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# Teaching of undergraduate Forensic Medicine in the Malaysian medical curriculum and the Medico-legal responsibilities of the Malaysian medical graduate

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ABSTRACT

## Abstract (English)

*Every medical graduate has to compulsorily serve the government in Malaysia, before he can be a duly registered medical practitioner with the Malaysian Medical Council, in order to practise within Malaysia. During the course of his service as a Government Medical Officer, he is required to undertake medico-legal examinations of living and medico-legal autopsy of the dead relating to common offences, etc. These medical examinations are required by law for dispensing justice, as per the Penal Code, and other laws common to Malaysia and other former British Colonial countries of south Asian region. However the undergraduate Forensic Medicine curriculum has been progressively whittled down through repeated amendments of the undergraduate syllabus on the lines followed in some of the more developed nations. The latter have adequate post-graduate qualified Forensic experts in each district to undertake these tasks, and do not require the medical graduate to undertake these onerous and difficult examinations in their districts. This reduction of the under-graduate Forensic syllabus has resulted in many of the graduates not being given exposure to the minimal content necessary to undertake these examinations. They are thus uninitiated and unaware of the various situations and their responsibilities where they may be required to undertake these examinations for corroborating a crime or proving the innocence of a suspect examined. A synopsis of those situations, and the expectations of the government medical officer (usually the fresh medical graduate), in these cases are briefly highlighted. Comparisons are drawn in this paper, with the*

*medical graduate in India, who is required to undertake similar medico-legal examinations at district levels, and is taught more extensively in similar jurisprudence and objectives in his undergraduate training of Forensic Medicine and Toxicology. The latter is based on previous teaching experience in India from where many of the Malaysian statutes (Penal Code, Evidence Act, Contract Act, etc.) have originated, and the evolving trends in adjudication and jurisprudential interpretation experienced there.*

## Abstract (German, Deutsch)

*Jeder medizinische Absolvent muß die Regierung in Malaysia obligatorisch dienen, bevor er ein ordnungsgemäß eingetragener praktischer Arzt mit dem medizinischen Rat Malaysian sein kann, um innerhalb Malaysias zu üben. Während seines Services als Regierung medizinischer Offizier, wird er angefordert, sich medico-zugelassene Prüfungen der lebenden und medico-zugelassenen Autopsie der Toten in bezug auf allgemeine Handlungen, usw. aufzunehmen. Diese medizinischen Prüfungen werden durch Gesetz für zugeführte Gerechtigkeit, wie pro den Strafcode und andere Gesetze, die für Malaysia und andere ehemalige britische Kolonialländer der asiatischen Südregion allgemein sind angefordert. Jedoch whittled der gerichtliche Medizinlehrplan des Nichtgraduierten nach und nach unten durch wiederholte Änderungen des Nichtgraduiertsyllabus auf den Zeilen, die in einige der entwickelten Nationen gefolgt werden. Die letzten haben ausreichende fortgeschrittene gekennzeichnete gerichtliche Experten in jedem Bezirk zum Aufnehmen dieser Aufgaben und benötigen nicht den medizinischen Absolvent, sich diese lästigen und schwierigen Prüfungen in ihren Bezirken aufzunehmen. Diese Verkleinerung des gerichtlichen Syllabus des Nichtgraduierten hat viele der Absolvent ergeben, die nicht Aussetzung zum minimalen Inhalt gegeben werden, der notwendig ist, sich diese Prüfungen aufzunehmen. Sie sind uninitiated folglich und ahnungslos von den verschiedenen Situationen und von ihren Verantwortlichkeiten, in denen sie angefordert werden können, sich diese Prüfungen für das Bekräftigen eines Verbrechens oder die Prüfung der Unschuld von einem vermutlich defektem aufzunehmen überprüft. Eine Synopse jener Situationen und die Erwartungen des Regierung medizinischen Offiziers (normalerweise der frische medizinische Absolvent), in diesen Fällen werden kurz markiert. Vergleiche werden in dieses Papier, mit dem medizinischen Absolvent in Indien gezeichnet, das angefordert wird, sich ähnliche medico-zugelassene Prüfungen auf Bezirk Stufen aufzunehmen, und werden weitgehend in der ähnlichen Rechtswissenschaft und in den Lernzielen in seinem Nichtgraduierttraining der gerichtlichen Medizin und der Toxikologie unterrichtet. Das letzte basiert auf vorhergehender Unterrichten Erfahrung in Indien von, dem viele der Gesetze Malaysian (Strafcode, Beweistat, Vertrag Tat, usw..) sind entstanden und die entwickelnden Tendenzen in der Zuerkennung und in der rechtswissenschaftlichen Deutung erfahren dort.*

