THE USE AND ABUSE OF FORENSIC SCIENTIFIC EXPERT TESTIMONY IN THE COURTROOM

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Clinical forensic medicine involves the collection, critical evaluation, and presentation of medical evidence for use in the civil and criminal law arenas. The term “forensic” has come to be used as an adjective to identify a growing number of subspecialties of medicine, as well as other scientific fields, that may provide scientific evidence in courts of law. The forensic medical specialist is a key player on a large team involving many other professionals, who often have overlapping roles in the adjudication and resolution of legal matters.

FORENSIC MEDICINE SPECIALISTS

Forensic pathologists, testifying to the cause and manner of death in homicides and other unnatural death cases, and forensic psychiatrists, testifying in criminal cases wherein the insanity defense has been raised, were leaders in the development of forensic medicine in the United States, as well as in many other nations of the world, particularly Western Europe. The forensic medicine specialist is now one of many forensic scientists—such as the toxicologist, the immunologist, the odontologist, the criminalist and the anthropologist—who provide important services in a court of law.

Increasing in importance is the clinical medical specialist, who is frequently called upon to give medical evidence in court. This specialty includes not only the orthopedic surgeon, who is most often called to testify in personal injury matters, but also other medical specialists who may be asked to testify on a less frequent basis, such as emergency room physicians (trauma cases) and pediatricians (child abuse cases). This discussion is concerned with clinical forensic medicine experts, their evaluation and preparation of medical information and findings, and their presentation of that medical evidence in a litigation setting, which may be a deposition or a formal court trial. Clinical forensic medicine specialists are employed to assist attorneys in understanding the complexities involved in the medical scientific process; to give opinions concerning the applications of medical science in the proof of a fact; and, when the results are favorable to the employing party, to testify at the trial of the case as to the expert’s opinion and the basis for it.

THE WIDENING ROLE OF FORENSIC MEDICINE SPECIALISTS

The origin of the definitive connection between law and medicine dates from the publi-
tion of the Codes of Justinian about A.D. 530, in which it was provided that medical knowledge should be utilized in the adjudication of certain legal cases.

The role of the clinician in forensic medicine has greatly increased in importance over the past four decades in the United States. Certain selected specialists find themselves spending almost as much time in the courtroom as they do in the practice of their medical specialty. Those most apt to be found in court, providing evidence to assist in the resolution of a matter involving medical science, are the forensic pathologist, the psychiatrist (who is widely used in both criminal as well as civil proceedings) and certain treating physicians, most prominently the orthopedic surgeon and the neurosurgeon, who frequently are called to testify in personal injury litigation.

Although clinical forensic experts are able to provide a wide range of services useful for litigation, by far the most common function is that of an expert witness giving testimony in a court of law. Other important functions include assistance to attorneys in the investigation of the matter at issue, assistance in the preparation of the case and interpretation of the medical aspects of the case. Areas of litigation that depend on the experience and expertise of the forensic scientist have burgeoned over the last few decades. There has been a marked increase in the number of personal injury actions, including medical malpractice claims. There also has been a dramatic increase in the number of products liability cases, many of which involve highly complex medical issues (e.g., the Dalkon Shield, DES, Bendectin, silicone breast implants, etc.).

Since medical testimony or medical reports are of importance in approximately 80 percent of all cases litigated in the United States, it is likely that a significant number of physicians, regardless of their specialty, will be called upon to appear in court as expert witnesses.

THE ROLE OF THE FORENSIC PATHOLOGIST

The forensic pathologist is the medical expert who, as a function of his or her position, spends the greatest amount of time preparing for and giving testimony in court. The forensic pathologist is essential in all cases of death by violence or death from unexplained causes. The determination of the time of death and the identification of the deceased lie uniquely within the expertise of the forensic pathologist. Whether the sudden death is the result of disease or violence, the forensic pathologist is the specialist who is expected to make the determination and testify to his or her findings in a court of law.

Deaths due to poisoning, fire, drowning, gunshot wounds, stabbing, beating, motor vehicle accidents and any kind of trauma (recent or remote) fall within the realm of cases routinely studied by the forensic pathologist. In addition, the battered child syndrome has been catapulted into prominence in the United States over the last three decades with a great deal of writing and lecturing on the subject and an increasing number of court cases dealing with this complex problem. The forensic pathologist may also give evidence in cases dealing with rape, although other clinicians, particularly emergency room specialists and gynecologists, are more apt to be involved in these non-fatal cases. The identification of blood and other biologic stains will result in the forensic pathologist, as well as serologists, being called to court from time to time. The clinical interpretation of blood alcohol levels and various drugs will usually involve testimony by forensic pathologists and toxicologists.

RECENT TECHNOLOGICAL DEVELOPMENTS

Undoubtedly, the development of DNA testing would have to be considered the most signifi-
cantly and dramatically in the forensic scientific field in modern times. Its utilization in many kinds of homicide, rape and sexual assault, and other criminal cases has added an entire new dimension to medicolegal investigation.

Computer simulation of events is a relatively new process that is being used in both criminal and civil cases. Image processing with computer analysis is a very new technique that holds much potential promise for the ability to analyze photographs and obtain information from them that cannot be gleaned in any other way at this time.

New concepts in radiology, including computerized tomography (CT) scan, magnetic resonance imaging (MRI) and positron emission tomography (PET), which are utilized for various purposes in clinical medicine, are now being evaluated for application in several areas of forensic scientific study.

