MELESON NEWSLETTER 2020

MEDICO LEGAL SOCIETY OF NEPAL

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Message from the President

21 December, 2020.
DoFM, Maharajgunj Medical Campus
IOM, Kathmandu, Nepal.

Dear Colleagues,

I express my deepest gratitude and immense pride in being given this opportunity to help advance this organization. I look forward to your continued support and guidance.

On behalf of the entire MeLeSoN family, I would like to thank the outgoing executive committee for their efforts in developing a greater profile for the organization. MeLeSoN has progressed in leaps and bounds under the able guidance of the previous Presidents and I assure you of my greatest efforts in ensuring that we continue to strive for further development.

This society will continue to conduct programs for the capacity development of its members as well as advocate for further recognition of the field in Nepal. Having started with a handful of members, our numbers have now increased to 56 in just four years and this is a source of great pride for us. Over the last few years, MeLesoN has been actively advocating about medico-legal issues to numerous government and constitutional fora and is now recognized as the organizational representative of forensic practitioners in Nepal. However, this is not the time to rest on our laurels. While we have conducted a few trainings, workshops and seminars, we still have ways to go.

Given the ongoing pandemic, we have been unable to undertake numerous programs we had envisioned. However, we assure you that we are looking at possibilities and planning for the earliest opportunities. We look forward to facing the challenges that will come in the future and believe that together, we can rise above them and make a difference.

"If you want to go quickly, go alone. If you want to go far, go together."

Lastly, we thank the editor and his team for their efforts and persistence in ensuring the publication of this newsletter.

We wish you the very best in the coming year and hope for your health and safety.

Dr. Eugen Dolma, MD
President, MeLeSoN.

CONTENTS

Legal and Ethical Rights of The Unclaimed – Need for Reform

Dr. Rijen Shrestha, MD
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The medico-legal system encounters a large number of individuals that remain unidentified and unclaimed. The need for scientific disposition of these remains is a legal and ethical requirement, with profound consequences for the bereaved. Unidentified and unclaimed remains are often neglected by medical examiners, intentionally or otherwise, and are often not subjected to a complete autopsy. The disposition of unclaimed remains is a major obstacle for the dignified and respectful management of the dead, especially in large scale, open disasters.

Articles 32 and 33 of the Additional Protocol I of the Geneva Convention guarantee the rights of the family to know the fate and whereabouts of missing persons. The Geneva Conventions and the International Humanitarian Law also criminalise the desecration of human remains.

The National Guidelines on Management of Dead Bodies in Disasters, 2074 necessitates the preservation of remains from disasters for a period of 12 years. The preferred method of preservation of the remains, in case of unidentified remains, is short to long term temporary burial.

Under these legal duties, Department of Forensic Medicine at Institute of Medicine has been advocating to Government of Nepal and the university administration, for the development of burial grounds for the scientific disposition of the unidentified and unclaimed human remains.

The remains will be recovered following skeletonization and cleaned and stored. This will lead to the development of a skeletal collection that can be extremely helpful for research in forensic taphonomy, forensic archaeology and forensic anthropology, promoting studies for determination and validation of procedures for estimation of post-mortem interval and identification among others.

This will ensure the dignified and respectful management of unidentified and unclaimed bodies, protecting their rights and allowing for repatriation, upon identification in the future, while also ensuring compliance with international scientific standards.

Ethically, while one may be more inclined towards cremation of unclaimed bodies, this poses two issues – a majority of the unclaimed bodies are in fact unidentified. Were the medico-legal identification system developed, a majority of these remains could be identified and returned to their loved one. Would cremation of the remains by the state or other parties not violate the rights of their loved ones?

Another issue to be dealt with is the

duration following which the unclaimed remains would be cremated. As no law exists in Nepal regarding the final disposition of unclaimed remains, the prevalent practice dictates that the unidentified remains are kept for a minimum of 35 days at the Department of Forensic Medicine at Institute of Medicine. However, in reality, the bodies are often stored, neglected, for months and even years.

Additionally, the only scientific and humane method of preserving human remains for a period of 12 years, as is required by the National Guidelines on Management of Dead Bodies in Disasters, 2074, is burial. As was evident following the 2015 gorkha earthquake, the temporary burial of human remains requires minimal resources and the remains can be exhumed at a later date following identification. Human remains of foreign decedents were repatriated months and even years after they had been recovered following the earthquake.

Taking the Federal structure into consideration, it is important to develop facilities throughout Nepal for quick response. The development of burial facilities, at the central level, that can provide for the internment of 1,000 unclaimed and unidentified bodies resulting from the regular medico-legal services as well as facilities for an additional 1,000 bodies from disasters is vital to facilitate the dignified management of the dead following disasters. Additionally, burial facilities for 500 regular unclaimed and unidentified bodies with additional facilities for 500 bodies from disasters should be developed at the regional levels and facilities for storage of 100 regular unclaimed and unidentified bodies and 100 bodies from disasters should be developed at the district levels.

With regards to space management, the graves would ideally be single and marked. The minimum space required for each grave is 2m x 1m. This would require burial grounds of 400 sqm at the district level, 2,000 sqm at the regional level and 4,000 sqm at the national level. In addition, the development of such facilities throughout Nepal also requires substantial investment in human resource and infrastructure development. This can only be brought about by persistent advocacy and repeated pressure on the government.

References:

1. Cordner SM, Coninx R, Kim HJ, Van Alphen D, Tidball-Binz M, editors. Management of dead bodies after disasters: a field manual for first responders. Pan American Health Organization; 2016.
2. Guidelines on Management of Dead Bodies after Disasters, 2012 (First Amendment, 2019). Ministry of Home Affairs, Government of Nepal. (retrieved from http://neoc.gov.np/uploads/document/file/विपद्%20पश्चातको%20शव%20व्यवस्थापन%20सम्बन्धी%20मार्गदर्शन,%२०२०६८%20(प्रथम%20संशोधन,%२०७६)_20190509123456.pdf; accessed on 21 December 2020).
3. Blau S, Briggs CA. The role of forensic anthropology in Disaster Victim Identification (DVI). Forensic science international. 2011;205(1-3):29-35.
4. Acharya J, Shrestha R, Shrestha PK, Kanchan T, Krishan K. When protocols become fairy tales and gods remain buried under: excerpts from the diary of forensic experts at ground zero during the mega quake that hit Nepal. Am J Forensic Med Pathol. 2017;38:5-8.

