

# **Why is a Post Mortem Examination Important When a Child Dies Suddenly?**

*By Henry F. Krous, MD*

*Director of Pathology, Children's Hospital – San Diego  
Professor of Pathology & Pediatrics, University of California, San Diego School of  
Medicine  
Director, San Diego SIDS/SUDC Research Project*

Stricken with grief, parents experiencing the sudden death of their child are often and understandably reluctant to have a post mortem examination performed on their son or daughter. And yet, sudden deaths of individuals of any age and without apparent explanation are under the legal jurisdiction of the medical examiner who must determine the cause and manner of death. In order to do this, the medical examiner must perform a post mortem examination as well as be knowledgeable of the medical history and circumstances of death.

Perhaps it will help to begin with a basic description of the post mortem examination. It begins with a review of the medical history of the infant or child who has died. Secondly, it also involves a careful evaluation of the circumstances of death, including a reconstruction of the site where the infant or child was found apparently lifeless. The post mortem examination itself is the evaluation of the external appearance of the body and internal organs. It is undertaken much like an operation, but by a pathologist rather than a surgeon. In addition to the anatomic studies, ancillary studies are typically done as well. They may include post mortem X-rays, microbiology, toxicology, metabolic screening and chemistry evaluations. The dignity of the body is always maintained and disfigurement does not occur, therefore, funerals of choice can be performed.

With this background, what advantages accrue to the parents and other survivors of these children when a post mortem examination is performed? There are many and they have long term implications. First, when supplemented by the medical history and circumstances of death, the post mortem examination is the best way of determining the cause of death. Without the examination, the medical examiner does not always have enough information to make this determination unless there is something lethal about the scene, such as a toxic environment, where the child died.

Secondly, some of these parents may experience unwarranted guilt as they wonder if they may have caused the sudden unexpected death of their infants and children especially when they lack an understanding of the cause of death. Therefore, knowing why one's child died as the result of the post mortem examination can facilitate healthier grieving over their loss by allowing parents to focus on the wonderful memories of his or her life rather than agonizing over the unknown. When parents do not know what caused their child's death, they may imagine terrible, but unrealistic scenarios, such as "did my child suffer great pain before dying?"

Third, the knowledge gained from post mortem examinations of every infant and child is vitally important for every pathologist who performs them. It is not only through experience, as well as continuous study that we as physicians and pathologists improve our personal knowledge and expertise in complex areas of medicine, and that includes especially the topic of sudden unexpected death in childhood and infancy.

Aside from the valuable experience and expertise accruing to pathologists and other physicians, diagnoses derived by post mortem examinations are critical to the accuracy of vital statistics. Vital statistics are the basis for the allocation of health care resources by governmental agencies, such as the National Institutes of Health, and private sources, such as the CJ Foundation for SIDS. In this regard, the CJ Foundation is the only organization that funds research directed towards sudden unexplained death in childhood (SUDC).

Fourth, scene investigations and post mortem examinations are critical to research into SUDC. In comparison, for example, risk factors for SIDS were identified long before the underlying mechanisms involved in the cause of death have been clarified. Public education campaigns using epidemiologic data about these risk factors have led to dramatic reductions in SIDS rates with many fewer infants dying today compared to just a few years ago. We have no reason to doubt that the same thing will not happen with respect to SUDC.

With this in mind, the value of communication between families of SIDS infants and SUDC children and the medical examiners and coroners who investigate these children's deaths can not be overestimated. Face to face meetings are encouraged for several reasons. The autopsy report will never answer every question that a family will inevitably have. And, these reports will nearly always include medical terminology that may not be understood by the families. In contrast to telephone conversations, face to face conversations allow the medical examiner to "read" the nonverbal conversation of the families, thus providing the opportunity for clarification of confusing issues. The medical examiner's concerns for the family as they grieve the loss of their children are better expressed as well. In this regard, the medical examiners are fulfilling a role similar to clinical physicians in their interactions with their patients and their families.

Let me conclude with my personal experience regarding the attitudes of families whose infants and children have died during the past 30 years. During the time frame surrounding the infant or child's death, some parents have been very reluctant to have a post mortem examination performed on their child. This is understandable. At times, these objections may center on religious or cultural beliefs. Other parents may simply object to having the procedure performed for aesthetic reasons. Many of these objections can be mitigated by a careful explanation of what an autopsy is and what is to be gained will hopefully mitigate some of these objections. It is particularly important for parents to understand that a cause of death cannot be reached without performance of a post mortem examination, which in some cases may involve only ancillary studies.

Parental attitudes and healthy, successful grieving six months or more after the child's death have always favored performance of the post mortem examination. That is to say, I have never met a parent whose child died some months before my conversation with them that regretted having the autopsy performed. Conversely, in those cases where the examination was not undertaken, the parents are left with an irresolvable uncertainty regarding the cause of their child's death and have invariably regretted that the post mortem examination was not performed.

Those parents, whom I have met throughout my professional career whose child was examined were extremely grateful and rewarded that it had been undertaken. They have been able to reach closure in a more satisfactory fashion with knowing why their child died.

In selected cases, genetic disorders were discovered only during the post mortem examination. This information is vital to families planning future pregnancies and better protects surviving family members.

It should be noted that a post mortem examination does not always identify a cause of death. Nevertheless, the parents can be comforted to know that the effort was made. But it also must be remembered that these cases also provide information and materials that are important to vital statistics, education and research. There are many examples of this, perhaps the most obvious being the identification of risk factors for SIDS. Even though the exact cause of SIDS remains unknown even today, education of the public about what infant care practices should be avoided has resulted in dramatically lower SIDS rates throughout all developed countries of the world. Parents can share in this success by knowing that the post mortem examination of their children facilitated this progress.



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