Management of Bradycardia (Fetal) guideline (GL797)

Approval

<table>
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<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
<th>Date</th>
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<tr>
<td>Maternity &amp; Children’s Services Clinical Governance Committee</td>
<td>Chair, Maternity Clinical Governance Committee</td>
<td>5th June 2015</td>
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Change History

<table>
<thead>
<tr>
<th>Version</th>
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<th>Author, job title</th>
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Maternity Guidelines – Fetal Bradycardia (GL797)

Overview
Prolonged bradycardia is associated with hypoxia, acidosis and poor neonatal outcome. Prompt action is indicated to minimise the risks of hypoxic ischaemic encephalopathy. Possible causes include reversible causes such as maternal hypotension following an epidural insertion or top up, temporary positional cord compression, uterine hyperstimulation, maternal hypoxia, or maternal haemorrhagic or septic shock, and irreversible causes such as a placental abruption, uterine rupture or cord prolapse or vasa praevia rupture, the so called sentinel events, or finally as a pre-terminal event following a deteriorating CTG with signs of chronic partial hypoxia. It is rare for a bradycardia to persist in the absence of either a sentinel event, a maternal condition or as a pre-terminal event following CTG deterioration. In most cases of sudden bradycardia with no obvious identifiable cause the fetal heart rate will recover within a few minutes. However in order to avoid delay the patient should be taken to theatre. It is always still possible to return the patient to the labour room if the bradycardia has resolved once reassessed in theatre and continue with the labour.

Definition
Fetal heart rate less than 100/minute lasting for longer than 3 minutes.

Actions
- Check it is fetal heart against maternal pulse. If any doubt then scan to visualise fetal heart. A portable US machine should be kept charged up and switched on in the delivery suite corridor at all times to avoid delay.
- Reposition mother in left lateral position. Rapid maternal ABC assessment. Are there any clues such as maternal hypoxia, uterine hyperstimulation or hypotension that are reversible? If so treat with oxygen and increase IV fluids as appropriate. Turn off any oxytocin infusion, regardless of the likely cause. It is best not to stress a bradycardic fetus further with contractions prior to recovery. In cases where there has been uterine hyperstimulation with evidence of more than 5 contractions every ten minutes consider administering 250 micrograms of terbutaline S/C.
- Are there signs of a sentinel event such as a placental abruption, uterine rupture or cord prolapse? Do a rapid vaginal examination to exclude a cord prolapse and ascertain cervical dilation. Call for help and if no response to first aid measures or indication of maternal contributory factors which are reversible, move patient directly to theatre with no delay for a category 1 caesarean section under GA. Ensure that midwife in charge, theatre team, anaesthetist are told immediately and delegate the obstetric SHO to inform the on call Consultant Obstetrician. The neonatal paediatric team should also be called urgently.
• Once in theatre check the fetal heart again as the bradycardia may have resolved and labour may be able to continue. In this circumstance good communications with the patient and her partner are imperative as she is likely to be very frightened and concerned for her baby. If the bradycardia is persisting proceed to caesarean section under GA unless the patient is fully dilated with the fetal head low in the pelvis when an operative vaginal delivery may be attempted. Do not waste time attempting this unless you are confident of success and can execute the delivery without regional anaesthesia. If the bradycardia has resolved, remain in theatre for the next 15 minutes whilst performing continuous electronic fetal monitoring to ensure that no repetition of the fetal bradycardia occurs. If the CTG remains reassuring then the patient may be moved back to the labour ward. She should remain on continuous monitoring for the remainder of the labour.

• In all cases aim to be in theatre by 9 minutes from the start of the fetal bradycardia (NICE guideline 55, Intrapartum care).

• In order to avoid neonatal compromise, aim to deliver within 15 minutes of the onset of the bradycardia by the latest if it has not resolved.

References

1. NICE guideline 55, Intrapartum care

Written: Helen Allott (Consultant Obstetrician) January 2013
Reviewed: March 2015
Review due: June 2017