National Association of Medical Examiners (NAME)

2010 NAME Interim Program

Global Forensic Medicine: Learning from One Another

Thomas T. Noguchi, M.D., Chairman
Jeffrey Jentzen, M.D., Co-Chairman

Tuesday, February 23, 2010 from 1-5pm
in the SHERATON HOTEL in GRAND Ballroom D.

Tuesday, February 23, 2010 **1:00 – 5 :00 pm**

Global Forensic Medical Services – Learning From One Another

Educational Objective: This program is designed for forensic pathologists, medical examiners, coroners, medicolegal death investigators, forensic administrators and forensic scientists. By attending this program, participants will be provided overall understanding of the global forensic medical services provided by forensic specialists working in different types of investigative systems around the world, thus providing g an opportunity to compare and analyze different the roles in death investigation.

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1:00 P.M.– 1:10 P.M. Introduction

Welcome: Lakshmanan Sathyavagiswaran, M.D., NAME President
Introduction: Thomas T. Noguchi, M.D., Program Chairman

1:10 P.M. – 2:00 P.M. Group I Coroner's Tradition and its Modifications

I. Coroner's Tradition and Current Development in the United Kingdom
Dr. Richard Thorley Shepherd BSc (Hons), MB. BS., FRCPath, FFFLM, DMJ (Path),

II. Current Australian Practice in Death Investigation
Dr Dianne Little, MBBS, FRCPA, Australia

III. Death Investigation in Canada
John Fernandes MDCM FRCSC FRCPC, Canada

IV. Death Investigation in Singapore
Dr Paul P S Chui, MBBS, DMJ, MRPACTH, FAMS, MBA, Singapore

2:00 P.M.– 2:45 P.M. Group II Continental Europe

V. The Continental European Tradition and Legal Medicine in France
Prof. D. Gosset, France

VI. The Legal Medicine in Italy
Giancarlo Di Vella, M.D., Italy

VII. The German Development in Legal Medicine and Forensic Pathology German
PD Heike Klotzbach, Germany

2:45 P.M. – 3:00 P.M. Group III Asian Scene

VIII. Current Japanese practice in Death Investigation
Kenichi Yoshida, M.D., Ph.D., University of Tokyo, Japan

3:00 p.m. - 3:30 p.m. - Break

3:30 P.M. – 3:45 P.M.
IX. Overview of Forensic Medicine in the People's Republic of China and Taiwan
Zhongxue Hua, M.D., New Jersey
3:45 P.M. - 4:00 P.M.
Group IV The Arab and Islamic Middle Eastern Countries,
X. Forensic Medicine in Arabic Middle Eastern Countries
Jeffrey Jentzen, M.D Ph.D., University of Michigan

4:00 P.M. - 4:30 P.M. Group V Mexico and South America,
XI. Current Practice and New Development in Death Investigation in Mexico
Mario Alva-Rodriguez, M.D., M.E. Mexico
XII. Current Development in Legal Medicine and Forensic Pathology in Peru
Hugo Castro, M.D, Peru

4:30 P.M. – 4:50 P.M. Question and Answer
4:50 P.M. – 5:00 P.M. XIII. SUMMATION
Thomas T. Noguchi, M.D. Chair

XIV. Workshop Recommendation
XV. Acknowledgements

VI. Italian Legal Medicine

Giancarlo Di Vella, MD *is an Associate Professor of Legal Medicine Faculty of Medicine and Surgery University of Bari, Italy.* g.divella@medicinalegale.uniba.it
Dr. Di Vella is a member of the NAME International Relations Committee and a member of the NAME Board of Directors

Historical precedents

To fully understand Italian legal medicine, it is necessary to consider the historical foundations of Roman law and other Mediterranean and Middle Eastern influences on its origins and development.

The Ancient Period: The *Old Testament (Leviticus)* cited legal medicine questions about medical procedures in determining the *right of primogeniture or* the *fitness of those who were entering in the Church at the onset of puberty*. The *Sumerian Code* (2500-1950 B.C listed criteria for defining *abortion* and how personal injuries were to be compensated; the *Hammurabi Code of Laws* (Babylonian King 1728-1686 B.C.) discussed medical malpractice and established specific punishments for physicians who caused patient injuries or death; *Hittite Laws* (1460-1200 BC) contained criteria for determining the charges associated with homicide, abortion, rape, adultery; the *Assyrian Code of Laws* (1112-612 BC) inflicted harsh sentences for those who provoked abortion, personal injuries, or who were adulterous or homosexual; it outlined precise definitions for illegal conduct or behavior. In Egypt and some surrounding regions, the physicians belonging to the state (*demosios*) had to write reports when suspicions were found in the determination of cause and manner of death, especially when work-related fatalities occurred.

