Management of reduced fetal movements – working towards consensus

Transforming Maternity Services Mini-Collaborative
WebEx 29th April 2013
We are challenged by the women we serve to put what we know now into action.

Reduced fetal movements
Undiagnosed fetal growth restriction
ENORMOUS PROMINENT FISTULA FORMATION IN THE LOWER PART OF THE ABDOMINAL WALL.

PRESENTATION:
- Fracture
- Mechanism:
  - Driver in RTA
  - Airbag deployed
  - Friction burns to buttock and leg.

MEDICATIONS:
- None noted.

RE-TRIGG:
- None noted.

ACCOMPANIED BY:
- None noted.

NEXT OF KIN:
- None noted.

PARENTAL RESPONSIBILITY:
- None noted.

OBSERVATIONS / INVESTIGATIONS:

<table>
<thead>
<tr>
<th>TIME</th>
<th>TEMP</th>
<th>PULSE</th>
<th>B.P.</th>
<th>RESP</th>
<th>PUPS</th>
<th>O2 SAT</th>
<th>PEAK FLOW - PRE</th>
<th>PEAK FLOW - POST</th>
<th>B.M.</th>
<th>CAP REFILL</th>
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| 01/4 | Covered | Needs Booster | Needs Course | Unsure | Other Info / Allergies / Al

TETANUS STATUS:
- Covered
- Needs Booster
- Needs Course
- Unsure

MANUAL HANDLING RISK ASSESSMENT CATEGORY:
- Manual Handling Risk Assessment Category

WEIGHT:
- 3.5 kg

PAEDIATRIC PAIN SCALE:
- 1/10
Practical implementation of the RCOG Green-top guidelines

• The issues
• Policy Exemplar Guide on RFMs for Wales
• Next steps
• PEGS and beyond
Background: ↓ Fetal movement (s)

- A significant ↓ or sudden alteration in fetal movement is a potentially important clinical sign
- ↓ or absent fetal movements may be a warning sign of impending fetal death (USS)
- Association between RFM and poor perinatal outcome
- Majority of women (55%) experiencing a stillbirth perceived a reduction in fetal movements prior to diagnosis.
Abnormal Umbilical Artery Doppler

Decreased abdominal growth

Hypoxia – increased cerebral blood flow

Increased right heart strain

Biophysical profile score / liquor

Abnormal fetal heart rate

Schematic of optimal placental function against time and the approximate order in which clinical abnormalities might be found.

The rate of slope (rate of deterioration) varies between individuals.

(Modified from Prof David James).
Focus on: Reduced Fetal Movements

Scoping exercise - fetal movements

- All Health Boards report written policies, but several draft format
- Refer to the RCOG Green-top
- Document response each antenatal visit to specific questioning about fetal movements
- Referral for CTG after one episode of RFM – home or DGH.
- Scan if 2nd episode of RFM
Learning session 5

- Agreed that a significant ↓ or sudden alteration in fetal movement is important
- Inappropriate clinical response to a maternal perception of RFM is too common
- THIS IS ABOUT GETTING IT RIGHT THE FIRST TIME
Policy Exemplar Guide

• A PEG on which to hang local practice or guidance to minimise variation and risk and to optimise intervention rates for the benefit of women, their families and society in general

• Based on RCOG Green-top, sets boundaries and a welsh consensus

• Desirable – now versus working towards
Can you make a difference?

• 1/3 stillbirths have substandard care—appropriate clinical response to a maternal perception of RFM was common
• 20% are < 28 weeks
• Norway has ↓↓ stillbirth rates
• Consistency and a reduction of variation in objective assessments may help even more?
The can of worms? RCOG 2011

- Cardiotococographic (CTG) monitoring of the fetal heart rate should be used if the pregnancy is over 28 weeks of gestation and there is still a decrease in fetal movements after fetal viability has been confirmed. CTG monitoring for at least 20 minutes can provide an easily accessible means of detecting any problems. IUGR excluded?
Abnormal Umbilical Artery Doppler
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The contradiction?  RCOG 2011

- Ultrasound scanning can also be used as part of the preliminary investigations of a woman reporting RFM if the perception of RFM persists despite a normal CTG.
- Scan after 1 or 2 episodes?
- When?
One Count or Two? RCOG 2011

- Women who report RFM on two or more occasions are at an increased risk of a poorer perinatal outcome - stillbirth, fetal growth restriction and/or preterm birth.