## Abstract (French, Française)

*Chaque diplômé médical doit obligatoirement servir le gouvernement en Malaisie, avant qu'il puisse être un médecin praticien dûment registre avec le Conseil médical de Malaysian, afin de pratiquer dans la Malaisie. Pendant son service en tant qu'officier médical de gouvernement, il concernant est prié pour entreprendre les examens medico-légaux de l'autopsie vivante et medico-légale des morts des offenses communes, etc... Ces examens médicaux sont exigés par loi pour la justice de distribution, selon le code pénal, et d'autres lois communes en Malaisie et d'autres anciens pays coloniaux britanniques de région asiatique du sud. Cependant le programme d'études légal de médecine*

*d'étudiant préparant une licence a été progressivement taillé au couteau vers le bas par des amendements répétés du programme d'étudiant préparant une licence sur les lignes suivies dans certaines des nations plus développées. Les derniers ont les experts légaux qualifiés universitaires supérieurs adéquats dans chaque zone pour entreprendre ces tâches, et n'exigent pas du diplômé médical d'entreprendre ces examens onéreux et difficiles dans leurs zones. Cette réduction du programme légal d'étudiant préparant une licence a eu comme conséquence plusieurs des diplômés n'étant pas donné l'exposition au contenu minimal nécessaire pour entreprendre ces examens. Ils sont uninitiated ainsi et ignorant des diverses situations et de leurs responsabilités où ils peuvent être exigés pour entreprendre ces examens pour corroborer un crime ou prouver l'innocence d'un suspect examiné. Une synthèse de ces situations, et les espérances de l'officier médical de gouvernement (habituellement le diplômé médical frais), dans ces caisses sont brièvement mises en valeur. Des comparaisons sont dessinées en cet article, avec le diplômé médical en Inde, qui est exigée pour entreprendre les examens medico-légaux semblables aux niveaux de zone, et sont enseignées plus intensivement dans la jurisprudence et les objectifs semblables dans son formation d'étudiant préparant une licence de médecine et de toxicologie légales. Le dernier est basé sur une expérience précédente d'enseignement en Inde d'où plusieurs des statuts de Malaysian (code, acte d'évidence, Loi de contrat, etc.. pénaux.) ont commencé, et les tendances d' évolution dans l'adjudication et la traduction jurisprudentielle ont éprouvé là.*

**Keywords:** Forensic medicine, medical practitioner, medical officer, medico-legal autopsy, clinical Forensic Medicine

## Introduction

The word *Forensic* is a derivative of Modern western medical science. It derives its origin from the practice of the ancient Greek in bringing disputes, including those involving the infliction of injuries and the apportioning of blame for causing those injuries, and/or compensation, to the "*forum*". This latter function of determining whom caused the injuries and/or the extent of damages liable was the responsibility of the assembled publicans (senators) and elders, the persons invested with civic and legal responsibilities is not unlike our modern judiciaries with jurors.

In Latin, *forensis* means *of the forum*, and many propose this to be the origins of the term *Forensic Medicine*. Historically, Forensic Medicine was earlier known as *Medical Jurisprudence* (though today *Medical Jurisprudence* usually alludes to *Legal aspects of Medical Practise* including *Law in relation to Medical Men*). In some countries it is still known as *Legal Medicine* and in certain cases, *State Medicine*.

## The origins of Forensic Medicine in the yesteryears

The forensic aspect of medicine has always held a position of importance since the ancient times. Many codification's to guide the practitioners of medicine as to the opinions that are expected of them in these judicatory proceedings were formulated in those periods.

### Forensic Medicine practise in the Ancient Civilisations

The first origins of codified instructions regarding Forensic Medicine can be found in *Manu-Smriti* (3102 B.C.) given by the first traditional king and Law maker of India[1]. Similarly the "*Vedas*", the sacred literature of India, which were written between 3000 B.C. and 1000 B.C., mentions prohibition of relations of marriage and of incest, illegitimacy, etc. in the Rig-Vedas[2]. Other Vedas

mention crimes and their determination, and their punishments, as well as the diagnosis of various forms of poisoning and their management.

