University Hospitals Plymouth NHS Trust

MATERNITY GUIDELINES

Multiple Pregnancy

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1. Background

Multiple pregnancies carry higher maternal and fetal risks than singleton pregnancies, depending upon their chorionicity, the number of amnions and the number of fetuses. The numbers of multiple pregnancies are also increasing due to increasing maternal age and reproductive technologies.

2. Aim

This guideline aims to set out the evidence-based management of these pregnancies, with a programme of care.

3. Important points

- All multiple pregnancies should be booked under consultant led care and recommended to deliver in a consultant led unit
- Routine midwifery contact should continue throughout pregnancy
- Monochorionic twins and higher order multiples will require referral to fetal medicine
- Delivery will be earlier than term depending upon type of multiple pregnancy
- All multiple pregancies increase the risk of pre-eclampsia
- Vaginal deliver should not be attempted unless the first twin is cephalic, and vaginal delivery is not advised in the case of MCMA twins or higher order multiples.

4. Diagnosis of multiple pregnancy

- Routinely occurs at the first trimester screening test
- Assessment should include:
    - Chorionicity
    - Offer of appropriate screening test
    - Dating of pregnancy - to be estimated by using the larger fetus in all multiple pregnancies
    - Labelling of twins as upper / lower, right /left to describe fetus 1, 2 (etc)
- A lambda sign = DCDA
- A T sign = MCDA
- Absence of a visible amnion requires referral to fetal medicine to assess for MCMA pregnancy

5. Screening of a multiple pregnancy for aneuploidy

- All twin pregnancies can be offered routine first trimester screening
- Higher order multiples can only be offered NT screening

6. Schedule of care

- All women who have a multiple pregnancy should continue to see their community midwife as per appointment schedule (see appendix 1)

7. Routes of referral

DCDA twins refer to twin clinic

Monochorionic twins refer to fetal medicine

Higher order multiples refer to fetal medicine for assessment – they will decide if need to stay with them or refer to twin's clinic

7.1 DCDA twins

First trimester screening

At diagnosis:

- Give TAMBA leaflets re: twin pregnancy
- Recommend patient to start aspirin 150mg at night until delivery. If additional risk factors to start before 16 weeks' gestation
- Recommend prophylactic iron supplementation
- Refer to Twins clinic
- Schedule of appointments in twin clinic

To be seen at:

- 20, 24, 28, 32, 36 weeks with growth scans as a minimum
- Determine fetal weight discordance at each scan (appendix 2)
- Consider referral to fetal medicine if discordance >/= 20%
- Consider FBC at 20 & 28 weeks
- Aim for delivery at 37 weeks' gestation
- Vaginal delivery can be considered if first twin cephalic

Discuss with the pregnant individual the increased risks associated with multiple pregnancies:

Maternal risks:

- Pre-eclampsia
- Anaemia
- Need for emergency LSCS for second twin
- Advise managed third stage
- Discuss benefits and risks of epidural in twin labour

Fetal risks:

- Increased risk of miscarriage / pre-term birth
- IUD
- Discordant growth
- Risk of Locking twins if first twin not cephalic at delivery (hence advise for LSCS in these instances)
- Fetal monitoring in labour
- Timing of delivery
- Plan for labour

7.2 MCDA twins

Refer Fetal medicine clinic

See from 16 weeks gestation at fortnightly intervals

Anomaly scans will be undertaken in fetal medicine

Counsel re: risks of twin pregnancy (as for DCDA twins) in addition to:

- 10-15% risk TTTS
- Risk if fetal demise of one twin
- Risk of fetal anomaly
- Recommendation for delivery at 36 weeks in uncomplicated MCDA pregnancies

7.3 MCMA twins

- Refer to fetal medicine, to be seen at the next available appt
- See in fetal medicine as soon as possible
- In fetal medicine confirm diagnosis by assessing for cord entanglement
- Anomaly scans will be undertaken in fetal medicine

Counsel re: risks of twin pregnancy (as for DCDA and MCDA) in addition to:

- Increased risk of twin IUD secondary to cord entanglement
- Risk of fetal anomaly
- Recommendation for delivery by LSCS between 32-34 weeks (most units will use 32 weeks with steroid cover).

