# Neonatal Murmurs

**GL656**

## Approval

<table>
<thead>
<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
<th>Date</th>
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<tr>
<td>Paediatric Governance Policy and Procedure subcommittee</td>
<td>Ann Gordon, Chair of Paediatric Clinical Governance</td>
<td>13th January 2012</td>
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## Change History

<table>
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<tr>
<th>Version</th>
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<tr>
<td>1.0</td>
<td>13 Jan 2012</td>
<td>Dr Ravi Kumar, Consultant Paediatrician, Dr Andrew Ho, Paed ST5</td>
<td>New Guideline</td>
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Neonatal murmurs are commonly found incidentally at postnatal check, with an incidence of 0.6-1.4% (1,2). The majority found to be innocent clinically have no significant pathology on echocardiography (3), and clinical examination by appropriately trained staff has been shown to be a reliable discriminator (2,4).

Several simple tests have previously been used, occasionally routinely, to aid the differentiation of pathological and non-pathological murmurs, including Chest X-ray, Electrocardiography, 4-limb blood pressures and pre-and postductal saturations. Other than assessment of Saturations, these have largely found to be unhelpful in identifying pathology (5-8).

The most valuable of these is the assessment of pre-and postductal saturations. This investigation has been adopted in some units as a screening tool in its own right (9,10). There are no plans currently for this at the Royal Berkshire Hospital, but this guideline uses it to supply further information to aid diagnosis (11).

This work is based largely on the recommendations of the RCPCH Paediatric Cardiology Specialist Interest Group (12).
Guideline

This guidance applies for babies found to have a murmur at newborn examination. A neonate found to have a murmur should have a thorough assessment, including:

- Antenatal history including maternal history eg of diabetes
- Review of antenatal scans
- Examination for/of
  - Dysmorphic features
  - Cyanosis
  - Pulses
  - Praecordium
  - Thorough auscultation, including for radiation
  - Assessment for features of cardiac failure

Pre- and post- ductal saturations should then be assessed, senior review requested and the baby risk stratified as per Figure 1.

Babies with an abnormal saturations assessment, signs of cardiac failure/shock or abnormal femoral pulses should have urgent assessment and admission to NICU. Prostaglandin infusion should be considered and urgent echo performed if available. Those with pathological features on auscultation, loud murmurs or dysmorphic features should have an ECG performed and be discussed with the covering neonatal consultant. They should be considered for inpatient echocardiogram and have follow up soon in clinic. Those found to have clinically innocent murmurs and normal saturations studies can be discharged after 24hrs of age and followed up in clinic. Should they be initially assessed at <24hrs age then they should be seen again after 24hrs age- if the murmur has gone, no further follow up is required.
Murmur detected at routine neonatal examination

Suspect congenital heart disease

Actions:
- Thorough cardiac examination
- Pre and postductal SpO2
- SpR/consultant review

Findings

ANY of the following:
- Signs of failure/shock
- Lower Limb SpO2 <96%
- >3% pre/postductal gradient
- Absent/weak femorals

Likely Diagnosis

Significant CHD

ANY of the following:
- Loud murmur (>2/6)
- Heave
- Pansystolic/diastolic/continuous
- Location other than LSE
- Dysmorphic features

URGENT
- Admit NICU
- Consider Prostaglandin
- Urgent Echo if available

SOON
- D/w consultant
- ECG
- Consider IP Echo
- Info sheet for parents
- A/52 OPA

Low risk CHD

ALL of the following:
- Well baby
- No signs failure
- Normal pulses
- Normal SpO2
- Soft systolic murmur (1 or 2/6)
- Audible only at LSE

ROUTINE
If still present at >24hrs age:
- Info sheet to parents
- 6/52 OPA
What is a heart murmur?
A heart murmur is an extra noise, heard when the heart is listened to with a stethoscope.

Does a heart murmur mean there is heart problem?
Not necessarily. A heart murmur can sometimes be a sign that there is a problem with the heart like a hole or a narrowing. However many babies with heart murmurs have completely normal hearts. (These babies have what are known as “innocent” or “normal” heart murmurs.)

How will I know if my baby has a heart problem?
Your baby will be seen in the paediatric clinic as an outpatient. If the murmur can still be heard and the doctor is not sure that it is an “innocent” or “normal” heart murmur then your baby may be referred to a heart specialist.

What should I look out for?
Most babies with heart murmurs remain well but if your baby becomes unwell, they should be seen urgently by a doctor. Signs to look out for include: breathing difficulties; becoming breathless or sweaty when feeding; poor feeding; blue colour of skin and lips or mottled skin.

What should I do if my baby becomes unwell?
If your baby becomes suddenly unwell, call 999 for an ambulance. More likely is that the changes will be gradual. Should these occur, please phone the secretary of Dr _____________, your named paediatrician at the Royal Berkshire Hospital

Points to remember

• A heart murmur is an extra noise heard when listening with a stethoscope.
• Most babies with heart murmurs have completely normal hearts.
• A heart murmur can sometimes be a sign of an underlying heart problem.
• IF YOUR BABY BECOMES UNWELL SEEK URGENT MEDICAL ADVICE.
References