In ancient Egypt, legal provision for punishing improper treatment and sexual perversions, diagnosis of poisoning, etc. were prescribed, as described in the works of Homer, Herodotus, and Diodorus. Imhotep (3000 B.C.), grand Vizir, Chief Justice and Physician to king Zoser of Egypt is considered as the first medico-legal expert for combining the science of medicine and law.

The first legal code of Babylon, written by the King "Hammurabi" in 2200 BC prescribed punishments as well as civil and criminal liabilities of physicians among other medico-legal issues. Hippocrates' (460-355 BC) role in the ethical aspect of medical practice cannot be forgotten, while Aristotle (384-322 BC) fixed the animation of the foetus at 40 days. The Roman "Lex Aquilla" (572 BC) deals with lethality of wounds and their gravity. The murdered body of Julius Caesar (100-44 BC) was examined by Antistius, who opined that of the 23 wounds, only one of them was fatal. Pliny the elder (23-79 AD) was another important Roman author of Medical Jurisprudence.

## Developments in Forensic Practise with the era of the Roman calendar

Shushruta (200-300 AD), the father of Indian surgery, in his "Shushruta Samhita" wrote unique chapters on medico-legal issues of importance. The "Justian Code" of Emperor Justinian (AD 483-565), among other things, instructed that "physicians are not ordinary witnesses" but that they give 'judgement' rather than 'testimony', thus creating the role of the medical man as an impartial *Expert Witness* (cf. Expert witness in the modern context[3]). Charlemagne (AD 742-814) instructed the judges in all his empire to seek medical opinion on Forensic issues.

In 1250, "*Hsi Yaun Lu*" in China or "Instructions to coroners" gave detailed instructions to coroners relating to establishing various medico-legal causes and their inquests. In France, the 12$^{th}$ century bishops of Maine and Anjou had regular medical experts in their employment for forensic cases. The Pope gave the faculty of Montpellier the right of autopsy in 1934. A systematized law code on providing medical evidence was prepared in Maine, Germany, in 1507. The *Criminalis Carolina* of Charles V in 1532 established all over Europe (especially over his empire), the importance of medical evidence, and made opening of dead bodies mandatory.

The medical profession suddenly started organising discussions and writing Forensic monographs, and it became a separate subject by the 17$^{th}$ century. By the 18$^{th}$ century, chairs were created in German Universities for Legal Medicine; Leipzig University being the first in 1720. The French followed suit, with chairs in Forensic Medicine in Paris, Strasbourg and Montpellier in 1790 and a full professorship in Legal Medicine in Vienna in 1804. In Great Britain, Edinburgh in 1807 established the first chair in Forensic Medicine, while Glasgow had the chair at its University in 1839. London had its first professor of Medical Jurisprudence by 1834.

Poisoning, it's early detection and management, and proving after death caught up in a big way in the 18$^{th}$ century with the discovery of many deaths by poisoning. Usually, the poisoner, attempted to mask the homicidal death as one caused by a disease it mimicked. Thus arsenic- mimicking cholera/gastro-enteritis, and strychnine-, which suggested tetanus as a cause of death, gained popularity. The science of Forensic Toxicology was thus born, with Clinical Toxicology looking at the early detection and management of acute poisoning, usually in a hospital setting. This situation also led to the development of the Forensic Chemistry, looking into the early diagnosis of poisons, which supported the Forensic Toxicologist in trying to foil the attempt of the homicidal poisoner.

In America, the earlier prevalent Coroner system of inquiry into deaths was replaced by the Medical Examiner system in quite a few states. The Medical Examiner today is an Expert in Forensic Medicine, who has under his office, the complete crime team, including Forensic Chemistry, Toxicology, Ballistics, Fingerprints, and other allied departments.

Today, Forensic Medicine in certain countries like Britain show the speciality of Forensic Pathology is on the decline, while some disciplines like Clinical Forensic Medicine (of the Association of the Police Surgeons) is thriving. In contrast, other countries like USA have further specialised into sub-specialities like Forensic Toxicology, Forensic Pathology, Forensic Odontology (Dentistry), Forensic Psychiatry, Forensic Serology, Forensic Anthropology, Clinical Forensic Medicine, Forensic Radiology, Forensic Entomology (insects expert), Forensic Herpetology (snake expert), even Forensic Archaeology - and recently Forensic Cyber-crime experts.

