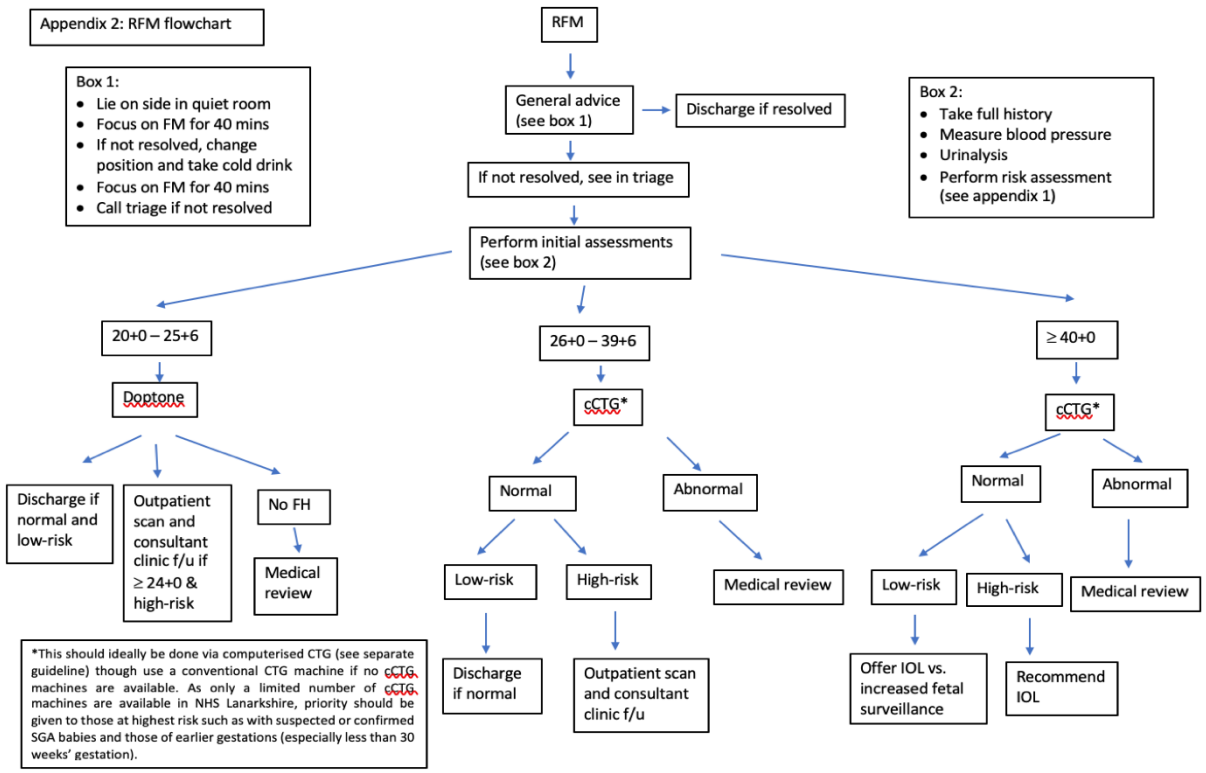
The Management of Women Presenting with Altered/Reduced Fetal Movements

TARGET AUDIENCE	Medical staff
PATIENT GROUP	Pregnant women

Summary



Management of Women Presenting with Reduced Fetal Movements

Introduction

The presence of fetal movements is considered a healthy and reassuring sign in pregnancy. Movements are usually first perceived by a mother by 20 weeks. Maternal perception of reduced fetal movements is a common unplanned presentation to maternity units across the UK. Women presenting with reduced fetal movements have a higher risk of stillbirth, fetal growth restriction, fetal distress and preterm birth. All healthcare professionals involved in providing antenatal care have a responsibility to be aware of these risks and to be aware of the necessary steps to take if this history is confirmed. Investigation and management of reduced fetal movements aims to exclude intrauterine death and to identify women at high-risk of the above complications. Local and national guidelines have been introduced to improve the investigation and management of pregnancies complicated by maternal perception of reduced fetal movement and to reduce the rates of the above complications. Large peer-reviewed studies such as the AFFIRM study failed to show a statistically significant reduction in stillbirth with a reduced fetal movement care package including induction of labour at 37 weeks for high-risk women although this was shown to improve the detection of small for gestational age babies. It also demonstrated an increased rate of operative delivery and prolonged neonatal admissions in the intervention group. It is therefore importance to find a strategy to be able to identify high-risk pregnancies whilst avoiding unnecessary interventions.

