

HIGH ORDER MULTIPLE PREGNANCY – ANTENATAL CARE

This LOP is developed to guide clinical practice at the Royal Hospital for Women (RHW). Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- Assessment and management for woman with high order multiple pregnancy (HOMP)

2. PATIENT

- Woman pregnant with three or more live fetuses

3. STAFF

- Medical and midwifery staff
- Sonographers
- Social workers
- Genetic counsellors

4. EQUIPMENT Nil

5. CLINICAL PRACTICE

At first presentation

- Ensure good quality, accurate ultrasound has been performed to establish dates, chorionicity and amnionicity. This may require a repeat ultrasound and ideally be performed prior to ten weeks gestation
- Refer woman to the Department of Maternal Fetal Medicine (MFM) for information and counselling regarding HOMP. This may include non-directive counselling regarding multifetal reduction and neonatal consultation regarding perinatal outcomes
- Discuss options for aneuploidy screening. Consider referral to RHW genetic counsellor for clarification about options, as not all available options will be interpretable in these pregnancies
- Book early morphology ultrasound +/- aneuploidy screen between 11⁺¹ and 13⁺⁶ weeks gestation
- Recommend folic acid, iron, calcium and iodine supplements:
 - folic acid 500 mcg/day
 - calcium 1.2g/day
 - elemental iron 80-100mg/day
 - iodine 150mcg/day
- Consider low dose aspirin (100-150mg nocte) and calcium supplementation (1.5-2g nocte) for pre-eclampsia prophylaxis according to risk factors, commencing at 12 weeks gestation. Risk factors include:
 - first pregnancy with each new partner
 - age 40 years or older
 - pregnancy interval of more than 10 years
 - body mass index (BMI) ≥ 35 kg/m² at first visit
 - personal or family history of pre-eclampsia
- Consider dietician referral for BMI < 18 or > 30, specific nutrient deficiencies or dietary restrictions

CLINICAL POLICIES, PROCEDURES & GUIDELINES

Approved by Quality & Patient Care Committee
21 September 2017

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Antenatal Care - Department of MFM

- Perform ongoing serial growth and wellbeing ultrasounds according to the number of surviving fetuses and chorionicity:
 - Twins - refer to twin pregnancy LOP
 - Trichorionic Triamniotic (TCTA) triplets - every 3 weeks from 18-20 weeks gestation
 - Triplets with Monochorionic Diamniotic (MCDA) twin pair – every 2 weeks from 18-20 weeks gestation
 - Triplets with a Monochorionic Monoamniotic (MCMA) twin pair/triplets - every 1-2 weeks from 16 weeks gestation
- Perform fetal morphology ultrasound at 18-20 weeks with transvaginal cervical length assessment
- Review woman in MFM clinic:
 - at least once during first trimester
 - every 4 weeks thereafter until 18-20 week morphology ultrasound
 - every 2-3 weeks from morphology ultrasound until 28 weeks gestation
 - every week from 28 weeks gestation until birth
- Arrange routine neonatal review for woman with HOMP prior to 23 weeks gestation to discuss management in the event of preterm labour, and clearly document discussion and plan in medical record
- Perform routine screening for gestational diabetes at 26-28 weeks, or earlier if additional risk factors
- Arrange antenatal lactation clinic appointment after 24 weeks gestation in Maternity Outpatients department
- Consider social work consultation
- Recommend attendance at multiple birth antenatal education classes at RHW
- Advise woman of NSW Multiple Birth Association and other support networks

Birth planning

- Commence birth planning by the 24-week antenatal visit including:
 - counselling about increased likelihood of spontaneous preterm labour
 - preferred mode of birth
 - antenatal consultation with neonatal team who will provide written information regarding outcomes of prematurity
 - recommendation of antenatal steroids for elective caesarean section
- Advise woman birth via elective caesarean section is recommended at approximately:
 - 35 weeks gestation in an otherwise uncomplicated TCTA triplet pregnancy
 - 34-35 weeks gestation in an otherwise uncomplicated MC or DC triplet pregnancy
 - 32-33 weeks in a quadruplet pregnancy