## What makes a Forensic Medicine expert?

From the aforementioned history it is evident that deciding culpability and remedial punishment and compensation of the victim/victim's relatives was an important role of the early Forensic Physician when he examined injuries and weapons causing them. He was also required to determine whether 'un-sanctioned' sexual intercourse, whether rape/ sodomy/ bestiality/ or paedophilia; whatever was codified as a criminal act, was present from his examination of the victim. He had to look for corroborating signs to suggest, and even prove the involvement of the accused, on the latter's examination. This, as well as detecting feigned injuries or poisoning, to falsely implicate another, were also part of his examinations, on which he would later give his expert opinion to the forum or court.

Today, this discipline in some countries like India, Pakistan, Bangladesh, Sri Lanka, certain countries of Africa, etc. form the domain of the Forensic Medicine expert, (a post-graduate qualified in Forensic Medicine), or Medical Jurist. He is, besides being an expert of Forensic Pathology, also an expert of Forensic Toxicology and Clinical Forensic Medicine, and Medical Jurisprudence. In some countries like U.K. Clinical Forensic Medicine is under the Forensic Physician who is trained in clinical Forensic Medicine or medico-legal examinations of the living, including injuries, assaults, alcohol and drug overdoses, drug/drunk driving and addicts, etc.

All the examinations of the dead- to determine the cause of death, also determine other important findings in these cases, viz. time of/since death, age of the deceased, establishing as much as possible- features individualistic to his/her identity, and also attempt to harvest evidence to determine the identity/characteristics of the accused, or to prove his culpability in the crime, etc. are done by Forensic Pathologists, or by persons with post-graduate qualifications in Forensic Medicine. In the developed countries of the Commonwealth they have either a diploma or post-graduate examination qualified memberships in the Royal College of Pathologists of the region, or if U.S. trained, specialised in the state boards in Forensic Pathology.

The initial mandate of the Forensic Medicine expert extended to psychiatric examinations of criminally insane persons to determine their fitness to plead guilty or not to a charge, their fitness to subsequently stand trial and put up a defence. If they were to be sentenced for the offence committed and/or to undergo the punishment, the fitness to undergo these had also to be certified by them. In some situations where in the south Asian countries mentioned, there aren't enough Forensic Psychiatrists available to undertake these examinations, the Forensic Medicine expert is

sometimes asked to do these examinations individually or along with a general (non-Forensic) psychiatrist. Now days, these examinations are usually done by an expert trained exclusively in Forensic Psychiatry.

In isolated situations, these Forensic Medicine practitioners were called upon to also examine and report on injuries to the gums and teeth, or those caused by the latter- which would ordinarily fall under the domain of the Forensic Odontologist, a Dental Surgeon further trained in Forensic Odontology. The work of the Forensic Odontologist extends to not only reporting injuries to teeth and the gums, etc., but also for identification purposes from fragments of the jaw available at mass disasters, or age estimation from the maturation pattern of teeth, identification of the accused from the bite pattern on the victim's body, etc.

Thus the work and training of the expert of Forensic Medicine includes not only Forensic Pathology, but also Clinical Forensic Medicine, Forensic Toxicology, Forensic Odontology, crime-scene investigation, elements of Forensic Radiology, and minimal understanding of principles of Forensic Serology and Forensic DNA analysis, and Forensic Psychiatry, dactylography, etc. This is in addition to the a good grounding in Medical Jurisprudence, since in many institutions overseas, especially in the South Asian regions these experts are often called upon to be members of boards inquiring in legal issues against medical men, such as professional misconduct, negligence, etc.

## Legal expectations from the Malaysian Medical Graduate

### The Registered Medical Practitioner and Medical Registration

Any medical graduate, after graduating has to provisionally register, to undergo the necessary training, so as to have his/her name entered in the register of medical practitioners within the country, as required by the Medical Act (Malaysia) 1971. For this purpose, he/she has to first apply to the registrar, Malaysian Medical Council, to be *provisionally registered*, for the sole purpose of obtaining the experience required for full registration[4]. He can register by thus applying, provided that he/she has a recognised M.B.B.S. or equivalent degree, as listed in the Second schedule. Otherwise after the candidate passes a prescribed test for this purpose, the Minister, after consultation with the Medical Council, would deem that his/her degree in medicine and surgery is suitable for registration. This is done if the candidate produces evidence that he/she has been selected for employment in an approved hospital or institution in Malaysia for a period of not less than one year, in medicine and surgery in a resident posting[5].