7.4 Higher order multiples / conjoined twins

- Refer to fetal medicine for individualised plan of care
- See in fetal medicine as soon as possible
- Counsel with regard to general risks of multiple pregnancy
- Discuss selective / complete termination of pregnancy as part of management options
- Delivery will be timed similarly to that for mono-amniotic pregnancies, depending on factors such as growth, etc

8. Delivery

- For DCDA twins there is no advantage of vaginal vs caesarean, therefore unless maternal choice, vaginal delivery can be attempted providing the presenting twin is cephalic.

- For monochorionic pregnancies there is a theoretical risk of acute TTTS in labour, but this is currently not born out by the evidence. Individuals who are pregnant with an MCDA pair with the presenting twin cephalic can aim for a vaginal delivery.

- Where the presenting twin is not cephalic, in MCMA and higher order multiples vaginal delivery is not recommended. These women should be offered LSCS at an appropriate gestation.

- Consideration for a loading dose of magnesium sulphate should occur if delivery is planned prior to 34 weeks

- Steroids should be given if delivery is planned prior to 34 weeks

8.1 Caesarean section

- Timing will depend upon type and course of pregnancy.
- Steroids should be given if LSCS prior to 34 weeks
- A loading dose of magnesium sulphate should be considered if delivery is planned prior to 34 weeks' gestation
- The caesarean should involve an appropriately trained surgeon

8.2 Induction and labour

Please refer to induction of labour guideline for management of induction process

8.3 Management of labour

All women should be afforded routine intrapartum care in addition to the following:

On admission to labour ward in spontaneous labour the following should always occur: -

- The senior obstetrician on site must be informed of admission and there should be a documented plan for mode of delivery.
- Confirm plan of management from maternal records
- Establish gestational age accurately, check most recent haemoglobin level and review recent ultrasound scan
- Inform Neonatal Doctor (bleep 0423) of admission and neonatal unit if appropriate
- Determine cervical dilatation on vaginal examination.
- Once in established labour, prophylactic antacid should be commenced
- A scan should be undertaken on arrival to determine the presenting twin's lie and presentation.
- **If the presenting twin is not cephalic then this must be discussed with the consultant on call, and a decision made about route of delivery.**

8.4 1st stage of labour

Investigations

- Take blood for FBC, ensure valid group and save.

Monitoring

- Monitor both twins during labour with continuous CTG. The presenting twin should have an FSE applied (caution when less than 34 weeks' gestation) in presence of ruptured membranes and the second twin should be monitored using the ultrasound transducer.
- Ideally a 'twin' CTG monitor should be used and adjust the baseline 'offset' by + 20 BPM.
- Confirm that two different fetal heart rates are recorded and that each is different from the maternal heart rate. The timing of accelerations /decelerations should not be concordant in the two traces
- If the CTG of the leading twin is abnormal further information of fetal well-being can be obtained by fetal blood sampling.
- Fresh eyes review of the CTG should be performed at hourly intervals as per trust intrapartum guidance
- If the CTG of the second twin is pathological then it is usually necessary to perform a caesarean section.

Analgesia

- Offer early epidural
- Increases analgesia for potential category one deliveries / internal manoeuvres

Augmentation of labour

- The same criteria apply to a twin pregnancy as to a singleton.

8.5 2nd stage of labour

The following personnel should be present in Delivery Suite for delivery:

- Obstetric registrar and Consultant Obstetrician / post CCT fellow
- Anaesthetic registrar / Consultant anaesthetist
- Neonatal SHO / registrar / ANNP if indicated
- Co-ordinating midwife

Please consider whether a double neonatal team and two midwives should be available

Preparation for delivery

- An infusion of Oxytocin 3iu in 50ml of normal saline, should be available to commence if not already in progress.
- Prepare 40iu of oxytocin in 500mls of normal saline infusion for post-partum
- At the start of the active second stage the obstetric F2/ST1-2, Obstetric ST3 (or above) and consultant / post CCT fellow and anaesthetist should be asked to attend labour ward.
- The ultrasound scan machine should be in the room
- As the head becomes visible the neonatal SHO/ANNP/Registrar should be asked to attend the delivery room if indicated

Delivery of first twin

- All required personnel should be in the delivery room, this includes
  - Senior midwife
  - Neonatal team
  - Obstetric consultant / post CCT fellow
  - Obstetric registrar
  - Appropriate number of midwives to receive neonates / assist with management of the delivery of the second twin.
- The lie of the second twin is stabilised by the most suitable person present.
- The senior obstetrician decides who conducts the delivery of each twin.
- **If the first twin is not cephalic a vaginal delivery should not be attempted at term.**
- Syntometrine is NOT given.