- Women should be reassured that 70% of pregnancies with a single episode of RFM are uncomplicated – but 30% have complications!
Focus on: Reduced Fetal Movements

Policy Exemplar Guide - RFM

- Antenatal discussion about stillbirth and what can be done to prevent it
- Any change in movements
- Same initial response to all women
- Demographics
- Risk factors
- Aim to cut undiagnosed placental dysfunction
Talking stillbirth

- Stillbirth in the vernacular
- Risk 1:200
- 10 x more common than cot death
- Many ARE preventable
- Sands / DOH / WISR
- RCOG / medical & midwifery curriculae
- Best practice / information as it develops
Fetal movements

- Changes
- Not absolute
- No kick charts – unless ‘aide memoire’
- No reduction at term
- Uncertain – side / eat
- Certain = act NOW
- 24/7 service
Initial response to ALL women

- Take concerns seriously
- See / listen in (local policy)
- RFM is a risk factor in itself
- Assessment of EXTRA risk factors
- CTG – at or over 26 weeks
- Assessment of growth
- Customised SFH charts
- USS if not had AC / Doppler / liquor within 2/52
Scanning

- If CTG not normal – admission / delivery / immediate scan
- If CTG normal, but extra risk identified – scan within 24hrs or monitor until can do
- Do this also if on-going maternal concerns
- If no extra risk and feeling better, arrange scan at interval, but return if repeat RFM (local arrangements – see delivery)
Risk factors

- Conventional / local list
- Repeated RFM
- RFM itself
- BMI > 30
- Smoking
Delivery

• Affected by gestation
• Steroids if pre-term (what if maternal infection eg GBS?)
• Term – IOL OR intensive and regular monitoring / BPP to minimise chance that miss placental dysfunction
Gestation

• We must respond to ALL women for whom an intrauterine death is a stillbirth because de facto these were potentially viable babies ex-utero

• Between 26 and 28 weeks, the CTG needs careful interpretation of abnormalities – autonomic maturity differs

• Decelerations are ‘normal’ <26 weeks, but there is the option for admission, steroids and ↑ surveillance
Attends with first presentation of reduced fetal movements (RFM) at >28th weeks of gestation

Detailed clinical history including risk factors for stillbirth and fetal growth restriction (FGR)

- History confirms RFM
- History does not confirm RFM

Auscultate with handheld Doppler to exclude intrauterine fetal death (IUFD)

- FH not present on auscultation
  - Immediate ultrasound to exclude/diagnose IUFD
  - Suspicious or pathological fetal heart rate pattern
    - IUFD
    - Manage as per unit protocol
  - Ultrasound for amniotic fluid volume/abdominal circumference/estimated fetal weight
    - Abnormality detected on scan
    - Normal scan

- FH present on auscultation
  - Cardiotocograph to exclude imminent fetal compromise
    - Normal fetal heart rate pattern
    - Perception of RFM resolved and no risk factors for FGR/stillbirth
      - Reassure
      - Give advice re: further episodes of RFM
      - If unsure whether fetal movements are reduced, focus on fetal movements for 2 hours
      - If they do not feel more than 10 movements in 2 hours, contact maternity unit
    - Continue with RFM or risk factors for FGR/stillbirth
  - Continue with RFM or risk factors for FGR/stillbirth

Routine antenatal assessment
Give advice re: further episodes of RFM
If unsure whether fetal movements are reduced, focus on fetal movements for 2 hours
If they do not feel more than 10 movements in 2 hours, contact healthcare provider
Attends with first presentation of reduced fetal movements (RFM)

Detailed clinical history including risk factors for stillbirth and fetal growth restriction (FGR)

History confirms RFM

Auscultate with handheld Doppler to exclude intrauterine fetal death (IUFD)

FH not present on auscultation

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IUFD

Suspicuous or pathological fetal heart rate pattern

Ultrasound for amniotic fluid volume/abdominal circumference/estimated fetal weight

Abnormality detected on scan

Does not distinguish 1st episode as different

Ultrasound for amniotic fluid volume/abdominal circumference/estimated fetal weight

Abnormality detected on scan

Normal scan

If sure that RFM – contact immediately 24/7

Talk stillbirth

If unsure whether fetal movements are reduced, focus on fetal movements for 2 hours

If they do not feel more than 10 movements in 2 hours, contact healthcare provider

Normal fetal heart rate pattern

Perception of RFM resolved and no risk factors for FGR/stillbirth

Reassure

Give advice re: further episodes of RFM

If unsure whether fetal movements are reduced, focus on fetal movements for 2 hours

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Talk stillbirth

What happens to the 30% with complications?
Scottish Research Study

- Scotland & Ireland 23 units
- Randomised step cluster study: 3 units every 4 months
- 3 yr study – approx
- Interventions yet to be agreed
- Based on Norway study: 30% decrease SB (high risk women only)
- Invitation to Wales: decrease time, increase power
- ?effect on any Welsh initiative
Next steps

- Circulate firmer draft PEG RFMs – can you live with or aspire to this?
- Work on appropriate information / communication
- PI each HB and co-investigators each maternity service
- Standardising assessment of fetal growth – clinically and on USS
If we can improve care for one woman, then we can do it for ten. If we can do it for ten, then we can do it for a 100. If we can do it for a 100, we can do it for a 1000. And if we can do it for a 1000, we can do it for every woman in Wales.

Faculty Lead: Philip Banfield. Email: philip.banfield@wales.nhs.uk
Programme Manager: Cath Roberts. Email: maternity.collaborative@wales.nhs.uk