Compensation and Scientific Evidence: Two Schools of Thoughts in Nepal

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As witnessed in any given day where a dead victim is brought for postmortem examination; the word *Chyati-Purti* (compensation) if heard anywhere tends to push back the investigation of the dead for days or weeks. The confusion with mortuary personnel starts swinging as to whether refrigerate the body or place it on autopsy table. All wait patiently for decision from investigating officer to perform further investigation on the dead. The investigation then passes through one of the following two schools before justice is presumably prevailed to victim: the regular school of justice and the school of mob/alliance.

School of Justice

The law as understood from the school of justice is simple and can be found in literatures of law and constitution of Nepal. When a person dies in a mishap, the body passes through a series of routine investigations. Documentary and physical evidences like inquest, circumstantial and physical evidence collection by police from the scene, witness testimonies, crime scene report, requisition for postmortem examination, conducting autopsy and collecting evidence of forensic significance, forensic lab reports, autopsy report, etc. are compiled and produced in the court of law. During the court trial, testimonies are held, defense lawyers' and public prosecutors' opinions and validations are testified and the judge gives away the verdict. The verdict determines acquittal, punishment or compensation from the other party given which can be challenged in higher courts. The compensation could be monetary and the punishment could be either fine or imprisonment or both. Time duration till the final verdict is given could be after months or years, no Guarantee assured!

School of Mob Alliance

The other school is where rest of the discussions of this article shall be focusing upon, as a contribution to literature, the school of Mob Alliance. School of mob is co-existent at the same time contrary to the regular school of thought; the procedures of which are explained below:

A. *Invasion into Scene of Incident:*

When any incident results in unnatural death of an individual, a group of people with or without local political background gather at scene, determine the manner of death among them and proceed to police station along with their agenda

to provide justice to the kin. The next to kin, usually a bereaved family member is convinced of the monetary gains that could be fostered if further investigation is kept at halt till the amount is received. It is further advocated that in other school the kin has to go through gruesome, uncertain and time-consuming court procedures. "*The deceased is not coming back, but we shall do all we can to make your life less difficult*" is a statement example of kind of promises assured. All kin has to do is to keep continue crying and yelling for next few days, especially when online bloggers and cameras are facing.

B. *Sensitization through online media:*

The supporters of victimized kin now grow with time and form a mob/ alliance, a small committee famously "*Baarta-Toli*" is formed, with an objective to sit for discussion with senior officers of police station responsible for investigating the case. One of the kin is made a member of the committee but the committee is led by someone with good bargaining skills but not necessarily known to kin before the incident. The supporters of victim may range from tens to hundreds in next few days, depending on the gray media sensitization. The physically present supporters gathered around the police station tend to house arrest police personnel in their perimeter by pelting stones, vandalizing structures and burning tires. This results in further media sensitization and may get into headlines of national dailies. This will result in directives from senior officials from the headquarters to the station in charge to settle the mob issue at the earliest by any means, irrespective of the demands bargained. "*Justice for the victim, punish the culprit at the earliest*" is an example of slogan used here.

C. *Capturing/criminalizing the target:*

The vulnerable target who is somewhere connected to the incident, or has history of conflict with deceased in the past is hunted down and demanded to be kept in police custody till the truth is prevailed; in other words, 'demanded compensations' are settled. The aim is to take the alleged assailant in police custody irrespective of their involvement in the case. Surprisingly, the same mob decides who to be kept in police custody by filing a complaint of homicide against the target. Thousands or even million sympathies from the news followers are gathered virtually through web-based victimization of the alleged assailant. This chosen target usually is a vulnerable individual with past criminal history/police records and can easily be denounced convict/culprit in public eyes. Forensic medical examiner and police officials/department are no exemption and may face brutal harassment over social media if not physical assault, if any attempt is made to dissolute the alliance and request to follow the regular law school. Allegations of corruption become the blind men's tool. "*Hang the culprit till death*" or even harsh slogans are used.

D. *Compensation demand:*

After a target is identified and kept in police custody, a demand is set by the mob committee as compensation. The compensation bargained from victim

could be anything ranging from few cows and buffaloes to millions of rupees, education of the child till graduation, monthly financial recharge for widow to continue her household, land and property transfer, etc. to name a few; all to lure the next to kin. The size of demand depends upon the financial capability of the hopeless target. Friends and family of the target unwillingly sit together with the committee in presence of station in-charge. Bargaining is made from both the sides, and in a subsidized rate the transaction is made. Mob disperses, police personnel take deep breath and the kin is left with few loved ones to visit mortuary for the last rights. The alleged culprit walks out from police custody full of social discrimination but free of legal obligations as the financial transactions made outside the court of law, *with Guarantee!* No slogans!

E. *Mortuary and scientific investigation:*

While all this happens in police station, no one from family visit the mortuary. The deceased sleeps quiet either stiff, pink and cold or green and loose, for days and weeks, depending upon the storage facility with refrigeration or an improvised dark shady room of a developing nation, impatiently waiting with mortuary personnel for the requisition letter for postmortem examination and wondering if life was harder or the death.

The mob that wanted justice to prevail is nowhere to be seen, unbothered about the cause and manner of death provided by the forensic expert just to rush to mortuary demanding less incisions be made on the deceased and the body be handed over urgently for last rights. In any case, if the body shows any signs of decomposition following prolonged unrefrigerated storage, cases of mortuary personnel being battered physically or verbally have been reported in many occasions. Chances for further compensation demand for disrespect to the deceased are explored. In even more bitter experience, protrusion of eyeballs due to decomposition was accused as attempt of mortuary personnel to trade it off for transplantation.

The questions that contemplates in our minds in most forensic departments of Nepal have remained the same all these years:

Should we wait for consent from the mob to start autopsy once requisition from investigating officer has been made? Is there even a need for investigation of the dead in cases which has passed out from school of mob? Is compensation money received by the kin distributed among the mob committee? And above all; can justice be prevailed without investigation reports, scientific validations or even reasonable interpretation?

Evolution of Forensic Medicine in Nepal

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Forensic Medicine is the branch of medicine and science involving study and application of scientific facts and medical knowledge to solve legal problems. It is equally applied in disputes between living persons and exploration of facts in case of unlawful and suspicious deaths.

