NEW ZEALAND COLLEGE OF MIDWIVES (INC)

Consensus Statement

Assessment of fetal wellbeing during pregnancy

Ratified Special General Meeting February 22, 2012

The New Zealand College of Midwives considers that assessment of fetal wellbeing during pregnancy to identify those babies at risk is a routine part of midwifery care [1]. Full assessment requires consideration of the individual woman and combinations of assessment techniques to detect deviations from the normal.

The focus of maternity care must be on the promotion of, and support for pregnant women's health and wellbeing, and if that is achieved, fetal wellbeing will be a consequence in most cases [2].

There is emerging evidence that the use of individualised fetal growth charts (which incorporate fundal-symphysis height measurements) may both reassure a woman that her baby is growing well and alert the midwife and the woman to possible concerns regarding the baby's growth [3-5].

Rationale

Physical identification and assessment of the position, growth and wellbeing of the baby by palpation is an integral and highly valued part of midwifery practice. It is also a time for the woman and midwife to discuss the developmental milestones of pregnancy, including sharing information about baby's growth and activity.

The changing health status of society in general and in pregnant women in particular (increased rates of obesity, high smoking prevalence in young women and older age of first pregnancy) have made these assessments even more important but equally they have become more difficult to conduct [6].

Normal growth and regular activity are reassuring signs of a healthy fetus. There is evidence that slowing of fetal growth in utero and a reduction in frequency or strength of fetal movements often precede intrauterine death [7-9].

Midwives provide information to enable the woman to assess the well-being of her own baby by encouraging the woman to be aware of and report changes in fetal activity[1]. Midwives inform women that if the baby's movements are reduced, change significantly or are absent there is a need to contact their midwife that day. A reduction in fetal activity will not be a problem in most instances [10]. However if the woman reports a definite reduction in the baby's normal level of activity or change in the quality of movements that is concerning to her, a full antenatal assessment with fundal-symphysis height measurement, cardiotocograph monitoring and consideration of ultrasound is warranted [11].

Fetal heart auscultation has been a routine component of fetal assessment antenatally. It also provides an opportunity for more intensive examination and discussion with the woman about her baby's wellbeing. Many women and/or her partner/family expect fetal heart auscultation at each antenatal visit and can feel reassured when the fetal heart is heard. However, *routine* fetal heart auscultation has little clinical or predictive value for fetal health as it merely confirms that the fetus is alive at that point in time

[12]. When the woman identifies a reported reduction in fetal movements, auscultation of the fetal heart should not replace a full antenatal assessment.

Plotting fundal-symphysis height measurements using a tape measure on a customised growth chart may alert midwives that a baby's growth is above or below normal parameters for that baby. A growth scan and more frequent assessments may be indicated at this point.

There is emerging evidence that bleeding during pregnancy may indicate a potential for increased risk to fetal wellbeing. Extra attention to fetal activity and assessments is therefore required in this instance [13, 14].

Recommendations

1. Establish gestation using certain dates for the last menstrual period (LMP). If LMP is unknown or unsure an ultrasound scan can be offered to women to estimate gestation if this is performed before 20-22 weeks.

2. At the woman's first visit a comprehensive health assessment should be made and documented. This would include: maternal ethnicity, medical/family and past obstetric history, current pregnancy history to date, smoking status and social history, measure weight and height, calculate Body Mass Index (BMI) [6, 15].

3. Provide information on lifestyle and nutrition that promotes fetal wellbeing and if necessary refer the woman to appropriate other providers who can assist her further.

4. From 24 weeks gestation it is recommended that the fundal-symphysis height should be measured [16] and recorded in centimetres at each antenatal appointment, preferably by the same person. Midwives using NZ Customised Growth Charts should be conversant with their conditions and limitations. If there is a decision to use a customised growth chart it is commenced beyond 24 weeks gestation; www.gestation.net [17].

5. Further investigation/consultation may be required if, on abdominal inspection and palpation, the pregnancy appears above or below normal parameters [18].

6. Fetal presentation should be assessed by abdominal palpation at 36 weeks or later, when presentation is likely to influence the plans for birth [12].

7. Intrauterine growth restriction is more likely to become apparent late in pregnancy. The midwife will be particularly attentive to indications of slowing growth *late* in pregnancy and consider referral for ultrasound assessment of growth, in consultation with the woman.

8. If a midwife is undertaking fetal heart auscultation she should consider measurement of the maternal pulse at the same time to ensure that there is a distinction between maternal and fetal heart rates. Both are then noted and documented.

9. All assessments are documented comprehensively in the woman's maternity record.

There is no evidence to support:

- assessment using abdominal palpation/inspection alone
- assessment using fundal-symphysis height measurement alone
- consecutive ultrasounds for fetal size where there is no clinical indication/ concern
- doppler ultrasound rather than auscultation with a pinard as the method to listen to the fetal heart at antenatal visits. However mothers may still request or prefer either method
- formal fetal movement counting in pregnancy [19]

- routine CTG monitoring for fetal assessment in an uncomplicated pregnancy including admission CTG monitoring when admitted to a facility in labour [20].

Practice Note

When using a customised growth chart [17] the woman needs to be offered a referral for ultrasound assessment if:

- the first fundal-symphysis height measurement plots below 10th centile line on the customised chart
- based on consecutive measurements, growth is static (flat), or there is concern about it being slow because it does not follow the slope of the curves on the chart, or growth declines through a centile line
- based on consecutive measurements, there is concern about excessive growth because of the steepness of the curve.
- A first fundal-symphysis measurement above the 90th centile line does not need referral for scan for growth assessment unless there are other clinical concerns - eg. polyhydramnios.

Following ultrasound assessment, the estimated fetal weight is plotted on the customized growth chart. If it is:

- Normal: revert to serial fundal- symphysis height measurement
- Abnormal: refer for urgent obstetric review

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