Abbreviations

- AFFIRM – Awareness of fetal movements and care package to reduce fetal mortality
- APS – antiphospholipid syndrome
- CS – caesarean section
- cCTG – computerised cardiotocography
- CTG - cardiotocography
- FM – fetal movements
- GAP – Growth Assessment Protocol
- BP – blood pressure
- FH – fetal heart
- IOL – induction of labour
- IUD – intrauterine death
- NFM – no fetal movements
- PAPP-A – pregnancy associated plasma protein A
- PCR – protein creatinine ratio
- PPH – post-partum haemorrhage
- RFM – reduced fetal movements
- SB – stillbirth
- SFH – symphysial-fundal height
- SGA – small for gestational age
- ST – specialty trainee
- VBAC – vaginal birth after caesarean

Aims

- To give healthcare professionals recommendations on how to assess and manage women presenting with RFM in both the community and hospital healthcare settings.

- To review the risk factors for RFM in pregnancy and factors influencing maternal perception.
- To ensure an efficient service by reducing inappropriate investigation and admission

Scope

- This guideline should be used by all healthcare professionals providing care to women within NHS Lanarkshire who complain of changes in their normal fetal movement pattern.
- Applies to singleton pregnancies only.

Definition of a fetal movement

Fetal movements can be kicks, flutters, swishes or rolls. They are usually perceptible by the mother by 20 weeks. They may plateau from 32 weeks but there is no reduction in the third trimester. There is no local or national agreement on what exactly constitutes reduced fetal movements. However, a sudden reduction or cessation of fetal movements is potentially clinically significant. Historically, healthcare professionals used formal ways of counting movements such as by using kick charts. However, this is not now recommended and instead it is advised to be guided by the individual mother's perception of what constitutes reduced movements.

Factors influencing maternal perception of fetal movements

- Anterior placenta – may limit perception of movements up to 28 weeks.
- Fetal presentation – this does not affect maternal perception of fetal movements.
- Fetal position – this may have an effect. Despite being seen on scan, women were unable to feel movements in 80% of cases if the fetal spine was anterior.
- Major fetal anomalies – may reduce fetal activity (though excessive movements have been reported in anencephalic fetuses).
- Steroid administration – observational studies have demonstrated that steroids can alter movements for 48 hours. Healthcare professionals should NOT use this to account for reduced movements.
- Fetal sleep cycles – these usually last 20-40 minutes. They rarely exceed 90 minutes.
- Smoking – this increases maternal carbon dioxide level from 30 weeks and can reduce fetal respiratory movements.
- Sedating drugs – alcohol, benzodiazepines and opioids can cause short-term reductions in fetal movements.

Risk factors for stillbirth and fetal growth restriction

See appendix 1

Antenatal care

- All pregnant women should be routinely provided with verbal AND written information regarding fetal movements in pregnancy.

- The named community midwife should be responsible for directing all women to the following RCOG patient information leaflet during pregnancy before 26+0: www.rcog.org.uk/en/patients/patient-leaflets/your-babys-movements-in-pregnancy/.
- At 22-23 weeks' the community midwife should give all women a nurture ribbon whilst discussing fetal movements in pregnancy utilising teach-back methodology to assess understanding.
- All women should be advised that there is no agreed definition of reduced fetal movements.
- All pregnancy women should be advised to contact their community midwife or maternity triage if they have concerns about fetal movements.
- It should be highlighted to all women routinely that they should not wait to call for advice if they are ever worried about fetal movements. For example, if a woman id concerned about her baby's movements but has an appointment with their midwife the following day, they should NOT wait until the scheduled appointment and they should seek advice immediately.
- Midwives and obstetricians should ask about fetal movements at EVERY consultation with all pregnant women. This should be documented on Badger.