History is important to understand the evolution of the subject through different stages of existence, appreciate the contribution of our ancestors and finally allow us to learn from their mistakes. Medicine and law are related from the earliest times by the bond of religion, superstition and the magic. The systematic application of Forensic medicine started from the mid-17th century but from the ancient time it was practised when needed. The word forensic is thought to be derived from the Latin term "Forensics" meaning "of the forum". In the ancient Rome forum was the meeting place where civic and legal matters were discussed by the competent authorities.[1]

The oldest recorded pertaining to legal matters is Code of Hammurabi by king of Babylon which is dated around 2200 BC. Earliest recorded autopsy took place in University of Bolonga, Italy during mid thirteenth century[2] whereas in Nepal it started about 100 years ago from Bir Hospital by Indian doctors who came to run the hospital for medical services. During same course in 1928, Dr. Raj Krishna Mukherjee dissected dead bodies and showed various internal organs to the then Prime Minister Bir Sumsher and to the group of local Vaidyas and practitioners of healing profession.[3]

Dr. Mohan Mani Dixit, who would have been the first Forensic expert, was sent in a helicopter to investigate the plane accident that had taken place at Dhorpatan in 1962 ending the lives of 25 passengers. His second trip on 24th August 1962 was unfortunate as the helicopter crashed. This was a huge loss to the fraternity.[3]

In Kathmandu valley, the autopsies then were conducted under the supervision of the doctors working at Central Jail Hospital Kathmandu who used to work at mortuary of Bir Hospital, though the person who usually did all the actual carvings was the porters appointed at the department. Ram Bahadur Damai, who was appointed as a helper had to do dissection and he reckoned that over the period of 27 years, he had cut open as many as 2000 dead bodies.[4] At that time there were no facilities for proper storage of dead bodies, no electricity and no continuous water supply.

Medico-legal autopsy at Kathmandu valley was operated by Central Jail Hospital for long time without proper management

in terms of physical facilities and expertise. For the purpose of authorization of medico legal work, the chief of Jail Hospital was designated as Police Surgeon and the name of the Office was kept as Central Jail Hospital and Police Surgeon's Office. The Police Surgeon was a medical doctor heading Central Jail Hospital of with any speciality or non but not from the field of Forensic Medicine. A single room at back corner of Bir hospital without any cooling and refrigeration facility was operated as mortuary for medico-legal autopsies for many decades till 2000 AD. All other clinical medico-legal services was provided by nearby government health facilities. The cases of sexual assaults allegation were taken to Maternity Hospital Thapathali with belief of gynaecological service can cover the medico-legal component of examination and reporting. Now it is upgraded with special training in forensic for Gynaecologists and other medical officers and establishment of One Stop Crisis Management Centre (OCMC). Till today, in most parts of the country, medical officers are the examiner providing the services for both autopsy and clinical forensic medicine.

The legal provisions for medico-legal work are still not sufficient and not very clear for the coverage of all types of medico-legal examination. Enactment of new law replacing the Muluki Ain which guided more than centaury looks little progressive to address the medico-legal field. Muluki Criminal Procedural Code 2017 in section 20 states the provisions on involvement of experts in the field for autopsy providing space for specialist's service by Forensic experts.[5] On the base of new provisions medical college teaching hospitals are permitted to provide medico-legal services through Medico-legal Service Operation Directive 2018.[6] Now Bhaktapur and Kavre Palanchowk districts are benefited with the services by Kathmandu Medical College Duwakot and Kathmandu University School of Medical Sciences Dhulikhel. This new directive opens for possibilities of specialist's service in the field when and where they are available. Before this new arrangement by law, IOM Maharajgunj, BPKIHS Dharan and PAHS Lalitpur were the centres where medico-legal services were permitted through special decisions by government at different times and the job of concerned experts was recognized.

The situation of Forensic Sciences in the country also not sufficiently updated as it is required. Though Nepal Police established Forensic Science laboratory in Police Head Quarter on 1960 AD with photography unit.[7] Other essential units like finger print, toxicology, ballistics and questioned documents were added within the period of more than 20 years. Because of limited facilities for laboratory analysis. the biological samples were used to send to India for toxicological analysis and DNA profiling for long time. According to recommendation of Royal Judicial Commission 1986, National Forensic Science laboratory was established under the RONAST which got separated later as a separate body on 1995 AD. The Commission also suggested to Nepal government to merge the police forensic science laboratory with the newly established under RONAST but it was not realised. On January 1995 the police Forensic science laboratory was restrengthened with the name of Central Police Forensic Science Laboratory with new Departments including

DNA unit. Now both of these laboratories are opening their branches in different provinces of the country. It is sad to know that necessary improvements and upgrading of both of these laboratories for addressing present needs are still awaited.

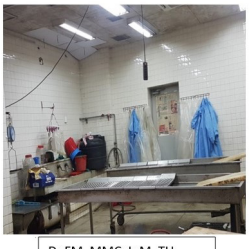
For betterment of forensic services including both the forensic medicine and forensic sciences, a lot of efforts are to be made. First thing is a clear cut legal procedural provisions in relevant laws must be added which can properly guide the concerned stakeholders of investigation towards right track. Medico-legal and forensic evidences related codified law can be effective in this regard. Involvement of qualified forensic medicine experts working at different medical colleges of the country and appointment of such experts in those hospitals where medico-legal cases are in significant numbers is another path for quality service. Not only expansion of forensic science laboratories but equipped laboratories in terms of expertise and technology only can fulfil the existing gaps in forensic services of Nepal.

References:

1. Subedi ND, Deo S. Status of medico legal service in Nepal: Problems along with suggestions. Journal of College Medical Sciences-Nepal. 2014:10(1):49-54.
2. Saukko P, Knight B. Knight's Forensic Pathology, 3Ed. 2004.
3. Dixit H. A Forensic Tale of Nepal. J Nepal Med Assoc. 2018;56(213):883-5.
4. Tiwari CL. Ram Bahadur Damai, a veteran of 2,000 Post mortem. My Republica, 23 Dec 2017. https://myrepublica.nagariknetwork.com/news/ram-bahadur-damai-a-veteran-of-2-000-postmortems/
5. Muluki Criminal Procedural Code 2017, section 20.
6. Medico-legal Service Operation Directive 2019. Ministry of Health and Population Kathmandu.
7. www//cid.nepalpolice.gov.np

Dhading District Hospital

Western Region Hospital



DoFM, MMC, IoM, TU

Kathmandu Medical College

Medical Certification of Death in The Context of COVID-19

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Introduction:

Mortality surveillance is essential during public health emergencies. It enables us to know the disease progression and also provides guidance in identifying proper public health interventions. An important way of mortality surveillance is by analyzing the causes of death as reported on the death certificates. In Nepal, death certificates are provided in hospital deaths due to obvious natural diseases. In all cases of unnatural deaths, medicolegal examination is mandatory which helps us to uncover the cause of death. The death certificate provides information about the deceased, the causes and circumstances of death. This information is useful for the settlement of the estate and provides family members closure, peace of mind, and documentation of the cause of death. The information provided in the death certificates can be an important source of information to the epidemiologists and statisticians to get a picture of prevalent diseases and conditions in a given setting.