The *Law of the Twelve Tables* (451 – 450 BC) *Lex Duodecim Tabularum*, more informally simply *Duodecim Tabulae*, is the ancient legislation that stood at the foundation of Roman law discussed *os fractum, or* traumatic mechanisms and the related criteria for economic compensation.

> *TABLE VIII:*
> *Manu fustive si os fregit libero, CCC, si servo, CL poenam subit sestertiorum; si iniuriam [alteri] faxsit, viginti quinque poenae sunto.*
> Someone who breaks another's bone by hand or club must pay 300 sesterces for a slave, 150; if he has done simple harm against another, 25.

Roman Law: Roman law required medical examinations to be performed before sanctions were applied when the offender was suspected to be suffering from mental disorders (*homo furiosus* and *homo mente captus)*. In Ancient Rome, rape, homicides, Caesarean section prescription in the event of a mother's death and a surviving fetus, as well as the certification of virginity needed medical testimony: the physician, at the end of the consultation, remarked it was done "*propter auctoritatem doctissimi Hippocratis.*"

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Autopsies were not allowed; however if the manner of death was unnatural, the bodies were exhibited for public viewing for two days. Anyone could provide an evaluation; on this basis Julius Caesar's cadaver was exposed too, and the physician Antistio, after the inspection of the 23 stab wounds, determined one lethal wound that penetrated the thorax, in the space between the 1st and 2nd ribs.

The *Lex Aquilia* defined that the wound was sustained by a lethal intention, and he prescribed exactly how economic compensation was to be done. Lucius Cornelius Sulla, Dictator of the Roman Republic, promulgated *Lex Cornelia de sicariis et veneficiis* (81 BC) by which severe punishment was imposed in case of medical malpractice; criteria for *diminished responsibility* (or *diminished capacity*) were defined by which the *capacity* (criminally liable) was excluded before the offender was fourteen years old; it established "quaestiones perpetuae", as specific judging system by which any "quaestio" was promoted by a citizen and prosecuted by a judge.

Claudius Galenus (September AD 129 – 199/217), a prominent physician and philosopher of Greek origin, first debated legal medicine themes (*De formatione foetus* and *De partu septimestri)* on the proof of fetal viability when stillbirth or charges of infanticide were brought. He proposed the corroborative role of the lung flotation test (idrostatic or galenic docimasia) for evaluating if respirations had occurred. He wrote *De prohibenda sepoltura in incerto morborum seu mortis dubiae genere* regarding to cadaver was not buried when cause and manner of death were undetermined and *De quomodo morborum simulantes sint deprehendendi* about disorders and simulation: "*many reasons man feign sickness.. It is right for physician to seek the truth…and only incompetent can believe he is not able to discriminate who are simulating from who are telling the truth*". Galen described cases of feigning illness especially such disorders as skin infections or hemoptysis, proving some individuals are able to spit blood without lung disease.

The Middle Ages and Renaissance: The period of history covering roughly a millennium in the 5th century through 16th centuries, physicians and midwives (*expertae matronae*) gave judges testimony when special competencies were required in the trial; it was essentially a personal opinion based on experience as was customary for non-professionals such as woodworkers or blacksmiths.

In the XII-XIII centuries Pope Innocent III (1160 or 1161 - 16 July 1216 at Perugia) and Gregorio IX (March 19, 1227 to August 22, 1241) established (*Decretales*) an official role of legal-medicine ***"peritia"***, as expert testimony or reporting during the trial when it is necessary to examine wounds or personal injuries or to verify the virginity in case of Annulment (*"impedimentum impotentiae"*). Frederic II, in 1231, remarked details about medical testimony in the criminal or civil trial by *Constitutiones augustales.*

In 1249 Ugo da Lucca, who was born in Bologna, was required to give two medical examinations upon oath and the report was dictated to the notary who was keeping it within the law.

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The medical *testimonies* were called *medici plagarum,* meaning the physicians of wounds and, among those, the "*beloved surgeons*" who were required to examine cut or stab wounds related to a duel or assault.

In the 1302 Bartolommeo da Varignano performed first forensic autopsy in case of a suspicious poisoning. Later, in according to the Caroline Law (Charles V, *Constitutio criminalis carolina*, 1532) medical experts were charged to examine cases in suspected crimes (illegal abortion, infanticide, homicide, poisoning, medical malpractice).

