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The heart link to cot deaths

By **LISA MELTON**

An Italian expert believes a cardiac problem could be a cause

COULD AN ECG prevent some cases of cot death? That is the suggestion of an Italian paediatric cardiologist who believes that he has found a link between sudden infant deaths and a heart problem. Over the past decade there has been great progress towards unravelling the triggers for sudden death among otherwise healthy children and young adults, with "long-QT syndrome" emerging as one of the culprits.

This is a disorder of the heart's electrical system: with every contraction, the heart emits electrical signals — when measured on an electrocardiogram (ECG) these produce a characteristic waveform; the different parts of the waveform are designated by the letters P, Q, R, S and T. "Prolonged QT interval syndrome" is the term given if the interval between Q and T takes longer than normal to occur. It is estimated that around 1 person in 5,000 is affected by long-QT syndrome, Long-QT syndrome is treatable and, according to Peter Schwartz, professor and chairman of cardiology at the University of Pavia in Italy, it is easy to detect early in life with an ECG. Indeed, Schwartz argues that early screening for long-QT syndrome would help to prevent sudden death at any age — from childhood to adulthood — as well as in infants, when it is often labelled sudden infant death syndrome (SIDS).

In the UK one in 2,000 babies dies each year from "cot death". The cause remains largely a mystery — fungus on the mattress, lying babies on their stomachs and the *Helicobacter pylori* infection have all been suggested.

The risk campaign launched in 1991 has succeeded in cutting sudden infant deaths by 70 per cent. Yet SIDS still claims seven babies' lives each week. In 1998 Schwartz published the results of a 19-year study of more than 34,000 babies, which suggested that long-QT syndrome contributes to SIDS. He believes that up to 15 per cent of SIDS cases could be prevented if picked up in time.

He admits that the idea of infants having an ECG so early is "very controversial", with many medico-legal implications. "But if these neonates are identified and put on beta-blockers, their likelihood of abnormal heart rhythms will shrink and their lives could be saved," he says.

In Tuscany a one-year screening programme has been approved to screen 25,000 infants in the third week of life. But not everyone is convinced by Schwartz's arguments.

"Without doubt Schwartz's work on long-QT syndrome is of immense scientific value, but the relevance to SIDS is more



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contentious,” says Eric Rosenthal, a consultant paediatric cardiologist at Guy’s Hospital, London. “QT measurements in babies vary from day to day in the first week and subsequently over the first year of life. If the QT lengthening is extreme, then there’s no question of the diagnosis of long-QT syndrome. But if it’s borderline, many cardiologists would ignore it,” Rosenthal says. He points out that since up to 2 per cent of normal newborns have a borderline raised QT interval, screening could cause unnecessary anxiety, and this figure is greater than the incidence of SIDS.

Dr Jan Till, a consultant paediatric cardiologist at the Brompton Hospital in London, also has doubts. “If you take families with long-QT syndrome, they don’t tend to lose babies, they lose children and adults.” Also, cases of “near miss” cot death do not usually have a long QT. “For these reasons I tend to think that the proportion of cot deaths attributable to long-QT is smaller than Peter Schwartz suggests.”

“Nobody would want Dr Schwartz not to do the study,” says Dr Richard Wilson, a consultant paediatrician at Kingston-on-Thames and a trustee for the Foundation for the Study of Infant Death. “Until it is done you can’t predict whether it will provide one answer or another. At least Schwartz is getting on with it.”

The Foundation for the Study of Infant Deaths www.sids.org.uk;
helpline 0870 7870554; Long QT Family Support group
www.longqt.org.uk

OTHER POSSIBLE CAUSES

- Exposure to cigarette smoke
- Baby’s sleeping position
- Genetically inherited conditions
- Infection

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