Structure of a death certificate:

A standard way of reporting the cause of death is to follow the protocol laid out by the World Health Organization (WHO). The format of death certificates prepared in different hospitals in Nepal too follow the guidelines of WHO. The cause of death section is the most important part in the death certificates and is based on the physician's best opinion. However, these certificates are not free of errors. One of the common errors in certifying death is to mention the mechanism of death rather than writing the specific cause. Terminologies like "cardiopulmonary arrest" and "cardiac arrest" are often attributed as the final cause of death whereas in reality they just denote the event of deaths rather than the cause. The other common error is to write the diseases and conditions in an illogical order. The doctors need adequate training to prepare satisfactory death certificates.

According to the WHO protocol, the cause-of-death section in the death certificate consists of two parts. The first part (Part I) includes the sequence of events leading to death, proceeding backward from the final disease or condition resulting in death. Therefore, each condition in Part I should cause the condition that is written above it. The last section of the part I should report the specific cause of death which denotes the etiology of all the events above it. Although all the sections in a death certificate are important, the last event is the most picked one for statistical and research proposes. If there are other significant conditions that could have contributed to

the death but were not directly associated with causation of the underlying cause should be reported in Part II.

Certifying deaths due to COVID-19:

Monitoring the emergence and progress of COVID-19 in Nepal and guiding public health reporting of COVID-19 deaths in Nepal is based on the proper reporting. There are several arguments regarding reporting the disease as an underlying cause or the contributory cause; especially in patients who had comorbidities. It is important to understand that the cause-of-death statement is an informed medical opinion which should be based on sound medical judgment drawn from clinical training and experience. The certifying physician should also be well informed of the current disease states and local trends.

COVID–19 should be reported in the death certificates if it has played a role in the death of a person. In most cases, COVID-19 can be an underlying cause of deaths as it can lead to several conditions like pneumonia and acute respiratory distress syndrome (ARDS) which is sufficient to cause death. In such cases, COVID-19 should be written in the lowest line in part I, and pneumonia or ARDS should be written in the lines above it.

In cases where the deceased was suffering from any of the chronic conditions for e.g., cancer, chronic obstructive pulmonary disease (COPD), chronic liver disease, etc., which could hinder and complicate the recovery of the patients with COVID-19. As these conditions are not the etiology of COVID-19, they should be better written in part II of the death certificate. In such cases, the death cannot be attributed to COVID-19, rather it should be considered as death with COVID-19.

In cases where the COVID-19 is not responsible to the initiation of the cause of events to cause death, the condition should be written in part II of the death certificate. COVID-19 can be written in the death certificates if the laboratory diagnosis has already been established. If the diagnosis of COVID-19 is not ascertained, but its role is suspected by the application of reasonable clinical knowledge, then "probable" or "suspected" COVID-19 can be written in the death certificates. But it is always wise and ethical to ascertain by the laboratory tests before writing so.

Conclusion:

The accurate number of deaths due to COVID-19 depends on proper certification of deaths and it is important for planning strategies for public health intervention. If COVID-19 is directly responsible for starting the chain of events leading to the death of a person, it should be written as an underlying cause in the last line of part I, whereas if the person is diagnosed with COVID-19, but it is not directly associated with the conditions directly causing deaths, it should be mentioned in part II of the death certificate.

कोविड महामारीबाट सिर्जित फरेन्सिकका विचित्र चित्र

डा. आलोक आत्रेय
एसोसिएट प्रोफेसर, फरेन्सिक मेडिसिन विभाग,
लुम्बिनी मेडिकल कलेज, पाल्पा, नेपाल ।

चीनको वुहान प्रान्तबाट विश्वभर फैलिएको मानिने कोरोना भाईरसको संक्रमणले सुरूवाति दिनमा नै हजारौंको ज्यान लिइसकेको थियो । कोरोना भाइरससँग लड्न विभिन्न राष्ट्रहरूले युद्ध स्तरमा काम गरिरहेका थिए । यसको प्रभाव नेपालमा पनि देखिएपछि नेपाल सरकारले यसको नियन्त्रणका लागि मार्च २४, २०२० (२०७६ चैत्र ११) बाट देशव्यापी रूपमा निषेधाज्ञा (लकडाउन) को निती लागु गऱ्यो । संयुक्त राज्यको रोग नियन्त्रण र रोकथाम केन्द्र (सिडिसि) ले नेपाललाई रातो सूचि (रेड जोन) मा राखेको छ । कोभिड-१९ का बेला देखिएका स्वास्थ्य प्रणालीको क्षेत्रभित्रका उपेक्षित पक्षहरू साथै केहि सामाजिक तत्वहरू संक्षेपमा प्रस्तुत गरिएको छ ।

(१) पोष्टमार्टम र जुगाड संस्कृति

कोरोनाको बढ्दो संक्रमण सँगसँगै नेपालमा स्वास्थ्य क्षेत्रमा अग्रपंक्तिमा रहेर सेवा दिईरहेका स्वास्थ्यकर्मी आत्तिनु स्वभाविक नै थियो । तर अपर्याप्त व्यक्तिगत सुरक्षा सामग्री (पिपिई) र त्यसको चरम अभावले चिकित्सा क्षेत्र नै बढि त्रसित हुनपुग्यो । फलस्वरूप नेपालमा बरसाती, ज्याकेट, झोला आदि बनाउन प्रयोग हुने पानी नछिर्ने कपडाले अस्थायी समाधानका लागि जुगाडे पिपिईको आविष्कार भयो । कोरोनाको संक्रमण रोक्न सक्ने विश्वसनीयताको प्रमाण नभएपनि यसले धेरै स्वास्थ्यकर्मीको मनोबल उच्च राख्यो । सुरूका दिनमा यसको व्यापक खपत र प्रयोग भयो । सर्वसाधारणले पनि सुरूका दिनमा पिपिई लगाउँदा कोरोना लाग्दैन भन्ने ठानेर यस जुगाडे पिपिईको प्रयोग गरे । चश्माको अभावमा चिकित्सकहरूले अनुहार ढाक्न प्लास्टिकको फेस-मास्कको प्रयोग गरेको पाईयो । कोरोनाका कारण मृत्यु भएमा पोष्टमार्टम गर्नु पर्दैन । तर कुनै अप्राकृतिक घटनाका कारण मृत्यु भएमा पोष्टमार्टम आनिवार्य हुन्छ । अत्यन्त संक्रामक रोग लागेको व्यक्तिको शवको पोष्टमार्टम गर्दा फरेन्सिक विज्ञले पिपिई लगाउनु पर्छ । पोष्टमार्टम गर्ने कोठा पनि भेन्टीलेसन नभएको हुनु पर्ने भनिएको छ । तर पनि यस महामारीमा फरेन्सिक विज्ञले यस्तै जुगाडे पिपिई लगाएर काम गरे ।