After provisional registration, on the satisfactory completion of this resident medical posting, he/she would be awarded a certificate to this effect viz. that he/she has satisfactorily completed the compulsory resident medical posting.

An applicant having qualifications other than those in the schedule, and applying for registration after the approval of the Minister, and after clearing the prescribed qualifying test, would have to continue in service in a medical resident capacity, to the satisfaction of the Director General, for a further period of not less than two years in such post/s, as directed to serve at Director General's discretion.

The Medical Council may exempt him/her from this additional resident posting, on the basis of the applicant's further qualifications, if they feel that the person has the experience which is not less in scope and character that that prescribed, when they may exempt the applicant from the further 2

years of service[6]. After the satisfactory completion of the resident medical posting, he/she will again be entitled to a certificate to this effect[2].

Only a person who has satisfactorily completed the requirements as mentioned in the previous paragraph, by being provisionally registered and having served in a resident medical capacity, can apply to be fully registered as a medical practitioner in Malaysia[7]. During this period of compulsory government service, while provisionally registered, he would be deemed to have been fully registered under the Act, so as to undertake employment and service successfully[8]. He shall also be considered as a public servant within the meaning of the Penal Code[9], thus requiring him/her to carry out all the duties and bear all the responsibilities incumbent upon such a person.

Only fully qualified practitioners are entitled to carry on the practise of the speciality they are registered as qualified in, or to charge or recover through any court of law - reasonable fees for his services, or visitations, etc[10]. The later is possible provided he/she has a valid annual practising certificate at that time, and is the only one whose signature on a certificate or document required by any written law is considered to be valid[11]. Wherever the word "legally qualified medical practitioner" or "duly qualified medical practitioner" features in any testimony or statement, it is understood that it connotes a fully registered medical practitioner, for this purpose[12].

## Government Medical Officer and Duties in Criminal Cases

The medical graduate in Malaysia, immediately on clearing his final examination and the compulsory rotatory internship, has to serve the Malaysian government as a government medical officer, for a period of one to three years, depending on his basic qualification.

The Criminal Procedure Code of Malaysia (FMS 6) spells out that when a police officer is investigating a death of a person who committed suicide, or was killed by another person or animal, machinery or by accident, or died in suspicious circumstances suggesting that another may have committed an offence, or died a sudden death or was unexpectedly found dead[13], then that police officer informs the nearest Government Medical Officer at once of his proceeding to investigate such a death. Unless it is necessary for the magistrate- who would later conduct the inquest, to come and view the body at the place where it was found (viz. custody deaths, etc.), this police officer will take or send the body to the nearest Government hospital or other convenient place for holding a post-mortem examination of the body by a Government Medical Officer[14]. It now becomes the duty of the Government Medical Officer to make a post-mortem examination of the body as soon as possible, and extend the examination to dissection of the body and analysis of any portion where required, to arrive at the cause of death[15].

The Government Medical Officer is required to draw up the report on the appearance of the body and conclusions therefrom, and issue a certificate of the cause of death, sign and date it, and transmit it to the officer in charge of the police district[16]. Here the "cause of death" denotes not only the apparent cause of death - ascertained by inspection or post-mortem examination of the dead body, but also all matters necessary to enable an opinion to be formed as to the manner in which the deceased came by his death, and also whether his death was the result of, or was hastened by the unlawful act or omission of any other person[17].

## Clinical Forensic Examinations & Reports

The Penal Code recognises that injury[18] to mind or body (also legally defined as *hurt*[19]) carries a grave implication when *grievous*[20], as compared to the infliction of just (simple) hurt, with the offences[21] of grievous hurt carrying a much enhanced punishment; besides being '*seizable offence*[22]', which allows the police officer or the Penghulu to arrest without a warrant of arrest. Besides, if the injury, whether simple or grievous, were to be inflicted by a '*dangerous weapon*', then not only is the punishment enhanced, but in this case, even infliction of a simple hurt (i.e. that which is not in the eight categories of grievous hurt) would be considered to be a siezable offence. Sometimes, the clinching of the evidence in a court of law in an alleged case of attempt to murder[23] or attempt to commit culpable homicide[24] requires proper documentation of the injuries and the opinion on the weapon- as to whether the latter could have inflicted these injuries on the injured. The same question has also to be addressed in an alleged case of murder, when the weapon is produced before the doctor during or after the autopsy.

