COMPLICATIONS OF PREGNANCY

MULTIPLE PREGNANCY

ANTENATAL MANAGEMENT

KEY WORDS
Multiple pregnancy, vaginal birth, caesarean section, breech presentation, antenatal clinics, fetal surveillance, monochorionic, monoamniotic, dichorionic, diamniotic, CTG, VBAC, ultrasound, triplet

BACKGROUND INFORMATION
Multiple pregnancy is associated with increased risk of perinatal morbidity and mortality.\(^1\),\(^2\) Multiple gestation pregnancies are more likely to have complications of preterm labour, preterm premature rupture of the membranes, pre-eclampsia, pyelonephritis, and postpartum haemorrhage. Gestational diabetes is higher in twin and triplet pregnancies compared to singleton pregnancy.\(^2\)

There is insufficient data available to support inducing uncomplicated twin pregnancies prior to 37 weeks gestation.\(^3\)

Twin pregnancies are commonly divided according to zygosity or chorionicity as these have important implications for pregnancy and infant outcome.

COUNSELLING AND MANAGEMENT
Planned management and mode of delivery should be documented on the MR004 Obstetric Special Instruction Sheet after medical counselling with the mother.

PLANNED VAGINAL TWIN BIRTH
Birth of the healthy first twin presenting by vertex is associated with a low perinatal mortality and morbidity. However, some retrospective studies suggest there may be increased perinatal mortality due to intrapartum anoxia in the second twin at term. There have been no randomised controlled trials comparing planned vaginal breech delivery to planned caesarean section.\(^4\)

PREVIOUS CAESAREAN BIRTH
Limited data is available concerning vaginal birth after caesarean in twin births, and currently there are no published randomised controlled trials. Recent studies have shown a trial of labour with twins does not appear to increase maternal morbidity, and perinatal morbidity is uncommon in gestation more than 34 weeks.\(^5\) Other studies have found similar risk of uterine rupture to a singleton trial of labour,\(^6\) with no more likelihood failing a trial of labour or experiencing major morbidity.\(^7\)

The decision for trial of vaginal birth (VBAC) should be made in conjunction with the Consultant and the woman.
TRANSVERSE LIE OF THE PRESENTING TWIN
An elective caesarean is the recommended mode of delivery.\(^8\)

BREECH PRESENTATION OF THE FIRST TWIN
The recommended mode of birth is caesarean section.\(^8, 9\) A planned caesarean section for the singleton breech presentation at term results in lower perinatal morbidity and mortality when compared to a planned vaginal birth.\(^10\) Studies have found significantly more depressed Apgar scores when the presentation of the first twin is breech, weighs more than 1500g, and has a vaginal birth.\(^9\) See Clinical Guidelines Breech Labour and Birth – Quick Reference Guide
## Antenatal care

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<td>1 Routine antenatal investigations</td>
<td>Management as for a singleton pregnancy.</td>
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</table>
| 2 Referrals | Refer to the Maternal Fetal Medicine team (MFM) for the following:  
- Monochorionic monoamniotic twins  
- Monochorionic monoamniotic triplets  
- Monochronic diamniotic triplets  
- Dichorionic diamniotic triplets  
- Chorionic villus sampling (CVS) or amniocentesis  
- Structural or chromosome anomaly  
- Single fetal death on monochorionic twins  
- Suspected twin – twin transfusion syndrome (TTTS)  
- Severe early onset fetal growth restriction  
Offer genetic counselling prior to screening for aneuploidy with nuchal translucency (NT) measurement |
| 3 Frequency of antenatal clinic visits | Women with twin pregnancies without complications are seen:  
- 4 weekly until 28 weeks gestation  
- 2 weekly until 34 weeks gestation  
- weekly from 34 weeks gestation |
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| Women with high risk multiple pregnancy:  
- frequency of care is individualised. The Consultant must be involved in decision. | Women with twin and triplet pregnancies involving a shared amnion should be referred to Maternal Fetal Medicine at KEMH. |

Women with uncomplicated monochorionic triamniotic and dichorionic triamniotic triplet pregnancies should have at least 11 antenatal appointments. Combine appointment with scans from approximately 11 weeks – 13 weeks 6 days gestation and then at estimated gestations of 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 weeks.

Women with uncomplicated trichorionic triamniotic pregnancies should have appointments combined with scans from approximately 11 weeks 0 days to 13 weeks 6 days and then at 20, 24, 28 and 34 weeks. Offer an additional scan at 16 weeks.

