Ten Percent of SIDS Cases Are Murder — Or Are They?

Christopher M. Milroy, Charis Kepron

ABSTRACT

Sudden infant death syndrome (SIDS) has been used as a cause of death for over four decades. It has allowed deaths of infants to be registered as natural. Within this group of deaths, a certain number have been recognized to be homicides from inflicted smothering rather than being natural or accidental deaths. Research has been conducted using confidential inquiries to determine how frequent homicide is in cases called SIDS. This paper traces the history of quoted rates of homicide. Early work suggested the figure was between 2-10% of all SIDS cases, though other workers have suggested figures as high as 20-40%. With the fall in the rate of infant deaths following the “Back to Sleep” campaigns, these figures have been reevaluated. If the higher figures were correct that 20-40% of SIDS were homicides, the fall in infant deaths would be expected to be less than it has been. Current data suggests a much lower figure than 10% of current cases, with much lower overall rates of infant deaths.

As well as 10% of SIDS cases having been stated to be homicides, a related question is whether multiple deaths classified as SIDS are really homicides. The paper discusses the maxim that one death is a tragedy, two is suspicious, and three deaths indicate homicide. The paper also looks at court cases and the approach that has been made in prosecutions of sudden unexpected death in infancy as multiple murder. *Acad Forensic Pathol.* 2017 7(2): 163-170

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INTRODUCTION

The term sudden infant death syndrome (SIDS) was introduced in 1969 by Beckwith and colleagues to provide a nonpejorative designation for sudden unexpected deaths in infancy (SUDI) that were thought to be natural but could not be explained by history or a thorough postmortem examination (1). A number of terms have been used for sudden death in infancy, including crib/cot death as well as SUDI and SIDS. The term SIDS has come under challenge as the term implies a natural death, whereas investigators know that a case classified as SIDS may be a natural or unnatural death (2). Many classify these infant deaths as undetermined or unascertained. While the term SIDS allowed for these deaths to be classified as natural, and perhaps more consistency in certification of cause of death, it has also long been recognized that these deaths are multifactorial and encompass covert homicides. Differentiation between a smothered infant and a death classified as SIDS and considered natural can be impossible and one question faced by pathologists conducting an autopsy on an infant found dead unexpectedly is, "Could this be a homicide?" even though there are no positive autopsy findings (3). Publications in the medical literature have stated that a proportion of deaths classified as SIDS or SUDI are homicides (4-6). A second connected question is related to whether or not a second and subsequent infant death should be classified as homicide (7). This paper examines the literature on cases of SIDS believed to be covert homicides and traces an oft-quoted figure that 10% of SIDS deaths are homicides.

Sudden death in infancy is one of the most difficult areas pathologists have to investigate. Because of an absence of positive findings in these cases, the mechanism, or mechanisms, by which these children die is not fully understood. As these deaths are typically multifactorial, different risk factors and mechanisms of death could be present in different cases, but with seemingly similar history and scene findings. An "asphyxial" component, in this case meaning accidental or imposed upper airway obstruction, has been recognized as being present in many of these deaths. The differentiation between imposed upper airway ob-

struction and other mechanisms of death is normally not possible to determine at autopsy (3). That carers of children can intentionally harm their children cannot be in dispute. Studies such as covert surveillance programs have shown carers deliberately inducing upper airway obstruction under observed situations (8).

DISCUSSION

Early Studies on SIDS and Covert Homicide

One of the pioneers of research into infant deaths was John L. Emery, a Professor of Pediatric Pathology in Sheffield, UK and pioneer pediatric pathologist. He published early studies in SIDS research suggesting that a proportion of deaths classified as cot (crib) death were, in fact, intentional deaths caused by the parents. Emery and colleagues had carried out psychosocial investigations of the families, as well as comprehensive autopsies, and produced confidential inquiries for the UK Department of Health and Social Security (4). In 1982, Taylor and Emery published an analysis of 65 postnatal deaths (eight days to two years) that occurred over a two-year period (1979-1981) (4). These cases included deaths in hospitals and children with known illnesses. Of the 47 babies who had autopsies, 33 had full pediatric autopsies. Of these, 19 were certified as unexpected death in infancy, with one dying in the hospital. Twelve of these children had illnesses associated with sudden death. Of the remaining seven children who died unexpectedly at home and would have been considered "cot" deaths, two had minor illnesses identified at autopsy, two had completely negative investigations, but three of the deaths were felt to be homicides – called "*gentle battering*." Deaths were placed in this category only after extensive discussion at a case conference and with the agreement of all those present.

