



The Royal College of Pathologists
Pathology: the science behind the cure

RCPCH
Royal College of
Paediatrics and Child Health
Leading the way in Children's Health

Sudden unexpected death in infancy and childhood

Multi-agency guidelines for care and investigation

The report of a working group convened by The Royal College of Pathologists
and endorsed by The Royal College of Paediatrics and Child Health

Chair: The Baroness Helena Kennedy QC



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7 The post-mortem examination

7.1 The aim of the investigation is to establish, as far as is possible, the cause of death and, in order to do this, it is important that the medical processes are similar to those of an infant with a rare condition requiring special investigation in a tertiary centre. The investigation should be carried out by specially trained pathologists with an emphasis on multi-agency working, involving close collaboration and the sharing of information between hospital- and community-based clinical staff, the pathologist, the police, social services and the coroner's service. The investigation will concentrate not just on the infant, but will consider the family history, past events and the circumstances. These factors can be helpful in determining why an infant died. All parts of the process should be conducted with sensitivity, discretion and respect for the family and the infant who has died.^{34,35,39}[C]

A key aspect of these guidelines is that all staff involved should retain an open mind, knowing that some deaths will be a consequence of neglect or abuse, but recognising that the majority are natural tragedies. All agencies have a duty of care to the family as well as to the infant who has died and other surviving children. [C]

The post-mortem examination will be ordered by the coroner, and should be carried out by a pathologist with up-to-date expertise in paediatric pathology. If significant concerns have been raised about the possibility of neglect or abuse having contributed to the infant's death, a forensic pathologist should accompany the paediatric pathologist and a joint post-mortem examination protocol should be followed (see Appendix 6). If the paediatric pathologist becomes concerned at any stage during a post-mortem examination that the death may be a consequence of abuse and a forensic pathologist is not present, the procedure must be stopped. The examination should recommence as a joint procedure by a forensic pathologist together with the paediatric pathologist, in the presence of the lead police investigator or other designated police representative. [C]

- 7.2** Families have the right to be represented at the post-mortem examination by a medical practitioner of their choice, provided they have notified the coroner of their wishes.²¹ [S]
- 7.3** Prior to commencing the examination, the pathologist should be fully briefed on the history and physical findings at presentation and on the findings of the death scene investigation by the lead health professional or police investigator. Other photographs of the infant that may have been taken at presentation or in the emergency department should also be made available. [C]
- 7.4** The post-mortem examination procedure must include a full radiological skeletal survey or other appropriate imaging, reported by a radiologist with paediatric training and experience. [C]
- 7.5** At the post-mortem examination, tissue samples, other specimens and frozen samples will be obtained according to a standard protocol (see Appendix 6), and other samples may be taken as deemed necessary by the pathologist in order to ascertain the cause of death. [C]
- 7.6** Whole organs will not routinely be retained, but when this is deemed necessary by the pathologist, the coroner and the family must be informed, and the family given the opportunity in due course for return of such samples to the body if appropriate. If the family has requested that tissue or organs be donated for future use when the coroner's investigation has concluded, there should be a record made of the purposes for which the material can be used (to ensure it is not used for other purposes) and that the appropriate person has given their consent. This is particularly important where the mother/parents of the infant are under 18 and their parents may wish to make decisions about tissue retention on their behalf. [C]
- 7.7** The coroner should be immediately informed of the initial results of the post-mortem examination, which may also, with the coroner's permission, be discussed with the lead health professional and lead police investigator as required.^{2,21,22} [S]

It should be noted that the interpretation of the extent of investigation required to address the points above may vary according to coronial jurisdictions and hence, while recommendations are provided here for a suggested protocol, specific local practice may vary. The extent of investigation in individual cases should be discussed with the coroner involved.

In addition, the expectations of what information the post-mortem examination will provide may significantly differ between the coroner, the police, the family and other interested parties such as child protection agencies and researchers, but the primary aim of the post-mortem examination in SUDI is to aid the coroner in coming to a decision regarding how the death came about.

Note that factors that may have caused or contributed to the death and would thus, if found, also appear on the death certificate, are also relevant and should be considered as part of the examination, within reason (Sections 5 and 10 of the Coroners and Justice Act 2009).²² [5]

Clinical information relevant to the post-mortem examination

Prior to starting the post-mortem examination, the pathologist should have available a comprehensive history and report on the circumstances of death. This is essential both to aid interpretation of findings that may provide a cause of death, and to identify suspicious features that may indicate the need for a special or forensic examination (see police response section above: Appendix 1, section 3).

Ideally, available information should include:

- detailed history, including details of pregnancy, delivery, post-natal history, ante-mortem history and precise circumstances of death, including family history such as previous sibling deaths, consanguinity, drug use and sleeping arrangements
- event-scene investigation report from paediatrician and/or police investigators, if available
- report of the coroner's officer
- relevant GP records
- reference to the child protection register

- reference to resuscitation procedures
- results of examination by a consultant paediatrician
- results of skeletal survey or other post-mortem imaging
- details of any investigations performed in the emergency department, and any results available to date. All results from such investigations should be reviewed by the pathologist as well as by the designated paediatrician for unexpected deaths in childhood. [C]

The post-mortem examination procedure

Note that the post-mortem examination procedure, including the extent of sampling and ancillary investigations, may vary according to the specific clinical circumstances, with more extensive sampling or ancillary testing being performed where particular indications exist. The procedure suggested below represents the minimum recommended level of investigation in the majority of cases, but each case should be assessed on an individual basis regarding the extent of additional investigations.

Unless stated otherwise, all recommendations are based on perceived best practice [C]. Where specific peer-reviewed published evidence exists for a statement, the reference is provided.

- SUDI post-mortem examinations should be performed by a specialist paediatric pathologist with training in this area.
- If there is any suspicion of abuse contributing to the death, a joint post-mortem examination with a forensic pathologist should be carried out (see section 7.1 of main report above).
- Consider close adherence to the rules of evidence from the outset of involvement (for example, identification and corroboration of evidence).
- Specific examination for evidence of injury should be documented prior to commencing the post-mortem examination (including a full skeletal survey or other appropriate post-mortem imaging, reported by a radiologist with specialist expertise in this area).
- The post-mortem examination should include appropriate detailed external and internal examination, with consideration of photography or other documentation of findings.