(२) मृतकको अन्तिम संस्कार

मृत्यु भैसकेपछि सबै आफन्तले आफ्ना मृत प्रियजनको अनुहार हेरेर अन्तिम बिदाई गर्दछन् । अन्तिम संस्कारको परम्परा अनुसार आफन्त र शुभचिन्तक उपस्थित भएर मृत शरीरको शवयात्रा पश्चात् 'अन्त्येष्टि' गरिनुलाई शुभ मानिन्छ । कोरोना भाइरसको वर्तमान महामारीमा संक्रमणको डरले धार्मिक मान्यता अनुसारको अन्त्येष्टि संस्कारको कर्मकाण्ड पनि प्रभावित भयो ।

(क) नेपाली सेनाको शव व्यवस्थापनः नेपाल सरकारले नेपाली सेनालाई कोरोना भाइरसबाट मृत्यु भएकाको शव व्यवस्थापन गर्न निर्देशन दियो । नेपाली सेनाले लासलाई जमिनमा गाडेर व्यवस्थापन गर्न खोज्दा स्थानीयले

अवरोध गरेका खबर पनि बाहिर आए । मृतकको परिवारका सदस्यहरूलाई अन्तिम पटक मृतकको अनुहार हेर्न नदिइकन आफन्तको अनुपस्थितिमा प्लास्टिकको झोलामा बेरेर रातको समयमा लुकाईछिपाई डोजरले खनेर जंगलमा गाडेको कृत्यको पनि आलोचना भयो । गाह्रो परिस्थितिहरूका बीचमा परिवारका सदस्यले अन्तिम विदाई र राष्ट्रले सम्मानजनक व्यवस्थापन गर्न नसक्नु दुःखद थियो ।

(ख) **विद्युतीय शवदहनः** हिन्दु धार्मिक परंपरा अनुसार नदी वा खोला किनार अथवा घाटमा दाहसंस्कार गरिन्छ । यसरि, घाटमा हुने दाहसंस्कारले नदी र वायुमण्डलमा प्रदूषण त हुन्छ नै, शवदाह गर्न प्रयोग हुने काठले वन विनाश पनि हुन्छ । यस कोरोना महामारीमा खुला रूपमा घण्टौं लगाएर लाश जलाउनु भन्दा विद्युतीय शवदहन सहज र सरल विकल्प पनि हो । विद्युतीय शवदहन लकडाउनका बेला उपयुक्त विकल्प बने पनि राजधानिमा मात्र सिमित एउटा शवदाहगृह पनि प्राविधिक समस्याका कारण बेला बेला बन्द भैरह्यो । वातावरणीय सचेतनाको अभाव र धार्मिक आस्थाका कारण अलोकप्रीय विद्युतीय शवदहन बाध्यात्मक जस्तै भयो । विद्युतीय शवदहनका सकारात्मक पक्ष जनमानसलाई बुझाउन नसक्नु र देशमा अन्यत्र विद्युतीय शवदाहगृह नहुनु पनि दुःखद नै हो ।

(३) आत्महत्यामा वृध्दि

नेपाल पुलिसले मार्च र मे २०२० बीचको लकडाउनको अवधिमा आत्महत्याका ८७५ वटा घटनाहरू रिपोर्ट गरेको छ । जसमध्ये ४८२ वटा आत्महत्या लकडाउनको पहिलो महिनामा गरिएको भनी बताइका छन् । यो संख्या २७ जुन २०२० सम्ममा बढेर १६४७ पुग्यो । तथ्यांकले लकडाउन पूर्वको अवधिको तुलनामा आत्महत्याबाट भएको मृत्यु दरमा २५ प्रतिशतले उल्लेखनीय वृद्धि भएको देखाउँछ ।

महामारीको बीचमा नेपालका स्वास्थ्यकर्मीहरू बीच चिन्ता, उदासीनता र अनिद्रा धेरै भएको पाइएको थियो । चिन्ता, उदासीनता र आत्महत्यामा वृद्धिले यस महामारीको अज्ञात तर स्पष्ट पाटोलाई दर्शाउँछ । मानसिक स्वास्थ्यका आवश्यकताहरूलाई यस महामारीको समयमा सम्बन्धित निकायले सम्बोधन गरेको देखिएन जुन अत्यावश्यक थियो ।

(४) महिला हिंसा

क्यालिफोर्निया विश्वविद्यालयका अनुसन्धानकर्ताहरू द्वारा गरिएको एक नयाँ अध्ययनले लकडाउनका बेला रेड जोनमा यौन उत्पीडन र बलात्कारका घटनाहरू वृद्धि भइरहेको पनि देखायो । नेपालको राष्ट्रिय महिला आयोगले संचालित गरेको चौबिसै घण्टे टोल फ्री हेल्पलाइनमा अप्रिल देखि जून २०२० का बीच घरेलु हिंसाका ८८५ उजुरी परेका थिए । यो लकडाउन अघि समान अवधिमा (डिसेम्बर २०१९ - फेब्रुअरी २०२०) प्राप्त भएका गुनासाहरूको संख्याभन्दा दुई गुणा बढी हो । एउटै छाना मुनि पीडक सँग बस्नु पर्ने पीडितहरूको संख्या यो आंकडा भन्दा अझ बढी हुन सक्ने अनुमान सहजै गर्न सकिन्छ किनकि तिनीहरू पीडकको डरले कानुनि सहायताको जोखिम उठाउन सक्दैनन् । लकडाउनका बेला बोक्सिको नाममा भएका लैंगिक हिंसा, बलात्कार, बाल विवाह जस्ता घटना प्रायः समाचार बनिरहे । महिला र बालबालिकालाई हिंसाबाट जोगाउन नसक्नु लापरवाही पनि हो र देशको सामाजिक-आर्थिक विकाशको लागि एक अवरोध पनि हो । यो नेपाल सरकार र सबै सम्बन्धित सरोकारवालाहरू र व्यक्तिहरूलाई लैंगिक हिंसाको रोकथामका लागि ध्यान दिन र सोहि अनुरूप कार्यहरू गर्न एक आह्वान पनि हो ।