Delivery of the second twin

The management of the lie, timing of membrane rupture and mode of delivery of the second twin is the responsibility of the most senior obstetrician present with the senior midwife present.

Only they decide who performs each step but when straightforward can delegate to more junior staff.

- Continue to stabilise the fetal lie
- Where necessary turn the fetus into a longitudinal lie, preferably cephalic but breech is acceptable.
- Start oxytocin unless already running and / or if not contracting regularly
- Perform VE as necessary
- When contractions are sufficient, and the presenting part has descended to at least the level of the ischial spines an ARM may be performed but is not essential.
- The senior obstetrician present determines who conducts the delivery
- If the presentation is by the breech the delivery must be conducted by the most experienced breech accoucheur present.
    - This may include a medical or midwifery trainee under direct supervision of a skilled breech accoucheur.
- Twin delivery interval should not exceed thirty minutes, beyond this decision should be made to either expedite delivery or accept delay
- Instrumental delivery can be performed if indicated
- Ensure the cords are clamped using different identifiable instruments.

If the lie is not cephalic:

- If the feet (or a foot) are presenting it is often easiest to grasp the feet (foot), prior to membrane rupture, perform an ARM and then carry out a breech extraction.
- If the membranes rupture and the fetal back is inferior it may be hazardous to perform an internal version and delivery should be by caesarean section.
- An attempt at internal podalic version by an obstetrician experienced in the procedure is acceptable.
- Syntocinon infusion may be needed to augment contractions for breech delivery/extraction

8.6 Third stage of labour

- After delivery of the second twin, Syntometrine should be administered and the placentae delivered together.
- A oxytocin infusion of 40 iu in 500ml of normal saline should be prepared and given following the delivery of the placentae
- All placentae should be sent to Pathology to confirm chorionicity.

Appendix 1.

Schedule of midwifery appointments

Gestation	DCDA	MC pregnancies / higher order multiples
16 weeks	X	X
22 weeks	X	X
26 weeks	X	X
30 weeks	X	X
34 weeks	X	X
36 weeks	X	X

16 week appointment:

- Check FBC and routine investigations
- Confirm has contact with hospital
- Make plan for enhanced schedule of care (due to increased risk PET)

Remaining appointments

- Routine ANC
- 26 weeks check FBC and Group and Save
- Plan for anti D if required
- Discuss delivery plan

Appendix 2:

Screening for selective fetal growth restriction in twins:

At each scan from 20 weeks onwards, calculate and document any weight discordance

Formula

(Larger twin EFW -smaller twin EFW/ larger twin EFW) x 100

Liquor volume should be assessed as deepest pool at each visit (not AFI)

Perform umbilical artery Dopplers if concerns re: growth

Alert doctor in clinic of growth discrepancy 20% or more, who will make follow up plan

Monitoring and Audit

Auditable standards:
Diagnosis of chorionicity
Appropriate referral
Timing of reviews
Delivery management

Reports to:
Clinical Effectiveness Committee – responsible for action plan and implementation of recommendations from audit

Frequency of audit:
Annual

Responsible person:
Obstetrician

Cross references

Guidelines can now be found on the network share (drive) 'G:\DocumentLibrary\UHPT Clinical Guidelines\Maternity'.

Maternity Hand Held Notes, Hospital Records and Record Keeping
Risk assessment and identification of low and high risk antenatal care pathways
Guideline Development within the Maternity Services
Augmentation of labour
General principles of intrapartum care and cord bloods

References

RCOG Green-top Guideline No. 51 2008, **Management of monochorionic twin pregnancy**. RCOG, London

National Institute for Health and Clinical Excellence (NICE) 2011, **Multiple pregnancy: The management of twin and triplet pregnancies in the antenatal period.** NICE, London.

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