These- then are some of the situations that the law has to take recourse to early and prompt, detailed expert reports from the medical men to further prosecute in these cases.

Besides these, there are even graver offences where the proper knowledge of the subject of Forensic Medicine is required for the recognition and proper documentation of offences such as rape[25] and other unnatural offences[26] (e.g. sodomy, buccal coitus, bestiality, etc.). Awareness of the precautions in the collection and preservation of evidence as well as proper documentation, as well as taking adequate precautions during the course of examination, in a medico-legal sense 'makes or breaks' the case for the prosecution even if she was a genuine victim of rape or he/she - a true victim of an unnatural offence.

During the course of examinations of these and other *Clinical Forensic Medicine* cases, one soon learns to differentiate cases of malingering from the cases of genuine assault, or battery or cases of violence, including torture, domestic violence and child abuse.

## Forensic & Clinical Toxicology

Recognition of poisoning is another domain, especially linked to Forensic Medicine, where the timely recognition of the case to be a typical case of poisoning, initiates appropriate tests in this direction. In the past such determination and prompt reporting has had many a homicidal poisoner put behind bars due to the diligence of the Forensic Medicine expert.

In certain cases, an accused of a crime may take the plea that due to the fact that he was intoxicated, either with alcohol or with some unwholesome substance - he was not able to understand the nature and consequences of the act or omission to be wrong or contrary to law[27], and the intoxicating substance had been administered to him without his consent or knowledge; or that he was rendered temporarily, or otherwise, insane, from the intoxication. Of course, the law would consider our medical expert's opinion on these effects, i.e. firstly- whether it can be agreed that he was intoxicated at the time of the alleged offence, and that it would have lead to his loss of reasonableness, or resulted in a state of insanity, whether temporary, or otherwise; as well as whether, - with the help of medical and other evidence, if the latter has been satisfactorily established.

Where intoxication is established and is used as a defence to a criminal charge, and the law requires him/her to form an intention to commit that crime, the ability to form such intent in the

midst of the alleged intoxication will be taken into account. Thus if in the medical opinion, the intoxication usually incapacitates him to such an extent that he could not form the intent/or be unable to undertake the preparation to commit the crime, then if he is proved by the medical evidence to be intoxicated and he would not, therefore, be guilty of the offence. This applies where forming the intention (viz. murder[28]) or *mens rea* is described as an essential component of the crime along with the *actus rea* or the criminal act[29].

Then there is the offence of attempting to cause hurt by administering a poison with intent to commit an offence[30], which again requires that the poisoning be diagnosed by the doctor.

This interest in Toxicology has developed, in many countries, into a healthy interest in the antidotal management of poisoning, amongst the Forensic Experts, as well as the undergraduate teaching of this vital discipline in the Speciality, in most of the Asian colonial medical schools. In India, many medical colleges have their Forensic departments named as "Department of Forensic Medicine & Toxicology" and the undergraduate students are tested on many of the above mentioned subjects after somewhat extensive teaching and training. On comparison one observes that the objectives are the same (i.e. those in Malaysia compared with India), i.e. that any graduate doctor, or registered medical practitioner, as defined in the Code of Criminal Procedure 1973 (of India), can be asked, if recognised by the State government for this purpose [i.e. to conduct autopsies], to do a post-mortem examination of a dead[31] body in similar circumstances as in Malaysia).

### Medical examination of accused of crimes

There are some subjective differences in the Criminal Procedure Code between the Malaysia and India, with the Criminal Procedure Code (of India) laying down two circumstances where an accused would be clinically medical examined. In the first circumstance, this would be done at the request of a police officer to establish whether the accused was involved in a crime[32]. Police officers also invoke this section to get those in their custody to establish a medical record of any injuries before they are formally placed in their custody/prison. The accused may also be examined at his own request (usually put up before the court) to prove his innocence, or to prove that someone has committed an offence against him[33] (usually allegations of torture, or to prove/ medically establish his youthful age for a juvenile trial and sentencing, etc.). He is then produced before a Registered Medical Practitioner on a court order, to be examined.

In Malaysia clinical Forensic medical examinations were hardly undertaken, and very rarely by Forensic Clinicians or those trained in Forensic Medicine or Clinical Forensic Medicine, especially of the undertrials till recently, because of statutory guidelines in this regard being missing from the Criminal Procedure Code.