(५) भोको पेट

नेपाल कम आय भएको देश हो । यहाँ दैनिक ज्यालादारीमा काम गरेर जीविकोपार्जन गर्ने ठूलो जनसत्त्या छ । कोरोनाको प्रकोप कम गर्न लागू गरिएको लकडाउनले दैनिक ज्यालामा काम गर्ने ठूलो समूहलाई असर गऱ्यो । मार्च २४ मा लकडाउन हुनुभन्दा दुई दिन अगावै करिब १० लाख मानिसहरूले काठमाडौं छोडेको अनुमान गरिन्छ । लकडाउन भए पछि पनि हजारौं मानिस सयौं किलोमिटर टाढा आफ्नो घर पुग्न राजमार्गमा हिंडिरहेका देखिए । भारतबाट फर्केका महिला र बालबालिका लगायत आप्रवासी कामदारहरू सीमा सुरक्षा जाँच गर्ने ठाउँमा पुगेर कुरिरहेका देखिन्थे । नेपाल सरकारले मुलुकमा प्रवेश गर्ने सबैलाई दुई हप्तासम्म क्वारेन्टीनमा बस्नुपर्ने बाध्यात्मक नियम बनाएको थियो । उचित पूर्वाधार बिना बनाइएको क्वारेन्टीन, जहाँ उपयुक्त किसिमको अधारभूत बस्ने र खानेसमेत सुविधाहरू थिएनन्, धेरै व्यक्तिहरू शुरूका दिनमा क्वारेन्टीनबाट भागे । यसै त भारतबाट सङ्क्रमित भएर मानिसहरू आनो घर फर्केका थिए त्यसमाथि तिनै क्वारेन्टीनको नियमलाई उल्लंघन गर्दै भोकै, खाली खुट्टा आफ्नो घरतिर दौडिए । शुरू-शुरूमा लकडाउनबाट सबैभन्दा बढी प्रभावित दैनिक ज्यालादारी गर्ने कामदारहरू थिए भने तर क्रमशः यसले पछिल्ला दिनमा मासिक वेतनमा कार्यालयमा काम गर्नेहरूलाई पनि छोडेन । मासिक तलब पाउनेहरूले पनि महिना मर्दा तलब थाप्न पाएनन् । भोको पेटले गर्दा राजमार्गहरूमा बच्चादेखि बूढासम्म आफ्नो पुर्ख्यौली थलो जान हिंडिरहेका देखिन्थे ।

(६) क्वारेन्टीनको अवस्था

कोरोना माहामारी फैलन नदिन क्वारेन्टीन शिविरहरू खडा गरियो । विद्यालयहरू, मन्दिरहरू र सार्वजनिक ठाउँहरूलाई अस्थायी क्वारेन्टीन शिविरमा रूपान्तरण गरियो । तर उचित योजना र पूर्वाधारको अभावले ती शिविरहरू बस्न लायक अवस्थामा थिएनन् ।

सामाजिक दूरी कायम गर्नु पर्ने हुँदाहुँदै पनि क्वारेन्टीन शिविरहरूमा अत्यधिक भीड हुने गरेको थियो र तिनमा शौचालयहरूको संख्या सीमित थियो । पानीको उचित सुविधा थिएन । खाने, बस्ने र सुत्ने ठाँउहरू फोहर थिए । त्यसमाथि थप मर्का वर्षाले पारेको थियो । जेठ महिनादेखि बिस्तारै शुरू भएको मनसुनले थप महामारी (मलेरिया, डेंगू, काला-आजार) को सम्भावनालाई उर्जा दिईरहेको थियो ।

स्थानीय बासिन्दाहरूले पनि विभिन्न ठाँउमा क्वारेन्टीन शिविरहरू राख्न नदिन विरोध गरेका थिए । यसका साथै सामाजिक भेदभाव, कुदृष्टी, अवहेलना र दुर्व्यवहारका घटनामा पनि वृध्दि देखिएको थियो ।

(७) स्वास्थ्यकर्मीहरूमाथि दुर्व्यवहार

स्वास्थ्यकर्मीहरूमाथि दुर्व्यवहारका घटना पनि कोरोनाको कहरसँगै समाचार बन्न थाले । कोरोनाको उपचारमा खटिएका स्वास्थ्यकर्मीहरूबाट सङ्क्रमित हुन सक्ने डरले गर्दा चिकित्सक र परिचारिका तथा अन्य स्वास्थ्यकर्मीहरू निन्दाका पात्र बने । स्वास्थ्यकर्मीहरूमाथि विभेद र उत्पीडन हुन थाले । स्वास्थ्यकर्मीहरूलाई उनीहरू बसेको घरमा घरमालिकहरूले पस्न अनुमति दिएनन् । यस्तो संकटको घडीमा स्वास्थ्यकर्मीहरूले गरेको सेवाका लागि तिनको सराहना गर्नुको साटो उनीहरूलाई रोग फैलाउने भन्दै निन्दा गरियो । लकडाउनका बेला सडकमा बाहिर निस्केका कारण ड्युटीमा रहेका डाक्टरहरूमाथि प्रहरीले समेत लाठी प्रहार गऱ्यो । पीडितहरूले डाक्टर भएको र ड्युटीबाट फर्केको प्रमाण प्रस्तुत गर्दा पनि "पुलिसको लाठीले डाक्टरलाई चिन्दैन" भन्दै प्रहरीले थप कुटपिट गरे ।

सारांश

कोविड-१९ ले नेपाललाई रोगको महामारीको पक्ष मात्र नभई स्वास्थ्य प्रणालीको क्षेत्रभित्रका उपेक्षित पक्षहरू, महिला हिंसा जस्ता सामाजिक तत्व पनि

उजागर गराईदियो । कोरोनाको महामारी आगामि दिनमा शिथिल हुँदै जाला । जन-जीवन पुनः सामान्य बन्ला । तर भविष्यमा पुनः आउन सक्ने भयावह माहामारीको लागि हामी सबैले यसबाट पाठ सिक्न र सचेत हुन जरूरी छ । साथै आगामि दिनमा यस्ता कमि कमजोरीहरू नदोहोरिउन भन्नका लागि नेपाल सरकार र सम्बन्धित सम्पूर्ण पक्षहरूको पहलकदमी अत्यावश्यक देखिन्छ ।

Medico-legal Services in Nepal: Situation and Needs

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1. INTRODUCTION

Medicolegal term means "of relating to, or concerned with both medicine and law, as when medical testing or examination is undertaken for a legal purpose". Medicolegal field is the scientific field that applies medical knowledge to legal problems. Cases that fall under this realm of medico-legal practice require independent medical evaluations and expert testimony in order to prove a case. Teams of independent, non-biased doctors/ forensic expert/s are called in to evaluate a patient's claims, injuries, medical history and treatment protocols. From there, medical experts provide fact-based reports on the cause and severity of a person's injuries as well as any short and long-term effects these injuries may have on their future. The medico-legal field includes various types of sub-fields and services some of which are listed below:

- Post-mortem examination (autopsy) in cases of unnatural deaths or suspicious death
- Medical Examination of alleged victims or accused of sexual offences and assaults
- Medical Examination of victims of physical assaults
- Medical examination of alleged victim of torture and examination of detainee before keeping in custody and at the time of release from the custody
- Age estimation of individual when age of the person in debate or unknown
- Mental state examination of an individual when it is necessary by law of victims and or accused of crime
- Drunkenness examination
- Miscellaneous; medical examination for specific condition of individual like examination of female for pregnancy, abortion, delivery and others situation

2. MEDICO-LEGAL SERVICES: CURRENT SITUATION

a. In Nepal, medico-legal services are provided by all health facilities where Area Police Office from Police Department is working. Area Police Office is the authorized office for FIR and authority to initiate investigation of any criminal case/s.

b. Post-mortem examination (Autopsy) is conducted by Medical Officer (MO) in almost all Primary Health Centres and Hospitals in the country, which are under ministry of health and population (MoHP).