In 1985, Emery published a further paper in which he discussed infanticide (in England, killing of a child under one year of age by the mother), filicide (killing of a child by a parent), and cot (crib) death (5). Emery reported that in England, one-quarter of all legally proven homicides involved children under 16 years of age, with 81% killed by parents. He recognized that

cases of filicide fell into two groups: newborn children and later (meaning children older than the newborn period). There were four main groups of causes of death: 1) accident, 2) poisoning, 3) nonaccidental injury, and 4) “gentle battering” – which were a group of children that do not show the violence characteristic of the third group. He stated it was this fourth group that had a relationship to cot (crib) death (5).

Emery stated that evidence related to filicide has come from much more than conventional histopathology and requires a polyfactorial approach (5). He stated that the most important factors were the biochemical state of the body and a psychosocial study of the family. He further opined that once a label of SIDS or “cot death” has been made, it affects the parameters of any subsequent discussion of death. Emery commented that a mother or father stating they have killed the child in no way proves that they have. He stated that more mothers had confessed to killing their child than he believed had done so. He also noted that confessions to the police could be withdrawn or deemed inadmissible for trial purposes.

Emery commented that children found dead in a cot in the 1940’s would have been considered cases of filicide, but developments in pediatric pathology meant that many of these deaths would have been considered from natural causes in the 1980’s. He felt that the development of the term SIDS had helped parents, but had an unfortunate effect upon research of causality in these deaths. Where an autopsy was negative, it was classified as natural. He noted that against this background, the suggestion that these deaths were due to filicide became unacceptable.

Emery went on to describe his examinations of cot deaths in Sheffield and regarded them as the most comprehensive in the world. These investigations included a psychosocial study of the family. From these studies, he stated that “*filicide is the probable mechanism in death in approximately one in 10 of the unexplained, unexpected deaths*” (5). Emery said it was important to use the term filicide, because, in their opinion, all these deaths are not due to actions on the part of the mother alone.

In reexamining autopsies conducted by another experienced pediatric pathologist from another country, Emery said in a random survey of 50 cases, there were five cases that raised the possibility of unnatural deaths. In a further 120 cases from other centers, a more superficial examination suggested that two cases appeared suspicious. Thus, Emery said in cases of “cot death,” the rate of unnatural death could be between 2% and 10%. He did note these were not court-proven cases. It remains unclear, however, how exactly the deaths were differentiated, but it appears to be from the psychosocial examination of the family, as the autopsy was negative in these cases.

Various percentages have been quoted over time by different authors. In a 1989 leader in *The British Medical Journal*, Emery quoted a figure of 5-10% of cot deaths being homicide (9). In a 1993 publication, Emery gave a further figure of 10-20% (3). Studies from the United States have suggested rates of covert homicide of between 1.3% and 4.7% (10). In a 1999 publication, Green said that based upon conversations with forensic pathologists and pediatric pathologists, the rate may be as high as 20-40% (11). In a response to Green’s article, Limerick commented, *inter alia*, that the incidence of covert homicide was a matter of conjecture (12). Southall and colleagues have characterized the evidence linking cot deaths to smothering as “*uncontrolled, circumstantial, anecdotal and indirect*” (13).