Advice for women reporting fetal movement concerns

- seek a quiet area and lie on their side.
- focus on the baby's movements for 40 minutes – this period should be uninterrupted, quiet and free from distractions (such as mobile phones).
- If the woman is still concerned after 40 minutes, she should change position, take a cold drink and continue lying on her side for a further 40 minutes.
- If the woman is still concerned after a further 40 minutes, she should immediately call her community midwife or maternity triage.
- Women should be offered to attend maternity triage who report **no** fetal movement when they have been previously aware of fetal movement.

Assessment of the woman presenting with abnormal fetal movements

- Detailed history:
  - What is her usual pattern of movements?
  - What is the change to her usual pattern?
  - When did the change occur?
  - Any response to conservative measures?
  - Is this the first time this has happened?
  - Any other symptoms or concern?
- Palpate the abdomen and, if required as per the SGA guideline, measure symphysial-fundal height in those presenting at ≥ 26+0 (if they have not had this done in the last 14 days) and plot on GAP chart.
- Measure blood pressure and compare this to booking blood pressure.
- Perform urinalysis and send protein-creatinine ratio if ≥ 1+ of protein.
- Ascertain fetal viability by auscultating the fetal heart (by hand-held Doppler or Pinard stethoscope).
- Perform risk assessment using proforma (see appendix 1).
- Perform or arrange CTG at ≥ 26+0 to assess fetal heart rate in accordance with national guidelines. This should ideally be done via computerised CTG (see separate

guideline) though use a conventional CTG machine if no cCTG machines are available. As only a limited number of cCTG machines are available in NHS Lanarkshire, priority should be given to those at highest risk such as with suspected or confirmed SGA babies and those of earlier gestations (especially less than 30 weeks' gestation).

Initial management

- Low-risk women (no risk factors):
  - If the fetal heart assessment is normal and the woman subsequently becomes aware of a normal movement pattern, she can be discharged with reassurance and advice about monitoring her movements.
  - If the woman is low-risk but meets any of the following criteria, she should be treated as **HIGH-RISK** (see below):
    - is still not reassured by her baby's movements or
    - she presents with any further episodes of RFM or
    - there are abnormalities on scan or cCTG or
    - there are other obstetric concerns (such as hypertension) or
    - the FH cannot be auscultated.
- High-risk women:
  - Refer to triage (if not there already)
  - Ensure that all assessments (as described in the "Assessment of the woman presenting with abnormal fetal movements" section above) have been performed
  - Request or perform ultrasound scan for fetal growth, liquor volume and umbilical artery doppler if >/= 24+0
  - Refer to the flowchart on page 1 for ongoing management

Ongoing management

- If assessments (including cCTG) are reassuring, discharge the patient home with worsening advice.
- If required, growth scans should ideally be performed within 1 working day. It is recognised that capacity within the scan department may not allow this so if this is the case, request the next available appointment.
- If the woman has had a normal growth scan within the last 14 days, no further scan is required.
- If the woman does not have any risk factors but is still not reassured by a normal pattern of fetal movements, she should be treated as high-risk and a growth scan requested.
- If there are cCTG or scan concerns at any time, request an urgent review by medical staff (ST2 trainee or above).
- If a woman presents with reduced movement at ≥ 26+0 and has any risk factors, she should have a telephone consultation at her local consultant antenatal clinic to discuss a management plan.