- Irrespective of knowledge and skills, autopsy is conducted by MOs as one of the compulsory medico-legal work
- Irrespective of basic facilities for autopsy, it is compelled to be done with traditional methods or just to fulfil the formalities
- Reporting system to Health Management Information System (HIMS) is not yet established for any medico-legal service including autopsy

c. Clinical medico-legal services are provided by all health facilities as and when and where necessary. It is conducted at private as well as government health facilities

- Sexual offence cases are preferably taken to Gynaecologists or available female doctors at nearby health facilities when necessary.
- All level medical officers and Gynaecologists are not adequately oriented in medico-legal examinations, documentation protocol, reporting and subsequent expert witness testimony at courts.
- Cases of physical assault and drunkenness examination are done in most of the hospitals by paramedical health workers who have had never undertaken any curricular activities in their courses nor trained for medico-legal examinations.

d. Physical facilities for autopsy and clinical medico-legal examination do not meet minimal standards at all hospitals and health facilities throughout the country which include

- Lack of appropriate mortuary room, necessary instruments, proper light and regular water supply.
- No separate room for clinical medico-legal examination in almost all hospitals and health facilities, which has been largely affecting to maintain confidentiality and proper examination.

3. LEGAL REQUIREMENTS

- मुलुकी फौजदारी कार्यविधि संहिता, २०७४ section 20 states about autopsy
- मुलुकी फौजदारी कार्यविधि संहिता, २०७४ section 21 states about physical evidence collection.
- मुलुकी फौजदारी कार्यविधि संहिता, २०७४ section 22 states about injury examination in cases of physical assaults and also separately describes about examination and reporting of a case of alleged torture.
- The annexes 15 and 16 of ***Cr.Pr.Code 2074*** are reporting formats of autopsy and injury examination.
- The annexes 11, 12, 13, and 14 of कसुरको अनुसन्धान सम्बन्धी नियमावली २०७५ are reporting formats of sexual offences case in victim (11), accused (12), age estimation (13) and drunkenness examination (14).
- At the end of each format, it is clearly mentioned that the particular type of case examination and reporting must be done by specialist in the subject if available and if not available by the trained medical doctor in particular field/forensic medico-legal.

4. PROBLEMS AND CHALLENGES IN MEDICO-LEGAL SERVICES IN NEPAL

- Recognition of the medico-legal field is still somehow foreign in our context regardless of its vigorous necessity everywhere. The separate and specific nature that this work demands, has been in a shadow as there is largely no fair acknowledgement for this discipline.
- Reluctance to address the medico-legal service sector in terms of its need and importance.
- Reluctance in implementation of existing rules and standards though they are not complete and comprehensive.
- Lacking reasonable incentives (monetary or non -monetary rewards), acknowledgements and compensations for medico-legal works as MLE is inherent with risk, stress and additional responsibility in comparison with other clinical works. Further, personal recognition, achievements and responsibilities are almost unheard.

5. RECENT DEVELOPMENTS

a. Addressed by law **(मुलुकी फौजदारी कार्यविधि संहिता, २०७४ *and* कसुरको अनुसन्धान सम्बन्धी नियमावली २०७५)**

- Autopsy can be performed by doctors at government hospitals or by specialist /licensed doctor authorized by Nepal government; section 20 (3)
- Injury examination should be done by government doctor or doctor authorized by Nepal Government; section 21 (2)
- Each type of medico-legal examination should be done by Specialist if possible and by trained doctor with medico-legal training, if no specialist is available; foot note of all 6 medico-legal formats

b. **चिकित्सकीय कानुनी (मेडिको लिगल) सेवा सञ्चालन निर्देशिका, २०७५**

- Permission for medico-legal work (Autopsy and clinical) by non-governmental health institutions or hospitals with required criteria No 3-10
- Central Medico-legal Services Operation Committee and it's functions No 11-14
- Provincial Medico-legal Services Coordination Committee No 15-16
- Medico-legal Unit in all hospitals if Forensic Department does not exist No 5 (ka)
- KUMS Dhulikhel and Kathmandu Medical College Duwakot Bhaktapur were permitted by MoHP for autopsy as well as clinical medico-legal works and now these hospitals are performing well

c. **Standard Operating Procedures of Medico-legal Examinations NHTC 2018**

- 6 types of medico-legal examination procedures are separately developed by specialist from concerned society (MELESON) for NHTC

d. **Minimum Service Standards in**

different level hospitals MoHP 2019

- Facilities for medico-legal works are identified and listed

e. **Clinical Protocol on Gender Based Violence 2020**

- The clinical protocol on GBV has been implemented in OCMC based hospitals.

6. **Action plan for the development of medico-legal services in Nepal**

A. *Organizational arrangement*

a. Establishment of Medico-legal Division or Section at MoHP and Provincial Ministry of Social Development

b. Formation of Provincial Medico-legal services Coordination Committee

c. Establishment of Medico-legal Unit in all hospitals where larger number of medico-legal cases are conducted

B. *Physical infrastructure*

a. Arrangement of mortuary with minimum standard in each health facilities and as given in annex 4 of ***Nirdeshika***

b. Allocated clinical medico-legal examination room in each hospital with basic minimum equipment and instruments as given in annex 4 of ***Nirdeshika***

C. *Human resources*

a. Use of available Forensic Specialists in those hospitals where larger number of medico-legal cases exists (all Province level hospitals)

b. Use of Forensic Medicine Departments of different medical colleges where experts are already available by permitting them for conduction of medico-legal services as per requirements

c. Train Medical Officers and Gynaecologists from District level or equivalent hospitals with certified Medico-legal Orientation Training

d. Train mortuary technician and medico-legal nurses who involve in medico-legal examination (Mortuary helpers are never trained or oriented for their work)

D. *Medico-legal service statistics*

a. Data collection of medico-legal works from all health facilities through HMIS ; should start immediately

b. Data collection of physical and human resource facilities from all hospitals of the country; should start immediately

