Management of Twin and Multiple pregnancies guideline (GL928)

Approval

<table>
<thead>
<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternity &amp; Children’s Services</td>
<td>Chair, Maternity Clinical Governance Committee</td>
<td>5th April 2019</td>
</tr>
</tbody>
</table>

Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author, job title</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>June 2016</td>
<td>M Selinger (Consultant Obstetrician), Hazel Inkster (Practice Educator)</td>
<td>Reviewed – amendments made throughout &amp; Auditable quality standards updated</td>
</tr>
<tr>
<td>10</td>
<td>May 2017</td>
<td>C Harding (Consultant MW, P Bose (Consultant Obstetrician),</td>
<td>Reviewed and changes made throughout, particularly regarding referral antenatally also replaced appendix 2 with new proforma</td>
</tr>
<tr>
<td>10.1</td>
<td>Nov 2017</td>
<td>S Bisht (Consultant Obstetrician)</td>
<td>Minor changes made pg 3, 4, 6 &amp; 7</td>
</tr>
<tr>
<td>10.2</td>
<td>Oct 2018</td>
<td>B Chohan</td>
<td>Pg 2 – update to reflect steroids now not offered routinely but on case by case basis</td>
</tr>
<tr>
<td>10.3</td>
<td>March 2019</td>
<td>S Bisht (Consultant Obstetrician), C Harding (Consultant MW)</td>
<td>Reviewed, minor changes</td>
</tr>
</tbody>
</table>
Overview: Twin pregnancies are high risk and require consultant led antenatal care. Correct diagnosis of chorionicity in the first trimester is important and affects management. Monochorionicity (MC) occurs in a third of twin pregnancies. The risk of perinatal loss with twins is 3-4 times greater than with a singleton.

Antenatal Management (Appendix 1)
All women known to have a multiple pregnancy should be referred as soon as possible for antenatal care under a consultant. There is a patient information sheet outlining the care schedule for mothers with a twin pregnancy, and a check list sheet to be included in the hospital record. During the antenatal period the obstetrician will discuss the following:

Risks of multiple pregnancy
The woman should be informed of the increased risks to both her own health and that of the fetus / neonate with multiple pregnancy
Maternal morbidity – increased PET / APH / VTE/PPH
Prematurity - marked increase in preterm delivery rates compared to singletons. Approximately half will have delivered by 36 weeks
Steroids are not offered routinely to all women with multiple pregnancy, but on a case-by-case basis, for example PPROM, threatened/preterm labour or where early delivery is indicated or anticipated. Perinatal / infant morbidity – increased prematurity, growth problems and cerebral palsy
Role of USS – increased risk of structural abnormalities in monochorionic twins (need cardiac scan); increased risk of growth problems - impossible to assess growth clinically.
Risk Twin to Twin Syndrome only occurs in monochorionic twins (approx. 15% of such MC pregnancies will be complicated by TTTS).

Antenatal Care Schedule
All women with a twin pregnancy should be offered an ultrasound examination at 10–13 weeks of gestation to assess viability, chorionicity, major congenital malformation and nuchal translucency.
A photographic record should be retained, (in the ultrasound archive or in the case notes), of the ultrasound membrane attachment to the placenta.
If the pregnancy is thought to be monochorionic or if there is doubt in the diagnosis of chorionicity, the woman should be referred to a specialist without delay, as chorionicity is best determined before 14 weeks.
Ultrasound Diagnosis and Management of Twin Pregnancies

**Dating Scan or NT**
- 11 - 14 weeks

**Dichorionic**
- 2 placentae
- Lambda sign
- Thick dividing membrane

Refer to consultant ANC (any consultant)

Routine anomaly scan

Growth scans
- 4 weekly from 26 weeks

- Possibly **Monochorionic**
- 1 placental mass
- ‘T’ sign
- Thin dividing membrane

Refer to (SB/SA) scan clinic first available appt. for confirmation

ANC under care of SB

2 weekly scans from 16 weeks

Anomaly scan
- 20 weeks

Cardiac scan 24 weeks

**If no first trimester scan**
- 1 placenta, same sex
- treat as monochorionic

Aneuploidy screening in multiple pregnancy is managed by the Sonographers/ SCO’s according to the FASP recommendations.