Changes in SIDS Rates and Homicide

The number of sudden unexpected deaths in infancy fell dramatically after the “Back to Sleep” campaign. Levene and Bacon reviewed the incidence of SUDI and covert homicide in a 2004 paper, following this fall in the number of deaths (14). They commented that it is impossible to be certain of the frequency of covert homicide among sudden infant deaths. They noted Emery’s figures of 10-20% and pointed out that at the time of his studies, there were approximately 1000 sudden unexpected deaths of infants a year in England and Wales, which would have meant 100 to 200 homicides certified as SIDS based upon his figure of 10-20% as covert homicides. By 2000, the number

of cases of SIDS had fallen to around 200 per year. They analyzed data from the Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI), which was performed from 1993-1996. During this period, the number of SIDS cases was around 400 per year. The Enquiry examined deaths in England and Wales and Northern Ireland (but excluding Scotland) and found that of 346 deaths classified as SIDS, 22 (6.4%) were felt to be due to maltreatment, and another 28 (8.1%) in which maltreatment was a secondary or alternate cause of death. Thus, 6.4% to 14.5% of cases had evidence of maltreatment. This included both intentional and negligent care, so the figures appear high for intentional smothering. Levene and Bacon point out that while the best available evidence for covert homicide was the confidential component of the CESDI enquiry, it was still a subjective judgement. Extrapolating from CESDI data, they concluded that about 10% of current SIDS deaths were homicides, giving a figure of 40 cases a year, much less than the 100-200 cases that Emery estimated (14).

An examination of infant deaths following the reduction in SIDS was made by Pollack following the Back to Sleep campaign in the USA using data from 1989 and 1999 US birth cohorts (15). With the reduction in deaths from "SIDS," it would be expected that a higher proportion of homicides would be present based upon the quoted rates in the literature. However, based upon his analysis of the two cohorts and the stable age-at-death distribution between the two cohorts, when overall numbers had significantly lowered, he concluded that the data suggests that covert homicides are a small fraction of reported SIDS deaths.

Multiple Infant Deaths

The concept of multiple deaths being either homicide or natural has been in the public spotlight for a number of decades. Waneta Hoyt had five children die between 1966 and 1971 and all were classified as natural deaths. The last two babies were investigated while alive by Steinschneider, who published research on apnea and SIDS in 1972 (16). Subsequently, Waneta Hoyt confessed to killing her children. Although she retracted her confession, she was convicted of mur-

dering her five children in 1995 (17). She died in prison before her appeal.

In England in the late 1990s and early 2000s, there were a series of trials and subsequent appeals involving women who had suffered multiple deaths of their children in which the deaths had originally been classified as SIDS, but were prosecuted as murder (18). The prosecution relied, *inter alia*, on the evidence of an eminent pediatrician Sir Roy Meadow. Meadow was a very experienced pediatrician who had written extensively on the problems of child abuse, including inappropriate use of SIDS as a diagnosis (19). He was also the first to describe Munchausen Syndrome by Proxy in the literature (20). A number of women were convicted, including the lawyer Sally Clark, but their convictions were ultimately overturned in the Court of Appeal—Sally Clark after two appeals. Sally Clark's convictions were quashed because of a failure of the pathologist to disclose microbiology results and because of Sir Roy Meadow's use of statistics at trial, though the first Court of Appeal had heard challenges to the statistics but held that the convictions were safe (21, 22).

Meadow was credited with inventing a maxim that became known as Meadow's Law. This stated that one cot death is a tragedy, two cot deaths is suspicious, and until the contrary is proved, three cot deaths is murder. This was considered a sensible working rule for anyone encountering these tragedies (23). Although often attributed to Meadow, the maxim that multiple sudden deaths in infancy are homicides can be traced to DiMaio and DiMaio in their 1989 textbook, where they state:

While a second SIDS death from a mother is improbable, it is possible and she should be given the benefit of the doubt. A third case, in our opinion is not possible and is a case of homicide (24).

The concept of multiple deaths as murder has been examined in the English courts. In the appeal of Angela Cannings, convicted of murder in 2002 (25), the English Court of Appeal noted at paragraph 10:

It would probably be helpful at the outset to encapsulate different possible approaches to cases where three infant deaths have occurred in the same family, each apparently unexplained, and for each of which there is no evidence extraneous to the expert evidence that harm was or must have been inflicted (for example, indications or admissions of violence, or a pattern of ill-treatment). Nowadays such events in the same family are rare, very rare. One approach is to examine each death to see whether it is possible to identify one or other of the known natural causes of infant death. If this cannot be done, the rarity of such incidents in the same family is thought to raise a very powerful inference that the deaths must have resulted from deliberate harm. The alternative approach is to start with the same fact, that three unexplained deaths in the same family are indeed rare, but thereafter to proceed on the basis that if there is nothing to explain them, in our current state of knowledge at any rate, they remain unexplained, and still, despite the known fact that some parents do smother their infant children, possible natural deaths.

