Terminology and Reporting

The interpretation of FHR traces and the ability to communicate this assessment of fetal well-being to others is one of the most difficult problems facing the newly appointed houseman in obstetrics. It is important therefore that a standard terminology and method of reporting is used.

Intrapartum FHR Monitoring

The terminology discussed below is based on the classification published by the American College of Obstetricians and Gynecologists in 1975 (Technical Bulletin No. 32), and is gaining increasing acceptance.

BASELINE FHR

The baseline FHR is the rate (in beats per minute — b.p.m.) at which the heart is set for most of a 10-minute period.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mild</th>
<th>Severe</th>
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</thead>
<tbody>
<tr>
<td>Normal</td>
<td>120–160 b.p.m.</td>
<td></td>
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<tr>
<td>Tachycardia</td>
<td>161–180 b.p.m.</td>
<td>&gt;180 b.p.m.</td>
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<tr>
<td>Bradycardia</td>
<td>100–119 b.p.m.</td>
<td>&lt;100 b.p.m.</td>
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</table>

Baseline tachycardia

A fetal tachycardia can result from a variety of causes:

1. In some cases of fetal asphyxia. However, where asphyxia is present the baseline tachycardia will be complicated by a reduction or absence of variability and/or the presence of decelerations.

   An uncomplicated baseline tachycardia with good variability would not be considered a sinister pattern.

P. L. Wood et al., *Electronic Fetal Heart Rate Monitoring* © Paul L. Wood and H. Gordon Dobbie 1989
A fetal tachycardia is occasionally seen on recovery from asphyxial stress, e.g. a large deceleration in the FHR is sometimes followed by a baseline tachycardia and is probably due to the release of catecholamines from the sympathetic nervous system and the adrenal medulla when the fetus is subjected to stress.

2. Maternal or fetal infection, e.g. chorioamnionitis.
3. Drug treatment, e.g. β-adrenergic agents used in an attempt to arrest preterm labour.
4. Extreme prematurity, when the parasympathetic nervous system is not so well developed.
5. Fetal tachyarrhythmias.
6. Thyrotoxicosis.

**Baseline bradycardia**

A mild bradycardia with good variability may be benign and not an indication of hypoxia. Alternatively, it may represent mild hypoxia that is being well compensated for by the fetus.

A severe bradycardia is a more serious prognostic sign and indicates that the fetus is failing to compensate (it is recognised by diminishing and eventually absent FHR variability). A bradycardia of $< 80$ b.p.m. will almost certainly result in fetal asphyxia unless action is taken.

Fetal bradycardia can also be due to cardiac conduction defects, e.g. heart block.

**BASELINE FHR VARIABILITY**

Variability can be described as short- or long-term.

**Short-term variability (STV)**

This is due to the varying beat-to-beat change (the R–R interval of the fetal ECG) in the fetal heart. It is obtained by direct FHR monitoring via a fetal scalp electrode, although the latest machines can give a close approximation to STV via an external ultrasound transducer. However, many machines in use at present are unable to give a true STV when Doppler ultrasound monitoring is used.

**Long-term variability (LTV)**

This represents changes in the baseline rate that have a frequency