6. DOCUMENTATION

- Integrated clinical notes
- Antenatal card
- Obstetric database

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7. EDUCATIONAL NOTES

- HOMP are most commonly trichorionic triamniotic (TCTA), three fetuses each with their own placenta, or dichorionic triamniotic (DCTA) monochorionic twin pair and “singleton”. Monochorionic high order multiples (three fetuses sharing one placenta) are extremely rare.
- HOMP are associated with a very high likelihood of premature delivery, increased fetal/neonatal and maternal complications.
- Maternal complications:
 - hypertensive disease of pregnancy
 - gestational diabetes
 - cholestasis
 - antepartum haemorrhage
 - risks associated with caesarean delivery
 - postpartum haemorrhage
- Neonatal complications:
 - preterm delivery
 - small for gestational age
- For triplets the mean gestational age at delivery is 32 weeks.
- Epidemiological studies suggest that the nadir for perinatal mortality for triplet pregnancies occurs at 34-35 weeks of gestation. However, there are no prospective trials to test the hypothesis that elective delivery at this gestation improves outcomes.
- The role of cervical screening for risk of preterm birth is not determined. Interventions, such as prophylactic cerclage, routine hospitalisation and bed rest, prophylactic tocolytics, and prophylactic Arabin pessary, have not proved to decrease neonatal morbidity or mortality and, therefore, should not be used in women with multifetal gestations.

Multifetal Reduction (MFR)

- This involves the termination in the first trimester or early second trimester of one or more fetuses in a multiple pregnancy. It is usually performed at 11-14 weeks by intracardiac injection of potassium chloride under ultrasound guidance.
- It increases the gestation age at birth on average 3-4 weeks.
- In pregnancies where a MFR has taken place before 20 weeks, registration of the demised fetus as a stillbirth is not required.
- The most common scenario is the reduction of a TCTA pregnancy to DCDA twins.
- There are no randomised controlled trials (RCTs) to evaluate the risks and benefits of MFR. The decision to accept or decline MFR rests solely on the woman's preference and counselling should be non-directive.
- A systematic review calculated that in TCTA triplet pregnancies, MFR to twins compared with expectant management results in:
 - Higher rate of pregnancy loss before 24 weeks (8% vs 4%)
 - Lower rate of preterm delivery < 32 weeks (10% vs 27%)
 - Higher median birth weight (2300g vs 1760g)
 - Prolongation of pregnancy by about 3 weeks (36 versus 33 weeks)
 - Number needed to treat: Seven MFR would be needed to prevent one early preterm delivery < 32 weeks
 - Number needed to harm: 26 MFRs would result in one additional pregnancy loss < 24 weeks

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- Assuming similar survival and disability rates from premature singletons, MFR could reduce the risk of severe disability from about 1.5% to 0.6%.
- However more recent case series have not found a difference in survival with MFR, despite a reduction in prematurity.
- Studies using standard psychological tests to assess the emotional state of the woman after MFR have not identified any serious long-term psychological sequelae

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Twin pregnancy – Antenatal Care guideline
- Twin pregnancy - Intrapartum Vaginal Birth guideline
- Monoamniotic Twins, Management
- Referral to the Department of Maternal Fetal Medicine: Fetal Indications
- Corticosteroids for woman at risk of preterm birth or with a fetus at risk of respiratory distress – Antenatal
- Magnesium sulphate prior to preterm birth for fetal neuroprotection
- Hypertension – Management in pregnancy
- Severe and/or urgent hypertension in pregnancy guideline
- Small for gestational age (SGA) fetus screening and management – Singleton fetuses
- Anaemia and haemoglobinopathies in pregnancy
- Gestational diabetes mellitus management (GDM) policy SESLHAPD/282

9. RISK RATING

- Low

10. NATIONAL STANDARD

- Comprehensive Care - CC

11. REFERENCES

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- Perinatal outcomes in multifetal pregnancy following fetal reduction Neda Razaz, Tehila Avitan, Joseph Ting, Tracy Pressey K.S. Joseph *CMAJ* 2017 May 8;189: E652-8. doi: 10.1503/cmaj.160722

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