**AN appointment in a consultant clinic if not already booked for consultant care**

Once a twin pregnancy has been diagnosed, the mother should be referred to a consultant clinic if not already under consultant care. For dichorionic pregnancies she should be referred to the consultant whose name is on the rota as ‘on call’ except those who live in the Newbury area who should be referred to WBCH clinic. For monochorionic pregnancies she should be referred to SB. In the absence of any worrying features, the hospital clinic appointment should be at 20 weeks.
Management of twin to twin transfusion
If there is a suspicion of TTTS, raised at a routine scan, the mother should be scanned as soon as possible by SB/SA. If the second scan confirms the diagnosis, the mother will be counselled and offered a referral to a tertiary service for assessment and possible treatment. Fetal and perinatal morbidity is high in this condition both with, and without, treatment.

Planning Delivery
All women with multiple pregnancies should be counselled regarding the risks and benefits of:

- **Quality statement** - Women with a multiple pregnancy have a discussion by 32 weeks with one or more members of the multidisciplinary core team about the timing and place of birth and possible modes of delivery so that a birth plan can be agreed.

- Mothers should be advised that the safest place for delivery is in a fully equipped, consultant led unit with appropriate neonatal services on site to cope with premature infants, not at home or in a midwifery led facility.

- There is no ‘requirement’ for regional anaesthesia in labour, but all mothers should be seen on admission by the duty anaesthetist. Overall, one mother in 13 will require a caesarean to deliver the second twin. Mothers where the second twin in non-cephalic may need either external or internal manipulation of their second twin before vaginal delivery, which requires a regional block to be in situ, and may be the most vulnerable to this intervention. For further anaesthetic information please see Anaesthetic guidance for twin delivery (GL950).

- **Timing / gestation** – In uncomplicated dichorionic twin pregnancies, induction is considered at 37 - 38 weeks if the leading twin is cephalic. In monochorionic twins, induction is usually considered at 36 – 37 if the leading twin is cephalic. In pregnancies where there are either, or both, concerns for maternal or fetal wellbeing, early delivery may be advised, the timing and mode being tailored by the clinical situation. Ensure the patient has had steroids prior to delivery – ideally allow 24 hours after the second dose of steroids for maximal benefit before delivery.

- Induction is carried out as per guideline with Propess (see Induction of labour & augmentation of PLRoM in prolonged pregnancy guideline GL861)

- Monoamniotic twins are usually delivered by EI LSCS @ 32 weeks of pregnancy.
**Care in Labour**

**Antenatal monitoring of twins (non-labour)**

All twins must have an ultrasound scan to establish the position of both fetal hearts prior to attaching the CTG monitor. A diagram should be made in the notes indicating which fetus is being monitored by which transducer.

- The heart rates should be 'separated on the CTG printout using the displacement of FHR tool on the machine.
- If at any time there are concerns regarding the fetal hearts (either abnormal trace or there is a suspicion that only one fetal heart is being recorded) immediate assistance from the obstetric registrar must be sought.
- If recording twin 2 is problematic Ultrasound should be used to ascertain the presence of the fetal heart, and CTG monitoring should be established.
- Two CTG labels should be used on both the CTG and in the notes, one for each twin, which are clearly labelled as either twin 1 or 2. Both labels should be signed or initialled by the assessor.

**Established labour twin monitoring**

- All twins must have an ultrasound scan to establish the position of both fetal hearts prior to attaching the CTG monitor. A diagram should be made in the notes or start of the CTG if using electronic records, indicating which fetus is being monitored by which transducer.
- CEFM of both twins when in active labour using the CTG equipment.
- The heart rates should be separated on the CTG printout using the displacement of FHR tool on the machine.
- Following rupture of membranes, the option to use a FSE (if over 32 weeks) to ensure continuous monitoring of both twins, is available.
- The CTG of both fetal hearts should be systematically and separately assessed and the ‘fresh eyes’ system instigated.
- If at any time there are concerns regarding the fetal hearts (either abnormal trace or there is a suspicion that only one fetal heart is being recorded, immediate assistance must be sought. If recording twin 2 is problematic Ultrasound should be used to ascertain the presence of the fetal heart, and CTG monitoring should be established.
Planning delivery

- There should be regular multi-disciplinary team discussions to optimize plans for labour and delivery. These should be discussed with the mother and her partner and evidenced on the Twin Checklist (appendix 2).

