

## The conscientious autopsy

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The competently performed and thoughtfully reported postmortem examination remains a vital component of today's autopsy practice. The integral role which autopsy plays in documenting diseases and injuries that cause death is well recognized. Of equal importance, however, is that in revealing anatomic pathology (and in some cases microbiologic and biochemical alterations, as well), an autopsy enables morbid anatomy to be correlated with clinical signs and symptoms, thereby enhancing an understanding of the decedent's ailments. The artful practice of clinical-pathologic correlation, advanced by Giovanni Battista Morgagni in 1761,<sup>1</sup> takes time to master, but becoming skillful at assisting clinicians in understanding a decedent's medical history or in explaining the cause of a decedent's symptoms to family members remains one of the most rewarding aspects of autopsy practice.

In order to provide meaningful clinical-pathologic correlations, autopsy pathologists should be aware of relevant issues that exist prior to, or arise during, an autopsy, and they should effectively address those issues in a satisfactory manner with the postmortem examination. For example, when pulmonary thromboembolism is identified at autopsy, deep veins of the legs and, if necessary, the arms should be dissected. (N.B. In consented autopsies additional permission(s) for the procedure(s) from next of kin may need to be obtained). Sections of the occluded or empty vessels should be submitted for histology, in addition to sections of pulmonary emboli within vessels.<sup>2</sup>

Such a thorough evaluation of venous thromboembolism assists in 1) determining the

underlying cause of death (i.e., emboli by definition travel from somewhere, and most but not all pulmonary thromboemboli originate in the legs); 2) identifying a possible etiology of the thrombosis (e.g., potential phlebitis, extrinsic venous compression by tumor); and 3) approximately aging the thrombus and embolus (i.e., "acute", "subacute", or "chronic" clots). Complete evaluation and documentation of all relevant issues in such a manner optimizes clinical-pathologic correlation, allows objective medicolegal assessment of relevant issues, and reaffirms the value of autopsy among involved stakeholders.

Objectively documenting evidence that can elucidate injury, disease, and/or death, such as in the aforementioned case of venous thromboembolism, is a fundamental purpose of the autopsy and underlies its persistent importance in the medicolegal realm. Indeed, over the past half century hospital autopsy rates have declined around the world,<sup>3</sup> while forensic autopsy rates have remained relatively unchanged (at least in the USA).<sup>4</sup> The distinction between "hospital" autopsies, in which natural disease processes are evaluated, and "forensic" autopsies, in which injuries as well as natural and non-natural pathologies are investigated, understandably exists to support jurisprudence in various countries. Although forensic pathologists are expected to become adept in performing, reporting, and testifying about autopsies in civil and criminal court proceedings, all pathologists conducting autopsies should recognize that any death may have medicolegal implications and the findings from any autopsy can be drawn into medicolegal proceedings.

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In fact, among the various proposed reasons for declining hospital autopsy rates is the misperception among some physicians that autopsies increase the likelihood of malpractice litigation and/or render them culpable in such litigation.<sup>5</sup> However, literature from the USA,<sup>6</sup> Germany,<sup>7</sup> and Italy<sup>8</sup> exploring the role of postmortem examinations in cases of medical malpractice revealed that a majority of physicians were exonerated of the charges brought against them in cases where an autopsy had been performed. Moreover, the USA study showed that defendant physicians were acquitted of malpractice in the majority of cases, not only when autopsy findings favored the physician but also when autopsy findings favored the plaintiff initiating the lawsuit. In essence, unfavorable court rulings against defendant physicians involved standard of care issues rather than accuracy of clinical diagnoses in the cases examined by those authors.

A poorly performed and/or reported autopsy can be detrimental to physicians, can negatively influence perceptions of the autopsy among healthcare professionals and the public, and does not allow the autopsy's potential value to be realized. The same review of USA medical malpractice cases discussed above also demonstrated that suboptimal autopsy performance and reporting adversely affected the appeals process in nearly 20% of the examined cases.<sup>6</sup> While the legal fate of a particular autopsy may not be known prior to its being completed, pathologists can always control the quality of their autopsy performance and reporting.<sup>9</sup> With the privilege of conducting autopsies and advancing clinical-pathologic correlation comes the responsibility to be consistent, complete, and competent in all facets of autopsy practice.

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