### Undergraduate Forensic teaching and Medical Ethics

The teaching and training of undergraduate medical students also imparts a reasonable grounding of Medical Ethics, and the law relating to medical men, etc. as part of this discipline. Members of this speciality are often called to be part of the ethical committee in their institutions, since they are daily imparting to the undergraduates the ethical aspect of practise vis-à-vis the law.

## Other Medico-legal Examinations

Besides, there are a host of offences, such as negligently doing an act likely to spread infection of any disease dangerous to life[34], or the offence of molestation, or outraging the modesty of a person

by using criminal force[35] which would require the documentation of the injuries inflicted, and the expert opinion that these are likely as a result of assault or force and the type of weapon used in this case. If a weapon is recovered in the case, whether it could have caused the injuries noted on the injured, are expert opinions expected of Forensic Medicine. In the case of the former offence of spread of infection, the medical opinion as to whether such an act would ordinarily spread the potentially dangerous infection and that it is a commonly known dangerous infection (to the average person on the street, so to speak) which could be spread by this mode- are required.

## The Western Forensic Scenario

In the west, the pathological component of medical duties are fulfilled by specialists trained in Forensic Medicine, who, as Medical Examiners in the United States, and Crown Office Pathologists or Forensic Pathologists in the United Kingdom, possess post-graduate qualifications in these spheres, and are recruited only to serve this function. They are available in every district, so that there is no requirement of the average registered medical practitioner (as in India) or the Government Medical Officer (as in Malaysia) to do this exacting and responsible legal duty in both these countries. Thus, Forensic Medicine has, by and large, been removed from the extent it is still taught, for instance, in India[36], from the undergraduate curriculum.

In India, to encourage some of the best of manpower, both in the form of experts as well as technical staff to take up this speciality, some state governments such as the state of Kerala have passed orders[37], assigning additional designations -viz. Police Surgeons, to those in assigned teaching/non-teaching Forensic Medicine jobs, and assigned additional official perks (proportionate to Heads of Dept's viz. Official vehicle and residence, etc.).

Besides additional emoluments, as honorarium, for each Medico-legal examination done, including post-mortems, is offered, to be proportionately divided (as declared in the gazette), amongst all the staff/ doctors involved in the case and its reporting. The source for the funds would be the Ministry of Home (since the medico-legal duties, being a duty/function undertaken for the home department- through the respective Director-General of Police's office- the department indenting for this service). This model is now being emulated in many of the other states in India.

## The Malaysian Scenario

In Malaysia, the requirement for the medical graduate, working as a Government Medical Officer, is to be well versed in the medico-legal situations and problems encountered in his day-to day practise in Government service and their solutions. This also extends to the diagnosis and management of poisoning and its proving, if discovered as a cause of death. He may also be called upon to examine and report on many other situations such as the juvenile offenders and instances of injuries to children, etc. to the 'Protector' of custody cases[38], as well as immigrants brought for examination, to establish that they are not harbouring any communicable or infectious disease, under the Immigration Act.

However, due to the designing of the undergraduate syllabus on the pattern of western undergraduate syllabi, this aspect of undergraduate teaching is accorded least priority. Forensic Medicine in fact faces the first onslaught in the deletion of teaching man-hours, so that not even the bare essence of Forensic Pathology, Ethics or Toxicology is being taught, so that there is no question of further creating awareness of the clinical aspects of Forensic Medicine.

## Forensic Medicine in the Court of Law

While the courts have till date been lenient in the service offered by our Forensic Examinations before it, the increasing number of acquittals before it may turn the tide, bringing the expertise shown in our so-called Forensic examinations to be judged, and at times found wanting, from our country's medical service function. That such a step is unheard of is erroneous, as evidenced in India, in the state of Gujarat. The Hon'ble High Court of Gujarat, responding to a criminal appeal[39], issued guidelines to the Gujarat State Government. The latter became the subsequent instructions in the circular issued by the State Government, addressed to all Deans and Directors of Medical institutions and Medical Colleges and the Registrars of Gujurat Universities[40].

To summarise briefly, it instructed all medical officers to themselves record the history as it is, as told by the patient, and the compos mentis of the patient when he is giving this history, himself, or his near and dear one accompanying him/her. They were to record his/her 'dying declaration' of the course of events that led to these injuries[41] in their vernacular, while additionally noting the exact time and date. The court insisted that it should be taught to the undergraduate student during his training - that it is the duty of the doctor treating to take down the dying declaration of the patient.