- The place of delivery should be assessed as suitable to promote safety and the mother’s experience. If this is the mother’s first baby she should be advised that delivery will take place in the operating theatre to minimise the risk of delay should intervention be required and to make use of the space and additional lighting.

- Prior to transferring the woman to theatre inform consultant obstetrician / anaesthetist / M/W in charge / NN team

- If the mother has previously given birth vaginally without complications, and the first twin is cephalic with no other abnormal clinical findings the delivery can take place in rooms 1 and 2, with the adjoining door open to accommodate all additional equipment. This decision lies with the Labour ward on call Consultant for that day.

- Ensure oxytocin infusion, sonic aid, USS and twin pack are available along with a 2nd resuscitare.

- There should be one midwife for each baby

- Avoid aortocaval compression. This will occur from the second trimester (that is from 16/40). Ask about symptoms of supine hypotension during pre-operative assessment. Be extra vigilant in multiple pregnancies or the obese. Remember to use a left tilt or a wedge. If possible use the left lateral position. Be careful about abdominal compression if using the prone position.

- Prepare neonatal resuscitare for the delivery (one per baby)

- The NN team should be called just prior to the delivery of the first baby. In the event of their being concerns about the baby or prematurity there should be one paediatrician or ANNP (advanced neonatal nurse practitioner) per baby.

Delivery of Twin 1

- The second stage should be managed entirely as would be appropriate for a singleton BUT there should be CEFHM of the co twin throughout. If there are any concerns for the monitoring of twin 2, consideration to expedite delivery of both twins must be made by the most senior obstetrician present
Following Delivery of Twin I

- Check time of delivery
- Ascertain position of twin 2 by USS
- Ensure that CTG is recording FH2
- Perform External Podalic version/ or an ECV if required. A team member to establish and stabilise longitudinal lie
- If FH normal – start Oxytocin infusion and await contractions (start at 2ml per hour and increase every 5 minutes until contracting 3 - 4:10) Careful palpation is essential to detect uterine hyperstimulation or a prolonged uterine contraction. In these circumstances the Oxytocin infusion rate should be stopped immediately and restarted ONLY WHEN TWIN 2 has a reassuring FHR.
- If there are any concerns for fetal wellbeing assess to expedite delivery either by vaginal or abdominal route. The obstetrician must decide on route depending upon fetal position and their own expertise in internal podalic version (IPV) with breech extraction (BE)
- If there are no immediate concerns, reassess progress of second stage for twin 2 @ 20 mins., checking uterine activity, descent of presenting part, bleeding

When to intervene for Twin 2

- If concerns with FH AT ANY STAGE
  - If no concerns for fetal wellbeing but no descent over next ten minutes (total about 30 mins. since delivery Twin I)
  - Assess reasons for delay
    - Position of Twin II
    - Drugs / dosage (need to increase Oxytocin?)
  - Decide on mode of delivery and proceed immediately

Third stage

- Bolus injection of an oxytocic (Oxytocin 5iu or 1 ampoule of Syntometrine)
- Increase Oxytocin infusion rate to 100ml/hr.
- Deliver placenta.
- If 1° PPH, manage as per guideline

Obtain paired cord gas samples for each baby and record the results in the maternity health record and in the neonatal record for each baby. **Fetal Blood & paired cord gas sampling (GL839).**
### Auditable Quality standards

1. Women with a multiple pregnancy have the chorionicity and amnionicity of their pregnancy determined using ultrasound and recorded between 11 weeks 0 days and 13 weeks 6 days.

2. Women with a multiple pregnancy have their fetuses' labelled using ultrasound and recorded between 11 weeks 0 days and 13 weeks 6 days.

3. Women with a multiple pregnancy are cared for by a multidisciplinary core team.

4. Women with a multiple pregnancy have a care plan that specifies the timing of appointments with the multidisciplinary core team appropriate for the chorionicity and amnionicity of their pregnancy.

5. Women with a multiple pregnancy are monitored for fetal complications according to the chorionicity and amnionicity of their pregnancy.

6. Women with a higher-risk or complicated multiple pregnancy have a consultant from a tertiary level fetal medicine centre involved in their care.

7. Women with a multiple pregnancy have a discussion by 24 weeks with one or more members of the multidisciplinary core team about the risks, signs and symptoms of preterm labour and possible outcomes of preterm birth.