By this time legal medicine practice was becoming a specialty that required rules and training. Gian Filippo Ingrassia di Racalmuto, anatomist, in the 1578 wrote *Methodus dandi relationes* and *Constitutiones et capitula nec non jurisditiones regii protomedicati offici*. Also, Giovan Battista Condrochi di Imola published *De morbis veneficis ac de veneficiis libri quatuor in quibus non solum certis rationibus veneficia dari demonstrantur sed eorum species causae signa et effectus nova metoda aperiuntur* (1595) and *Methodus testificandi,* that described how the medical consultation had to be reported to the judge. These publications paved the way for legal medicine as an official discipline. In the same period, Ambroise Parè, a very famous surgeon of the Kings in France, made additional contributions related to poisoning, drowning, asphyxia and more.

The first systematic editorial approach to legal medicine was attributed to Fortunato Fedele which wrote *De relationibus medicorum libri quatuor in quibus ea omnia in forensibus et pubblicis causis medico referre solent planissime traduntur*, that was also a bibliographic reference for medical testimony training in 1602.

In 1621 P. Zacchia (1621) was author of the *"Quaestiones medicolegates in quibus eae materiae medicae quae ad legates facultates pertinere videntur, pertractantur et resolvuntur*,by which included all the forensic knowledge at the time, containing principles of medicine, philosophy, theology, human sciences, jurisprudence and legal sentences, verdicts and pronouncements. It is common opinion that Zacchia, Fedele, Ingrassia and Codronchi were the pioneers of the Forensic Sciences and that they gave great impulse to the discipline in all the European area. Than there was a large proliferation of contributions (*De partu hominis pro medici et juris periti – by* Paolo Emilio Bianchi, Milan; *questionium medico-legalium* by Lelio Zaccagnini, Rome).

The Modern Period: While the 18th Century was ending, Legal Medicine embraced the experimental method of positive sciences. Old dogmatic statements were dismembered and the research was based on observational procedures and on inductive reasoning. Legal Medicine was elevated to scientific courses that were introduced into the University (1797 prof. Ronchi, Napoli; prof. Ramponi 1786, Pavia) as part of the official curricula in the educational program within a school of medicine.

In 1818 Professor Barzellotti published a book that was entitled "*Legal Medicine in accordance with the spirit of civil and penal laws that are ruling different Governments of Italy*" that is believed to be the first scientific text for modern legal medicine. There was a broad discussion of topics which included research-based findings developed through the use of accurate scientific methods. The field received more publications by

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several authors (Martini, 1825 – The handbook of Legal Medicine, Turin; Tortora, 1836, Institutes in Legal Medicine). Professor Angelo Filippi founded a prestigious school of legal medicine in Florence whose disciples were Severi, Montalti, Borri and Biondi. In Turin, Cesare Lombroso and his colleagues (Ottolenghi and Falco) studied criminal anthropology and behavior.

Legal Medicine eventually became the referee of the Social Security and Insurance System, connecting to clinical traumatology and to Occupational Medicine, both of which are involved in studying occupational-related accidents or diseases.

On 27th October 1897, the *Italian Association of Legal Medicine* was organized and prof. Cesare Lombroso was the first President; in the same year, the *Journal of Legal Medicine and Medical Jurisprudence* was born and directed by prof. Severi.

On the 5th of October, 1898, Professir Lombroso inaugurated the *first meeting of Legal Medicine* and the lectures concerned the cadaveric examination (Foà - Ziino), the duration of illness and its importance in a Law System (Lombroso – Severi), the

Toxicological Chemistry in Tribunal (Vitali), Methods in testimony (Ziino - Pecoraro), and the Unique and Irreplaceable Role of Legal Medicine in the Legal System (Ziino). The topics of the meeting elicited the Minister of Justice to approve on the 30th of June, 1910, the Memorandum - titled Fani by Minister's name - "Italian Rules for Forensic Autopsies" that was in force for larger part of the last century.

Educational Requirements

Italian Legal Medicine studies "*res biologica sub specie iuris*" is based upon the relationship between the physical and psychological aspects of human life and the social and legal systems. The discipline of Legal Medicine is comprised of principles derived from biological and medical sciences and *Forensic Medicine.* This knowledge can be routinely applied to a forensic case investigation by using the "technical advice" of the expert in the discipline, who has been qualified as a *Legal Medicine Specialist.*

A Legal Medicine Specialist must possess a post-baccalaureate degree, equal to a fellowship in the United States that provides a specific *forma mentis* or ability to determine the "causation" of the illegal event against the human life and to evaluate cause and effect relationships from both aclinical and judicial points of view. The qualification of the expert includes competencies to verify if the health impairments are associated with any third party liability for another individual or the social insurance system (INPS, INAIL), or if the disability resulted in economic benefits such as special long-term compensation or a pension

The continued exchange of experiences and professionalism between the Italian Society of Legal Medicine and the two State Institutes for Social Welfare and Occupational Insurance (INPS and INAIL) promoted the definitive name of the Italian Society of Legal and Insurance Medicine (S.I.M.L.A.). The Italian Journal of Legal

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Medicine is the official journal of the Society and it has no impact factor up till now because many papers are related to the Italian legal and justice systems that do not meet the international criteria. Currently, the Course of Specialization in Legal Medicine takes five years and includes all of the sections cited above. The Title offers opportunity for careers in the private or public health care system. The Specialist may be required as expert or testimony for lawyers, prosecutors or judges, or insurance companies; the National Health Care System provides Specialists within the company staff.