It will immediately be apparent that much depends on the starting point which is adopted. The first approach is, putting it colloquially, that lightning does not strike three times in the same place. If so, the route to a finding of guilt is wide open. Almost any other piece of evidence can reasonably be interpreted to fit this conclusion. For example, if a mother who has lost three babies behaved or responded oddly, or strangely, or not in accordance with some theoretically "normal" way of behaving when faced with such a disaster, her behaviour might be thought to confirm the conclusion that lightning could not indeed have struck three times. If however the deaths were natural, virtually anything done by the mother on discovering such shattering and repeated disasters would be readily understandable as personal manifestations of profound natural shock and grief. The importance of establishing the correct starting point is sufficiently demonstrated by this example.

Before this trial began, this Court, differently constituted, had decided that the fact of three deaths (that is those of Gemma, Jason and Matthew), as well as each of the ALTEs [apparent life-threatening event], provided admissible evidence relevant to each count. There could be no denying that the death of three apparently healthy babies in infancy while in the sole care of their mother was, and remains, very rare, rightly giving rise to suspicion and concern and requiring the most exigent investigation. Given the overwhelming consensus of medical evidence, it would indeed have been an affront to common sense to treat the deaths of the three children and the ALTEs as isolated incidents, entirely compartmentalised from each other. All the available relevant evidence had to be examined as a whole. Nevertheless a degree of caution was necessary to avoid what might otherwise have been the hidden trap of taking the wrong starting point. If, for example, at post mortem it was positively established that Matthew's death had resulted from natural causes, the situation reverted to precisely where it stood before he died. The concerns which would have arisen as a result of his death – as the third in the sequence – would have been dissipated. There would have been a positive innocent explanation for the death, which would no longer be a SIDS, and might help to confirm that the earlier deaths were indeed natural deaths. Equally, if there were unequivocal evidence that one of these deaths, or even one of the ALTEs, had resulted from deliberate infliction of harm by the appellant, that would be likely to throw considerable light on the question whether the other deaths, or ALTEs, resulted from natural or unnatural causes. If, after full investigation, the deaths, or ALTEs, continued to be unexplained, and there was nothing to demonstrate that one or other incident had resulted from the deliberate infliction of harm, so far as the criminal process was concerned, the deaths continued properly to be regarded as SIDS, or more accurately, could not properly be treated as resulting from unlawful violence.

Reverting to the two possible approaches to the problems posed in a case like this, in a criminal prosecution, we have no doubt that what we have described as the second approach is correct. Whether there are one, two or even three deaths, the exclusion of currently known natural causes of infant death does not establish that the death or deaths resulted from the deliberate infliction of harm. That represents not only the legal principle, which must be applied in any event, but, in addition, as we shall see, at the very least, it appears to us to coincide with the views of a reputable body of expert medical opinion.

The court went on to say:

We recognise that the occurrence of three sudden and unexpected infant deaths in the same family is very rare, or very rare indeed, and therefore demands an investigation into their causes. Nevertheless the fact that such deaths have occurred does not identify, let alone prescribe, the deliberate infliction of harm as the cause of death. Throughout the process great care must be taken not to allow the rarity of these sad events, standing on their own, to be subsumed into an assumption or virtual assumption that the dead infants were deliberately killed, or consciously or unconsciously to regard the inability of the defendant to produce some convincing explanation for these deaths as providing a measure of support for the Prosecution's case. If on examination of all the evidence every possible known cause has been excluded, the cause remains unknown (24).

And its final conclusion was:

In expressing ourselves in this way we recognise that justice may not be done in a small number of cases where in truth a mother has deliberately killed her baby without leaving any identifiable evidence of the crime. That is an undesirable result, which however avoids a worse one. If murder cannot be proved, the conviction cannot be safe. In a criminal case, it is simply not enough

to be able to establish even a high probability of guilt. Unless we are sure of guilt the dreadful possibility always remains that a mother, already brutally scarred by the unexplained death or deaths of her babies, may find herself in prison for life for killing them when she should not be there at all. In our community, and in any civilised community, that is abhorrent (24).