Delivery planning

<u>General principles</u>

- IOL is associated with increased risk of obstetric intervention.
- This includes caesarean section, instrumental delivery, perineal trauma and post-partum haemorrhage.
- This also increases the risks in future pregnancies such as stillbirth after caesarean section.
- The decision to offer IOL must take these aspects of care into account.
- Deciding to offer IOL should take into account patient autonomy, the risk of failed induction and cervical favourability.
- Offering ultrasound and CTG surveillance should be offered as an alternative to IOL where appropriate.
- The term 'recurrent RFM' is confusing and should be avoided. Instead, healthcare professionals should refer to the number of episodes of RFM a patient has had. By local agreement, when deciding on the nature of follow-up for a patient with more than one episode of RFM, a period of more than 6 weeks between episodes should be considered less clinically significant.

Suggestions

- If IOL is offered at any time for RFM, it should be started with 48 hours of the decision being made.
- High-risk women should be offered IOL with any presentation of RFM ≥ 40+0 though the relative risks and benefits should be discussed with the patient and should only be offered after cervical assessment.
- Any woman presenting with her second or more episodes of RFM can be offered IOL from 40+0.
- High-risk women and women presenting with ≥ 2 episodes of RFM between 37+0 and 39+6 should be offered a cervical assessment. If the cervix is favourable, IOL can be offered as above. If not, consideration should be given to offering ultrasound surveillance and discussion with their own consultant.
- Women with previous CS requesting vaginal birth after caesarean (VBAC) can be offered Cook's balloon IOL following discussion of the relative risks and benefits (including uterine rupture).

Other situations

- RFM between 20+0 and 23+6 – perform full antenatal check and auscultate the fetal heart using a Doppler hand-held device. Do not perform CTG or ultrasound for these women.
- RFM between 24+0 and 25+6 – as above. Do not perform CTG for these women. If there is clinical suspicion of FGR or if the woman is high-risk, consideration should be given to the need for ultrasound assessment.
- No fetal movements by 24+0 – this is abnormal and referral should be made to a scanning obstetric consultant for ultrasound assessment to look for evidence of fetal neuromuscular conditions.
- Post-dates pregnancy is a risk factor for placental insufficiency and any woman presenting with RFM in a post-dates pregnancy should be considered high-risk and should be offered immediate delivery.
- Multiple pregnancy – these are high-risk pregnancies and, with regards to women reporting RFM, need to be treated differently to singleton pregnancies. All women,

with any type of multiple pregnancy, reporting RFM after 20 weeks' should be asked to attend immediately for further assessment. Depending on gestation, this should be to ascertain fetal viability (hand-held doppler vs. cCTG in the first instance) and for an individualised senior medical review including consideration of an ultrasound. Monochorionic twin pregnancies should ideally be scanned within 24 hour of presentation with RFM to assess for signs of acute twin-to-twin transfusion syndrome.

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Appendix 1: Risk factors for stillbirth and fetal growth restriction

A woman should be considered 'high-risk' if any of the following risk factors are present:

- Maternal age ≥ 40
- Maternal age < 16
- Essential hypertension
- Pregnancy-induced hypertension
- Pre-eclampsia
- Diabetes mellitus/gestational diabetes
- Smoker
- Previous stillbirth
- Current growth-restricted baby
- SFH measurements < 10th centile
- Previous growth restricted baby
- Low PAPP-A (< 0.415 MoM)
- Renal impairment
- Antiphospholipid syndrome
- Maternal thrombophilia
- Antepartum haemorrhage
- Maternal alcohol/illicit drug use
- BMI≥35
- Congenital abnormality
- ≥ 2 episodes of RFM (in the last six weeks)
- Multiple pregnancy
- Post-dates pregnancy
- Asylum seeker

A woman should be considered 'high-risk' if ≥ 3 of the following risk factors are present:

- Maternal age between 35-39
- IVF pregnancy (singleton)
- Nulliparity
- BMI<17or25.0–34.9
- Previous pre-eclampsia
- Pregnancy interval < 6 months
- Pregnancy interval ≥ 60 months
- DNA'd ≥ 2 consecutive antenatal clinic appointments
- Social work input eg. safeguarding concerns

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