Legal Medicine System

Actually Italian Legal Medicine includes the following sections: *Basic* (doctrine, methodology, causality, damage of person in the legal system) - *Penal* (crime against the life or the health, and other) and *Civil* area (the estimation and the compensation of body damage); *military system*: recruitment and fitness for the service, pension due to disease or illness); Forensic Pathology - Forensic Psychiatry and Criminology - Forensic Odontology – Forensic Genetics, Forensic Anthropology – Forensic Toxicology – Ethics and Deontology in Medicine and Legal Medicine in the Social Insurance and Welfare System.

The S.I.M.L.A. includes different Groups of research (GIAOF: Italian Group of Forensic Anthropology and Odontology; G.I.P.F.: It. Group of Forensic Path; G.I.S.D.A.P.: It. G. for studying the damage of Person; G.I.S.D.I.: Interdisciplinary Group Study Iatrogenic Damage; G.T.F.I.: It. Forensic Tossicologist Group; and Ge.F.I.: It. Forensic Genetic) that organize a scientific meeting every year.

The Italian Society of Criminology is part of Legal Medicine too; it was founded in 1957 and at time it was directed by prof. B. Di Tullio; later, with the guidance of prof. G. Canepa, G. Ponti and T. Bandini who have made many significant contributions to this growing disciplinary field.

Each Tribunal has an official list of physicians who are willing to provide consultation for criminal trials or in lawsuits. Nevertheless the access to the list does not require the Diploma of Specialization in Legal Medicine and for this reason there is no control on quality of professional service. The listing originally aimed to designate specific competencies; however, economic motivation has driven many physicians to request inclusion on the list. Of course, this has resulted in predictable consequences from legal medicine point of view, especially within the field of lawsuits.

In regard to forensic autopsies, there is no law that limits the competencies of the Specialist who does the external body examination or the anatomical dissection. It is not surprising, therefore, that specialists in other medical disciplines are required by prosecutors to perform forensic activities, even though the absence of Forensic methodology and competencies appear later at the cross-examination.

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The Forensic Autopsy

To assure the correct approach to the forensic autopsy, the G.I.P.F. has approved and is promoting *autopsy procedure protocols* that may guarantee minimal standard in forensic cases; nevertheless those are not applied by who performs the autopsy in absence of forensic background or competence, such as the pathologists.

Even though the role of the medical examiner on crime scene is considered essential and mandatory at the forensic autopsy, many prosecutors do not require their participation. This is due to the participation of specialized Officers teams within the Carabinieri (R.I.S.) or Polizia di Stato (Polizia Scientifica) and other, who have all legal authority at the crime scene. This gives them all the responsibility in the investigation, excluding the way that the ME later performs the autopsy on body found on scene. Biologists, chemists, and physicists are team members and they work on trace evidence and on reconstruction of dynamics of the event. This occurs many times without the Medical Examiner's expertise, even though the investigation started from finding of a dead body. That is the reason for controversial results in trials of forensic cases, also very popular outside the Country.

The forensic autopsy is performed frequently by a medical examiner who is member of University Community, belonging at Institute of Legal Medicine: that guarantees a correct methodology and of adequate laboratory support. Procedures for accreditation of Institute of Legal Medicine are debated inside the Italian community of Forensic Pathologists and of other Forensic Scientists in order to verify the quality in the service and to calibrate the requirements to the Italian Laws System.

On the other hand, several cases of presumed malpractices flood the daily autopsy activity of the Italian medical examiner. Each investigation is complex and requires interdisciplinary competencies to verify the suspicion of medical responsibility. For these reasons it is obligatory by article 62 of the Ethical Code of Italian Medical Association (last revision on 2006), in a case of presumed malpractice, that the investigation has to be carried out by a team whose members are a specialist in legal medicine and a specialist in the discipline that is the object of controversy.

During the last decades, the area of interest of Legal Medicine has expanded, but the methodology in approaching various biological problems does not change; it is responsibility of university forensic community to transfer knowledge to a new generation when forensic sciences are opening new frontiers

Acknowledgment

The author wishes to thank Janet S. Barber for her assistance.

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