Sally Clark

Expert's evidence challenged in latest move to prove Sally Clark's innocence

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An expert said there was a one in 73 million chance Sally Clark's babies died naturally - and a jury agreed. Now new genetic research could help to clear her.

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Sally Clark was sent to prison two years ago, condemned to life inside for murdering her two babies because - among other evidence - there was only 'one chance in 73 million' of the babies, born a year apart, both dying of natural causes.

But the discovery of a cot death gene means that the odds for a second death could have been as high as one in four – and that by hearing 'one in 73 million' the jury was presented with a simple, but false, probability.

The new genetic research raises the possibility that Clark – and other women – have been the victims of an appalling series of miscarriages of justice in multiple cot death cases.

A joint investigation by BBC's Five Live Report and The Observer has revealed a climate of suspicion against mothers who suffer two or more cot deaths, based on the 'crude aphorism' of top paediatrician Professor Sir Roy Meadow that, unless proven otherwise, 'two is suspicious and three is murder'. Sometimes known as 'Meadow's Law', it has been adopted by doctors, lawyers and the police.

Manchester University's discovery of a cot death gene in February knocks flat the view of Meadow and others that one should 'think dirty' about multiple cot deaths.

Microbiologist Dr David Drucker, who helped to identify the cot death gene, said of Meadow's Law: 'It's scientifically illiterate.' His is not a lone voice.

Now Clark's defence team intends to prepare a fresh appeal, based in part on the discovery of the cot death gene. Other appeals are likely to follow.

Clark maintains her innocence: 'I now suffer the minute by minute torture of life imprisonment knowing, as I accept only I could know, that I did not harm my little boys, and did nothing but loved them.'

Clark's first child, Christopher, was born on 22 September 1996 and died 11 weeks later. At the time, he was certified to have died naturally from a lung infection. Her second child, Harry, was born on 29 November 1997, and died eight weeks later in January 1998.

The next month, Clark was arrested for murder. Still grieving, she was accused of smothering Christopher and shaking Harry to death. When she was found guilty in November 1999, newspapers ran claims that she was a binge-drinker – none of which was presented as evidence in the case.

The forensic evidence at the trial was complicated and difficult to deal with as the 'victims' were so young. The evidence was also disputed and the prosecution case hotly contested. But, as both babies had died in Sally Clark's care, the defence could only put up her word for it that the babies had died naturally.

Solicitor John Batt has known Clark since she was five: 'What I believe the jury's reaction was is: "If she can prove that she did nothing to her babies, we'll let her off. If she can't, she must be guilty." But there is no way that a mother or science can prove that she didn't smother or shake her babies.'

Like an arrow through the fog came the assertion by Meadow that there was only a 'one in 73 million' chance of a mother having two consecutive cot deaths – the likelihood of an such an event happening, he said, was once every 100 years.

Meadow is a knighted professor and, everyone agrees, a superb performer in the witness box. It was a statistical smoking gun. In one soundbite the jury had a com pelling case against Clark. They convicted her 10-2.

Meadow was knighted for his services to the study of child abuse. He was the first President of the Royal College of Paediatrics and Child Health and developed a controversial theory regarding a new form of child abuse known as 'Munchausen's Syndrome By Proxy' where parents fabricate symptoms of illnesses in their children, subjecting them to unnecessary medical treatment, and, in some cases, inflict injuries on them or even kill them in the process. For example a mother who seeks attention by murdering her baby and passing off the killing as a cot death.

Now, some experts contest the theory's merit. In his book ABC of Child Abuse, Meadow writes: '"One sudden infant death is a tragedy, two is suspicious and three is murder until proved otherwise" is a crude aphorism but a sensible working rule for anyone encountering these tragedies.'

Meadow has given evidence for the prosecution in criminal trials and family courts around the world. Often, his evidence – with other testimony – leads to convictions and mothers losing their babies to care.

No one is suggesting mothers never kill their babies. But Meadow's Law risks tarring all mothers who have suffered multiple cot deaths as murderers. It presumes guilt, and the presumption kicks in at the moment a second cot death occurs – when an innocent mother would be going through unendurable pain.

Many at the trial believe Meadow's soundbite statistic damned Clark. It was worked out on the basis that there are eight cot deaths a week in Britain. Then family circumstances are factored in: a single parent smoker is more likely to suffer a cot death than a well-off family. The Clarks are solicitors and non-smokers.

When all these factors are taken into account, you arrive at a figure of one cot death in 8,543 in a well-off family like the Clarks.

As the Clarks suffered two deaths, Meadow multiplied 8,543 by 8,543 and arrived at the chance of one in 73 million for two babies dying of natural causes. He then specifically linked the statistic with Clark's case.

Not a single statistician we have contacted has said that 'one in 73 million' – and the way in which Meadow used it – is defensible.

Peter Donnelly, professor of statistical science at Oxford University, is scathing: 'It is poor science. It's not rigorous,

it's just wrong.'

Dr Stephen Watkins, Stockport's director of public health, said: 'This is a breach of a fundamental axiom of probability theory... the equivalent of two plus two equals five.'

Watkins was so troubled by Meadow's evidence that he wrote [a damning critique in the British Medical Journal called 'Conviction by Mathematical Error?'](#) Meadow has not replied to the attack.

Donnelly points out that a key issue is whether Meadow was right to multiply the risk factors of the two cot deaths to get to the one in 73 million number. 'It is only valid to multiply the numbers if it has been established whether or not one child dying of cot death is completely independent of whether or not another has died. In order to present that kind of number in court one should have evidence to establish that independence.'

What this means is that, for the one in 73 million to be right, the two deaths had to be proved to be wholly unconnected – for example that there were no environmental factors common to both.

But, according to the prosecution, the two deaths were connected – and the prosecution witness who gave evidence on that? Sir Roy Meadow.

He told the jury: 'Each death has the characteristic of unnatural causes which is enhanced by the fact that two deaths have occurred at about the same age in one home. The evidence sadly increases the strength with which I feel that the two deaths are not natural.'

The defence did not use an expert statistician to challenge Meadow's figure. This decision may have cost Sally Clark dearly.

Clark is not the only alleged killer mum who was jailed with the help of Meadow's evidence. Donna Anthony is also serving a double life sentence in Durham Prison for murdering her two babies. She was convicted on forensic and behavioural evidence which, again, was contested. Meadow told the jury: 'Natural cot death has an incidence now of about one in a thousand, so the chance of natural cot death happening twice in a family is one in a thousand times one in a thousand, which is one in a million.'

We also know of a third case, but we cannot give details.

Meadow's evidence and other testimony led to the family losing all four children to care. A gag on the media means we cannot interview the parents.

Last October, the Court of Appeal turned down Clark's first attempt to clear her name. Clark's father, retired police divisional commander Frank Lockyer, is convinced of his daughter's innocence: 'She'd have to be monster to do that and Sally's not a monster.'

In February Manchester University announced: 'Cot death gene identified.' Scientists looked at the DNA of 23 babies who had died from cot death or sudden infant death syndrome (SIDS) and compared it with the genetic make-up of normal babies. Babies with three particular genetic differences were three times more likely to die from SIDS. The genes 'switched on and off' the immune system. One gene was particularly important.

We have put a series of questions to Meadow, but he declined to talk to us.

The question is: had the jury known in the case of Clark that, instead of Meadow's sound-bite that there was a one in 73 million chance of her babies dying naturally, it could have been one in four, would they have convicted?

• John Sweeney's '73 million to one' Five Live Report, produced by Bill Law, is on R5 today at noon on 909 and 693m AM.

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