JUDICIAL UNDERSTANDING OF FORENSIC SCIENTIFIC CONCEPTS

There are numerous examples of civil and criminal lawsuits in which the failure of the trial judge and/or the attorneys to appreciate the significance and importance of crucial forensic scientific evidence resulted in grave injustice or unresolved controversy. The need to utilize appropriate experts can only be fully comprehended if judges and lawyers acquire knowledge of what various forensic scientific fields entail. What are the parameters and limitations of each subspecialty? What are the educational and actual work requirements of the forensic pathologist, toxicologist, odontologist, anthropologist, criminalist and questioned documents examiner, in order for such a professional individual to be accepted as a bona fide expert? What national certifying organizations exist to objectively test and qualify people in these various areas?

ABSENT OR INADEQUATE FORENSIC SCIENTIFIC EXPERTISE

The assassination of President John F. Kennedy is the best known example of the kinds of problems that can ensue in a homicide case where inadequate expertise is utilized. It is a matter of record that the two U.S. Naval pathologists who performed this autopsy had no training whatsoever in forensic pathology. The raging controversy that has now continued for 30 years is largely the result of the extremely inadequate post-mortem protocol, photographs and x-rays.

The controversy surrounding the question of a “second gun” in the assassination of Senator Robert F. Kennedy is likewise a topic of great interest and concern for many people, and is the subject of continuing efforts to obtain the release and disclosure of all the investigative records from the Los Angeles Police Department. In this case, the autopsy was extremely thorough and competently performed. However, the specific findings of Dr. Thomas Noguchi, the Los Angeles County Medical Examiner, regarding the muzzle distance and trajectory of the fatal head shot were never introduced into evidence during the actual trial, even though they had been testified to by Dr. Noguchi before the Grand Jury. The judge should have been aware of this extremely important and critical deficiency, and should have been cognizant of the fact that failure to address this subject might well have led to a deliberately incomplete presentation of the case and a grave injustice.

Other well-known cases that can be addressed under this subtopic include the cleverly manipulated investigation into the death of Elvis Presley, the alleged non-fatal poisoning of Sunny von Bulow and the assumed drowning of Mary Jo Kopechne.

Recently, the verdicts in hundreds of homicide cases over an extended period in the southwest-
ern region of Texas have been seriously challenged because of erroneous testimony given by a self-styled forensic pathologist. Many of these cases quite likely will have to be retried because the attorneys and trial judges failed to recognize the fact that the same physician who gave testimony in all those cases had no formal training, educational background or recognized credentialing in forensic pathology.

In another very similar (and equally incredible) scenario, it has been publicly revealed that testimony by a so-called forensic serologist in several hundred homicides and other criminal trials in West Virginia over a period of many years was critically flawed because of a lack of formal training on the part of this prosecution expert. After he was forced out of his job in West Virginia, he obtained a similar position working under the aegis of the Medical Examiner in San Antonio, where he committed the same kinds of grievous errors before his incompetence was once again uncovered. At this time, it is not known how many past convictions will be overturned and how many new trials will be ordered. One must ask how it was possible for this travesty of justice to have gone on for so many years in countless cases without any awareness on the part of the trial judges and attorneys. It is highly unlikely that we are dealing with an orchestrated criminal conspiracy, but rather (and in some respects even more regrettable) with a lack of basic knowledge and appreciation of what forensic science is by the very people who have a professional duty to possess such understanding.

There are myriad cases that can be referred to in many areas of both criminal and civil law, including rape, child abuse, alcohol and drug overdose deaths, many kinds of products liability lawsuits and a substantial percentage of personal injury actions.

FORMAL EDUCATION AND CERTIFICATION OF FORENSIC SCIENTIFIC EXPERTS

The American Board of Pathology formally created the subspecialty of forensic pathology in 1959. Since that time, national certification examinations have been given each year to individuals who have completed a residency or fellowship in forensic pathology at an accredited facility (large metropolitan medical examiner or coroner’s office). Approximately 20 years ago, the American Board of Psychiatry formally created the subspecialty of forensic psychiatry. This requires an additional period of residency or fellowship, which upon completion enables the individual to take a national certification examination.

More recently, national boards with certification examinations have been created in the fields of anthropology, odontology, toxicology and questioned documents. These training programs and postgraduate certification examinations have been developed and sponsored by the respective national organizations of these specialty groups. In addition, the American Academy of Forensic Sciences has been extremely active in promoting the development of all these forensic scientific specialty fields.

Other national organizations that enjoy reputations for special interest and involvement in the fields of legal medicine and forensic science are the American College of Legal Medicine and the National Association of Medical Examiners, respectively.

Insofar as the clinical medical specialties are concerned, every one of these has certification examinations given by a national organization (e.g., American Board of Orthopedic Surgery, American Board of Obstetrics and Gynecology, American Board of Emergency Medicine, etc.). In order to be eligible to take such an examination, which is usually given twice a year by each
respective specialty or subspecialty Board a formally prescribed period of residency and fellowship must be satisfactorily completed at an approved hospital facility following graduation from medical school. Applicants from all over the U.S. take the same examination, which incidentally should be sufficient argument by itself against the application of the "locality" rule, an archaic concept that some trial judges rather surprisingly still give some credence to.