. Double clamp each end of the cord of twin two for postpartum identification, and label second neonate as twin two as soon as possible	1. Assess fetal lie and presentation of second twin with ultrasound immediately after birth of twin one (if twin two cephalic as per pathway 1) 2. Plan for breech extraction if twin two not promptly cephalic and engaged 3. Reach into uterus, grasp fetal legs (external assistance to displace an unengaged fetal head to the side may be required, attempt internal podalic version) 4. Continue with total breech extraction. This is facilitated by a relaxed uterus +/- fundal/suprapubic pressure 5. Double clamp each end of the cord of twin two for postpartum identification, and label second neonate as twin two as soon as possible

- Recommend active management of the third stage with intramuscular (IM) 10 units of oxytocin and administration of prophylactic 40 units oxytocin infusion postpartum
- Deliver placentas with controlled cord traction
- Be aware of increased risk of postpartum haemorrhage (manage as per RHW Postpartum Haemorrhage LOP if occurs)
- Collect arterial and venous cord samples from each twin to assess for pH/lactate
- Send placenta(e) for histological examination with cords clearly labelled twin one and twin two

6. DOCUMENTATION

- Medical record

7. EDUCATIONAL NOTES

- A randomised control trial in 2013 in twin pregnancies (Dichorionic Diamniotic (DCDA)/Monochorionic Diamniotic (MCDA)) showed that if the first twin was in the vertex position, planned caesarean delivery did not significantly increase or decrease the risk of fetal or neonatal death or serious neonatal morbidity[6]
- A large prospective population-based cohort study found that planned vaginal birth for twin pregnancies with a cephalic first twin at ≥32 weeks gestation was associated with low composite neonatal mortality and morbility[5]
- A retrospective cohort study of 758 consecutive twins ≥ 35 weeks gestation showed that active management of the second twin delivery via planned breech extraction (mean intertwin delivery interval of 4.9 +/-3.2 minutes) to have low neonatal composite morbidity and low caesarean for the second twin. 657 were planned vaginal and 101 planned caesarean. Of the planned vaginal 78.4% delivered both twins vaginally (second via breech extractions unless cephalic and engaged), 21.1% had a caesarean during labour and 0.5% had a caesarean for the second twin. Intertwin delivery interval of less than five minutes correlated with better neonatal outcomes[10]

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- Generally, a trial of labour for uncomplicated DCDA or MCDA twins with a vertex first twin should be offered as long as an experienced obstetrician is present and an anaesthetist and emergency operating theatre facilities is immediately available[5,6]
- Complications associated with the delivery of the second twin include: malpresentation which can lead to trauma during delivery, cord prolapse, and premature separation of the placenta[6]
- The second twin must be monitored continuously and accurately during the interval between the first and second twin deliveries. Setting a specific time limit for the interval between the birth of twin one and twin two requires balancing the risks of early intervention by operative delivery and later intervention with increasing risks of fetal acidosis[7]. Retrospective studies of intertwin birth intervals have documented increasing rates of fetal acidosis and abnormal CTG tracings with increasing intertwin birth interval, particularly when > 30 minutes [7] although a causal connection was not shown[6,7]. A consultant obstetrician must attend for this stage of intrapartum management
- In general, an unplanned caesarean after vaginal delivery of the first twin occurs in <5%[5]. In non-cephalic second twin presentation, breech extraction is preferred, if necessary, after internal podalic version[5]. According to one study, active second-stage management is associated with good neonatal outcomes and a low risk of combined vaginal-caesarean delivery[8]
- A meta-analysis showed that although trial of labor with twins after previous caesarean delivery is associated with higher rates of uterine rupture compared with elective caesarean delivery, pregnancy outcomes and success rates are similar to a trial of labor after previous caesarean delivery in singleton gestations[9].
- The small number of women who decline the recommendation of an epidural block in labour, if adequately informed of the rationale and potential outcomes, should be supported with their decision making. Other options for pain relief (pudenal block or single shot spinal) if internal manipulation or urgent operative delivery of the second twin is needed should be discussed. This discussion needs to be clearly documented on the birth plan and in the medical record antenatally
- Women giving birth to twins are at increased risk of postpartum haemorrhage due to uterine atony and should have active management of the third stage and a prophylactic Syntocinon ® infusion[8]

8. RELATED POLICIES/ PROCEDURES/CLINICAL GUIDELINES

- Oxytocin for induction or augmentation of labour
- Twin pregnancy – antenatal care
- Third stage Management Following Vaginal Birth
- Fetal Heart Rate Monitoring – Maternity – MoH GL2018/025
- Placental Examination and Indications for Referral to Pathology
- Assisted vaginal birth guideline – SESLHDGL/050
- Postpartum Haemorrhage – Prevention and Management
- Breech Presentation at Term – Antenatal and Intrapartum Management
- Specialist Obstetrician – conditions and procedures requiring attendance

9. RISK RATING

- Low

10. NATIONAL STANDARD

- Standard 2 - Partnering with Consumers
- Standard 5 - Comprehensive Care

TWIN PREGNANCY – INTRAPARTUM VAGINAL BIRTH cont'd

11. REFERENCES

1. Maternal-Fetal Evidence Based Guidelines. Berghella, V (Ed.). UK Informa Healthcare, 2007.
2. RCOG Multiple Pregnancy 50th study group statement 2005
3. Dodd JM and Crowther CA. Evidence-based care of woman with a multiple pregnancy. Best Practice & Research Clinical Obstetrics and Gynaecology. 2005. 19(1): 131-153.
4. Conde-Aguldelo A, Belizan JM, Lindmark G. Maternal morbidity and mortality associated with multiple gestations. Obstet Gynecol 2000; 95: 899-904
5. Schmitz T, et al. Association between Planned Mode of Delivery and Neonatal Morbidity in Twins. JUMODA study Group. Obstet. & Gynecol. 2017 Jun; 129(6):986-995
6. Barrett JF, Hannah ME, Hutton EK, et al. A randomized trial of planned cesarean or vaginal delivery for twin pregnancy. N Engl J Med 2013; 369:1295.
7. Lindroos et al. The effect of twin-to-twin delivery time intervals on neonatal outcome for second twins. BMC Pregnancy and Childbirth 2018; 18:36
8. Fox NS, Silverstein M, Bender S, et al. Active second-stage management in twin pregnancies undergoing planned vaginal delivery in a U.S. population. Obstet Gynecol 2010; 115:229.
9. Kabiri D, Masarwy R, Schachter-Safrai N, et al. Trial of labor after cesarean delivery in twin gestations: systematic review and meta-analysis. Am J Obstet Gynecol 2019; 220:336.
10. Schmitz T, Carnavalet Cde C, Azria E, Lopez E, Cabrol D, Goffinet F. Neonatal outcomes of twin pregnancy according to the planned mode of delivery. Obstet Gynecol. 2008 Mar;111(3):695-703

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