The Deans/ Directors and Registrars of Universities were, in addition, instructed to be seized of the fact that Forensic Medicine is taught in the Second Professional in India, i.e. by the fourth year of their M.B.B.S. (a five-year course excluding internship). When the undergraduate studied this subject, he/she was hardly imparted any practical training. There was no posting envisaged in internship in Forensic Medicine, so that, unlike other clinical subjects (in India, Forensic Medicine is gazetted in the Gazette as a clinical subject, after General Medicine) there is no 'honing' of skills by practical training after graduation, in internship. Therefore the H'ble High Court directed that these fresh graduates should have at least a two weeks' posting in Forensic Medicine during their internship, so that they acquire these vital skills at "*jurisprudential work*". They also asked that the same course be held in a phased manner as a refresher course, at regular intervals, by the Deans of Medical Colleges, in consultation with concerned Additional Directors and Commissioners of Health, Medical Services and Medical Education, to cover all medical officers serving the government, from time to time.

This is a laudable judgement for the teaching and training of Forensic Medicine, since Gujarat is a state where Medico-legal practise is of a high standard. And yet the courts responded to the felt need that in the particular case as well as others before it, the standards of Medical Jurisprudence were declining, and the educators need to rectify this.

Of late, the conventional training of the postgraduate Forensic Experts as Forensic Pathologists within Malaysia and their competence with regard to examination of Clinical Forensic cases are being questioned in courts vis-à-vis their credibility in Clinical Forensic Medicine examinations, in some of the on-going trial in Malaysia[42,43] . Soon it may be the turn of the Government Medical Officer who may have to stand up in court to defend his training to handle the daily requirements of medico-legal practise, both in the cities and rural Malaysia. For it is a well known dictum that "the eye will not see what the mind does not know". To even refer a clinical case to the appropriate Forensic Clinician, the medical graduate should first learn to recognise and deal with the forensic cases in the first instance, and know it for what it represents- the appropriate medico-legal issue involved.

Before such a legal step of inquiring into the quality and quantity of undergraduate Forensic medicine training and the Forensic skills of medical graduates in Malaysia is initiated, some thought as to how to rectify this needs to be accorded priority. Such an adverse comment of not adequately preparing the students for their responsibilities currently thrust upon them, would create doubt as to the standards of the teaching institution concerned. Currently some universities in Malaysia do not expose their undergraduates to medico-legal work, as these are not undertaken in the Pathology or other departments of the attached hospitals where these students go for their clinical skill training.

For the system to function as it is, without rectification in the deficiencies in the teaching and training imparted vis-à-vis Forensic Medicine and Toxicology, requires that every district have its trained Medico-legal Jurist/ Forensic Medicine expert or a combination of a Forensic Pathologist and a Police Surgeon. Then only can we implement the teaching programs as we see followed in those developed countries, whose undergraduate syllabi we are trying to emulate.

## Conclusion

The curriculum of Forensic Medicine should have proper orientation of the student towards recognising cases of foul play, and the various forms of suspicious or unnatural deaths. A reasonable idea of how to go about proving this through a post-mortem examination, or clinical examination and reporting when these living cases are presented for medico-legal documentation, should have been imparted to the undergraduate student as part of his training.

They should also be initiated in the processes of laws they would be dealing with in their day-to-day existence, and the role of medical men in various situations where the law calls on them to assist it. The medical graduate should be able to recognise in time- poisons and poisoning and their management; various ethical aspects of practise and malpractice suits arising out of their (medical) duties/practise, - and their defence against them.

They should be conversant with their role in a trial proceeding in court, the norms in evidence giving /taking in any investigation or trial, and an overview of the legal system they will be part of, to name a few. Some hands-on experience towards making of a medico-legal report of a living-injured patient and post-mortem examination should also be envisaged, so that in the long run, the graduate does not suffer from lack of adequate teaching and training, when called upon to undertake these duties when assigned to him. Only then can we claim to have prepared the Malaysian medical graduate for the duties and tasks before him when he begins to serve his compulsory 2 to 3 years' government service as the Government Medical Officer. This is especially so in relation to medico-legal cases brought to him by the police, etc. according to the prevalent laws in force.

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