4 Genetic Screening
Offer Nuchal translucency in the first trimester. Serum screening tests are not as sensitive in multiple gestations mainly due to limited available data. Serum levels markers are masked due to analytes from the normal and abnormal fetus both entering the maternal serum, and are in effect averaged together. In monochorionic twin pregnancy maternal serum values can be used as each fetus has the same risk of aneuploidy. The role of these serum values is less certain in dichorionic twin pregnancies.
### PROCEDURE

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<td>Where a first trimester screening for Down's syndrome cannot be offered to a woman with a twin pregnancy, consider second trimester screening and explain the potential problems of such screening including the increased risk of pregnancy loss associated with double invasive testing.</td>
<td>Second trimester serum screening for Down’s syndrome must not be used in triplet pregnancies.</td>
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### 5 Fetal Surveillance

#### 5.1 Ultrasound

- Perform an ultrasound at 12-13 weeks gestation.
  
  - The ultrasound at this time identifies whether the twins are dichorionic or monochorionic.

- Perform an anatomy scan at 19 weeks gestation.
  
  - Congenital malformations are more common in multiple than singleton pregnancies. The incidence of malformations are higher in monozygotic twins than dizygotic twins.¹

Arrangef serial growth and well-being scans according to chorionicity and clinical concern. Frequency of antenatal scans are generally:

- Monochorionic twins – screen for growth discordancy and TTTS every 2-3 weeks from 16-19 weeks gestation and then 2 weekly until delivery, Consider fetal echo at 22-24 weeks
  
  - Individualise frequency of ultrasounds according to fetal growth and well-being, umbilical Doppler assessment and maternal well-being.

- Uncomplicated dichorionic diamniotic twins – screen for growth 4 weekly from 26 weeks
  
  - If a woman with a twin or triplet pregnancy presents after 14 weeks 0 days, determine chorionicity at the earliest opportunity by ultrasound¹⁸.
If the woman books late in pregnancy manage the pregnancy as monochorionic until proven otherwise.\(^\text{18}\)

### 5.2 Cardiotocograph Monitoring (CTG)

CTG monitoring should be done for:

- Discordant growth – weekly after 34 weeks

Serial ultrasounds provides the best method for monitoring discordant growth, with evaluation of fetal well-being by use of CTG monitoring, biophysical profiles, and Doppler studies.\(^\text{12}\)

- Risk factors of fetal compromise

### 6 Diet and Nutrition

Offer referral to Dietician Services

- Multiple pregnancy increases calorie, protein, mineral, and vitamin requirements.\(^\text{1}\)

Recommend twice daily iron and folic acid supplementation.

- The risk for anaemia increases in multiple pregnancy.\(^\text{13}\)

Recommend multivitamin supplementation for woman with poor nutritional status.

- Iron deficiency anaemia is associated with pre-term delivery and low ferritin levels are linked to prematurity.\(^\text{14}\)

### Hypertension

Advise women with twin and triplet pregnancies that they should take 75mg of aspirin daily from 12 weeks until the birth of the babies if they have one or more of the following risk factors for hypertension:

- First pregnancy
- Age 40 years or older
- Pregnancy interval of more than 10 years
- BMI of 35 kg/m\(^2\) at first visit
- Family history of pre eclampsia

### 7 Parent Education

Advise Parent Education staff of all women with multiple pregnancies.

- Allows individualised contact to provide information of specific classes and links to specialised twins community groups and services.\(^\text{15}\)
Consider booking Parent Education classes early
Discuss analgesia during labour and birth, including epidural management

8 Timing and Mode of Birth
The optimal timing of birth is uncertain with clinical support for both elective delivery at 37 weeks gestation (either by induction of labour or caesarean section) and waiting for labour to start spontaneously

NICE\textsuperscript{18} recommends the following

- Monochorionic twin pregnancies; elective birth from 36 weeks gestation after a course of prophylactic corticosteroids has been offered
- Dichorionic twin pregnancies; elective birth from 37 weeks gestation.
- When appropriate obstetric experience is available, vaginal birth is the preferred mode of birth for all twin pregnancies that meet the following criteria:
  - Twins must be diamniotic
  - Twin 1 cephalic
  - Twin II is not > 500g heavier than twin 1
  - Neither twin has any evidence of fetal compromise requiring caesarean section.

Triplets pregnancies: elective birth from 35 weeks 0 days after a course of antenatal corticosteroids has been offered.

Multiple gestation pregnancy has a higher risk for preterm delivery.\textsuperscript{15}

Epidural analgesia is the preferred option for use intrapartum for multiple pregnancy

A multinational, multicentre randomised controlled trial assessing the mode of birth for women with twin 1 presenting cephalic and no contraindications to vaginal birth from 32 weeks of gestation, found planned caesarean delivery did not significantly decrease or increase the risk of fetal or neonatal death or serious neonatal morbidity, as compared with planned vaginal delivery.\textsuperscript{17}
REFERENCES (STANDARDS)


Do not keep printed versions of guidelines as currency of information cannot be guaranteed.
Access the current version from the WNHS website.

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