Other courts have allowed convictions to stand where a mother has been convicted of multiple murder, notably in the case of *R v Folbigg* in New South Wales in 2005, Australia, where there was other evidence beyond medical evidence (26).

The approach to multiple deaths of children was also examined in the Supreme Court (a trial court) in Victoria, Australia in the case of *R v Matthey* (27). In that case Dr. Michael Pollanen, Chief Forensic Pathologist of Ontario was quoted as follows:

Pathologists are faced with the task of detecting concealed homicides, particularly of infants, children and young women. In these cases the post-mortem findings are often minimal or non-specific, and a pathologist may be tempted to over-interpret findings based on suspicious circumstances. Thus, in the past, some pathologists may have given a conclusion of 'asphyxia', 'smothering', or 'suffocation' based on non-specific findings and suspicion, or even a reported confession. Proponents of giving a definitive cause of death in these situations often argue that this is an example of diagnosis by exclusion; when all reasonable natural processes are excluded, then asphyxia is a reasonable alternative. However, in these cases the autopsy evidence is more supportive of rendering a decision of unascertained (27).

Professor Cordner, then Director of the Victorian Institute of Forensic Medicine was also quoted:

In my view, it is wrong on the forensic pathology evidence available in this case to conclude that one or more of the Matthey children are the vic-

times of a homicide. There is no merit in forcing certainty where uncertainty exists. The very existence of the enigma of SIDS demonstrates how little we know about why some babies die. It is not for a pathologist to conclude that a number of infant or childhood deaths, with no significant pathological findings at all, are homicides on the basis of controversial circumstantial grounds. If this case is to result in a prosecution, I want to clearly state there is no pathological basis for concluding homicide. The findings are perfectly compatible with natural causes. The findings cannot rule out smothering in one or more of the cases, but especially in the case of Shania, it is important that absolutely no signs of asphyxia or compression of the face are present (27).

The concept that multiple SIDS deaths in a family are murder has been challenged in the literature as well as in court cases. In 2005, Carpenter and colleagues published a paper on multiple deaths (28). This paper appeared after the appeal judgements in *Clark* and *Cannings*. They stated that 80-90% of second SIDS cases were natural (28). This paper has not gone without challenge, including by Dr. V. Dimaio, and review of Carpenter's data by other authors has suggested a higher rate of unnatural deaths (29-31) than recorded by Carpenter et al. Bacon and colleagues, in a review of papers on repeat SIDS, commented that the studies upon which risk of a second death was derived were flawed and may have overestimated the risk (31). They stated that by 2005, the risk of a first baby dying of SIDS in the UK was one in 3300 and of a subsequent child dying would be less than one in 500, based upon the data. More recent research into SIDS deaths has included whether there are genetic factors, such as long QT syndrome (32), which might then occur in a subsequent sibling.

CONCLUSION

The literature has been traced on the rate of covert homicide in SIDS, whether for a single death or in multiple deaths. The use of a percentage – e.g., the notion that 10% of SIDS are homicides – is problematic because the rate of sudden death in infancy

has fallen, making percentages less valuable. The developing literature suggests that the initial figures were overestimates. The rate of homicide was based upon opinion and the evidence has been called uncontrolled, circumstantial, anecdotal, and indirect. However, the literature is clear that some sudden deaths in infancy are covert homicides, though the percentage is low. Similarly, whether multiple cases of SIDS are all homicides or could be from natural causes remains controversial. The different approaches to this problem may also reflect jurisdictional differences. For example, medical examiners certify manner, but some forensic pathologists in a coroner's system do not. Some may also have been influenced by such philosophical approaches to infant death investigation as "think dirty", an approach that was promulgated in Ontario (33). It had its supporters, but was subsequently rejected in the Ontario Inquiry into Pediatric Forensic Pathology by Justice Goudge (34). The correct approach is an objective approach to think truth. This does not mean that multiple deaths will not be prosecuted, and jurisdictional culture will still play a part in the decision whether to proceed. In the English and Australian courts, evidence simply beyond multiple deaths appears to now be a requirement before the deaths will be prosecuted.

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