8. Women with a multiple pregnancy have a discussion by 32 weeks with one or more members of the multidisciplinary core team about the timing of birth and possible modes of delivery so that a birth plan can be agreed.

9. Complete multiple pregnancy care plan and twin checklist for multiple pregnancies and place in maternal notes.

### References

1. Multiple pregnancy RCOG Study Group publication, RCOG Press 2006, Editors Mark Kilby, Philip Baker, Hilary Critchley and David Field


5. NICE Multiple Pregnancy: Twin or triplet pregnancies QS46 Sept 2013
Appendix 1 – Antenatal care plan for multiple pregnancy

Care plan for multiple pregnancies

<table>
<thead>
<tr>
<th>Patient name</th>
<th>Gestation:</th>
<th>Parity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affix patient label here</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ANTENATAL DISCUSSION (Before 26 weeks)**

- Information leaflet on multiple pregnancies given
- Explaned chorianicity
- Steroids given prior to delivery
- Serial scans:
  - 2 weekly from 16 wks if MCDA
  - 4 weekly from 26 wks if DCDA
- Cardiac scan at 24 weeks for all MC twins
- Risk of Twin-to-twin transfusion syndrome in MC twins (15%)
- Maternal morbidity (Hyperemesis/Aneamia/Preeclampsia/PH/VTE/PPH)
- Preterm labour (approx. 50% chance of delivery before 36 weeks)
- Perinatal morbidity
  - prematurity and complications, cerebral palsy, growth problems
- Twin class offered

**INTRAPARTUM CARE (Discuss at first antenatal visit & by 32 weeks)**

- Hospital birth recommended
- Discuss risks and benefits of different modes of delivery (tailored by clinical situation)
  - NVD
  - LSCS
- Timing for IOL in uncomplicated twin pregnancy (if leading twin is cephalic)
  - DC twins 37-38 weeks
  - MC twins 36-37 weeks
- Continuous monitoring in labour
- Early epidural in labour
- Management of second stage in theatre
- Active third stage

Completed by: __________________ Signature: __________________ Date: __________
Appendix 2 – Twin checklist

**Multiple Birth Checklist**

Please complete this checklist during labour to help you plan high standards of care.

A multidisciplinary discussion should take place after a change of staff (midwifery, obstetric or anaesthetic).

### First Stage of Labour

<table>
<thead>
<tr>
<th>On admission plan for labour discussed with consultant</th>
<th>Anaesthetist aware?</th>
</tr>
</thead>
<tbody>
<tr>
<td>obstetric registrar?</td>
<td>SCBU aware? (if appropriate)</td>
</tr>
</tbody>
</table>

Discussion with couple about plans for labour and delivery? □

- Patient info card given? □
- Wishes to have epidural during labour?...........................
- Place of delivery is theatre? (Recommended for primips and those with complications or non-longitudinal lie of second twin) □ Y / N
- Consent form signed? □ Y / N
- Place of delivery is rooms 1 and 2? (previous SVD with cephalic presentations and no additional complications) □ Y / N

Multidisciplinary discussion after each change of staff □ (as a minimum)

### Second Stage of Labour

Multidisciplinary discussion at start of second stage □

Plan to move to theatre when vertex visible (PO) or when appropriate (P1+) □

Plan to deliver in room 1 + 2 □

<table>
<thead>
<tr>
<th>Equipment ready?</th>
<th>Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resuscitaires x 2</td>
<td>Team Leader.................................................................</td>
</tr>
<tr>
<td>Scanner</td>
<td>Is consultant presence required?.................................</td>
</tr>
<tr>
<td>Oxytocin infusion</td>
<td>Name of second MW.......................................................</td>
</tr>
<tr>
<td>Twin pack</td>
<td>Partner ready □</td>
</tr>
<tr>
<td>NN Notes</td>
<td>SCBU aware □ (if necessary)</td>
</tr>
<tr>
<td>CTG transducers</td>
<td>Theatre aware and asked to keep staff to essential only □</td>
</tr>
<tr>
<td></td>
<td>Any other information..................................................</td>
</tr>
</tbody>
</table>

Roles (indicate who)

Delivery of twin 1........................................ Stabilising of twin 2........................... USS ..................................
Fetal heart of twin 2................................. Delivery of twin 2 ....................... (will depend on situation)