



## Imaging the Dead

### Dr Giles Maskell on Behalf of the Royal College of Radiologists

The College has received a number of enquiries from radiologists who have been approached to assist pathologists or Coroners by performing and interpreting imaging investigations performed after death. In the past, when post-mortem imaging involved only plain film studies performed for forensic purposes such as the identification of foreign bodies or comparison with dental records, radiologists have not usually been directly involved in this process. However, the increasing application of cross-sectional imaging techniques including CT and MRI has led to requests for radiologists to become involved in this new area of practice.

Requests for this form of imaging fall into two distinct groups. The first is the “forensic” field in which imaging is performed, usually on victims of trauma, either for purposes of victim identification or for demonstration and clarification of the nature of injuries sustained. Considerable experience has been gained by a few specialists particularly in the military arena. The second and less well-developed field is in the identification of the cause of natural death in cases where this is not known. Specifically in the UK this concerns the extent to which imaging could augment or possibly even replace the Coroner’s autopsy.

It must be stressed that radiologists working in this field are bound by the regulations of Good Medical Practice, as in any other area of professional practice, and must be careful not to work outside their areas of expertise. In the case of forensic studies performed on victims of trauma for identification and clarification of fractures and foreign bodies, most radiologists involved in cross-sectional or trauma imaging should be able to offer an opinion.

However, where the cause of death is unknown or death is suspected to be from natural causes, radiologists should be extremely cautious in offering help. The use of CT and MRI to identify the cause of natural death is in the early stages of evaluation and should currently be regarded as a “research technique”. The first study to attempt validation by comparison of CT/MR findings with conventional autopsy in a series of adult patients is currently being undertaken in the UK and is expected to report late in 2010. Until that time, radiologists who are not participating in this research and who are not able to demonstrate that their interpretation has been compared with conventional autopsy can only offer very limited help without exposing themselves to significant risks.

There seems little doubt that the role of post-mortem imaging will increase in the future but it is currently far from clear whether expertise is likely to remain concentrated in a few forensic units or whether in due course “Coroner’s cases” will form part of the mainstream work of most radiology departments. For those interested in learning more about this exciting new field, there are sessions planned at UKRC in June and at the RCR Annual Scientific Meeting in September at which the issues will be discussed and early results of the research will be presented.

**Dr Giles Maskell has represented the RCR for the last three years in this developing field and will continue to do so in the foreseeable future. His advice has been endorsed by college officers and will be updated as future developments warrant.**

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