E. *Incentive for medico-legal work (monetary and non-monetary)*

a. Medico-legal works are inherent with health hazards (autopsy) and another psychological stressful situation. After completion of examination and report submission, the medical officer who attended the cases will have to further attend the courts and provide evidences. This requires extensive involvement (time wise and other) before and after of the case

b. The rate, Rs. 950/- that was fixed 20 years ago, for one autopsy case, requires a big-time revision. This is the reflection of how the whole autopsy related services are viewed/ undermined largely. – This aspect

must be considered with utmost responsibility and rationality

c. Reasonable amount/ remuneration should be allotted for each clinical medico-legal examination case

7. SUGGESTIONS/ RECOMMENDATIONS:

A. MoHP Central Medico-legal Service Operation Committee should start their work at the earliest-- with data collection from all health facilities of Nepal which must include:

a. Annual number of autopsies in each hospital under the federal and provincial and other health institutions (last 2 years' data with current trend)

b. Annual number of clinical medico-legal work in each hospital (last 2 years' data)

c. OCMC data related with GBV cases (last 2 years)

d. Situation of physical facilities in all level hospitals; autopsy facilities like mortuary and equipments and clinical examination facilities with separate room and examination kits as per the set standards

e. Status of human resources in all hospitals: Medico-legal experts, trained Medical Officers and others

B. Immediate initiation by Central Committee to establish Provincial Medico-legal Coordination Committee as per Nirdeshika in all 7 provinces.

C. Federal MoHP to establish a separate Section or Division to comprehensively overview and manage Medico-Legal services through O&M at MoHP and further to another concerned ministry at Province level.

D. Medical Colleges should be encouraged to get permission to conduct medico-legal services given that they all have skilled and sufficient human resources for teaching learning activities. And since their location is usually a crowded city area, where more medico-legal cases are unfortunately present.

E. MoHP should revise the incentives or health hazard allowance for autopsy, which was decided more than 2 decades back as well as provide a reasonable incentive for clinical medico-legal work.

F. MoHP should make decision to establish Forensic Department/Unit in provincial level and other strategic hospitals based on number of medico-legal cases.

The Burden of Redundant Autopsies in Nepal

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In the western countries, autopsies are divided into medicolegal autopsies and clinical autopsies. Medicolegal autopsies are performed on those deceased where the foul play is suspected and are requested by the law enforcement officer. Clinical autopsies are performed on those deceased whose cause of death could not be determined before their demise. Such autopsies are requested by clinicians or family members. In Nepal, clinical autopsies do not exist. If any autopsies of clinical nature are needed, they are also grouped under medicolegal autopsies and are required to be done by forensic medicine doctors.

The objective of doing autopsy is to find the cause of death. But in Nepal, many autopsies are performed even if the cause of death is already known. Such redundant autopsies are performed for the sake of formalities. Sometimes, even the deceased who died while undergoing cancer treatment is forced to undergo postmortem examination, just because the authoritative body demands it.

The authority of deciding whether the autopsy is needed or not is given to the police administration but it is rare for the police to actually differ the autopsy. Usually, there are countless pleas from the relatives of the deceased requesting not to cut open their loved ones. However, once the inquest letter is received, the doctors are compelled to execute them. Understandably, no-one loves to see the remains of their loved ones mutilated, for no particular reason other than the law.

The law requires all such unnatural deaths to undergo autopsy. The extent of redundant autopsies is so absurd that all the patients who died from accidental burn injuries are subjected to autopsy, only because it is not a natural death. But the deceased would have spent days to weeks undergoing treatment at the hospital, during which investigators can seek information from the patient or their caregivers and also hospital records. A person speaks better when alive than dead. Exceptions can be in suspected cases of foul play or when the patient was in a moribund state since the incident; a thorough investigation would be mandatory. Sometimes, needless autopsies are to be done because of influence. There are instances where a confirmed case of cancer, with staging did undergo autopsy because the deceased was a member of a security force.

We must look at the root cause of why such autopsies are being requested.

The simple reasons could be the lack of knowledge, lack of investigating capabilities, lack of trust with the police or a faulty system. People are not aware of the limitations of post-mortem examinations. The police orders autopsy for the fear of public uprising or simply put, they want to take it off their hand or to shift the responsibility which further led citizens not trusting the police investigation as it implies police officers do not have confidence in their investigation. Recently, the public even do not trust the report of forensic pathologists. The system that governs the death investigation is too rigid and the law requires autopsies to be performed for every unnatural death without considering the merit of each individual case. A death of a patient related to a road traffic accident, which is an unnatural death, would not need an autopsy to prove head injuries since the diagnosis is already made by clinical examination and imaging. If toxicological analysis is warranted then the samples could be collected antemortem. Another reason for considering autopsy in such cases could be, authorities do not consider hospital death certificates as a legal document, which is illogical to say the least. Insurance companies also do not recognize death certificate provided by the clinicians as a legal document, which is beyond our understanding and the understanding of the general people. A better explanation may be forwarded by the relevant bodies in the future. Nevertheless, it must also be accepted that some of the autopsies are needed because of the poor documentation by our clinical colleagues at the hospitals.

In Institute of Medicine, Maharajgunj Medical Campus, in the first half of 2019, more than 50% of the cases were deemed to be redundant for various reasons described above. This has put financial and physical burdens on the department and to the government as well. Each autopsy costs approximately 10000 rupees and the cost have to be borne by the government. The mortuary staffs have to over work which affects the quality of services provided in monotonous environment. Such kind of autopsies divert the already inadequate and insufficient resources away from the genuinely required autopsies, further burdening our nation, where even those alive are not getting proper diagnostic facilities, let alone the facilities for examination of the dead.

Therefore, in order to solve this problem of unnecessary request for autopsy, multi-organizational cooperation is needed. Clinicians can improve their death certification skills, police administration can train their officers in determining whether autopsy is needed or not and insurance companies should be sincere, while our forensic medicine service should be expanded. Clinicians interested in diagnosis of the unknown disease, the extent of spread of disease or the disease progression can request for a pathological autopsy. Such autopsies should not be merged into the mortuary where medicolegal autopsies are carried out, instead that could be conducted in a different research institution and the findings published which could benefit the entire healthcare system of the country.

One Stop Crisis Management Center (OCMC) Service in Bir Hospital

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Introduction:

Gender based violence (GBV) is a worldwide problem. Large number of women and children have been victims of GBV in various forms which have resulted in physical, emotional, psychological and sexual damage. Rape, hurt, battery, indecent assault are the main forms of violence. Throughout the world, 1 in 3 (35%) women have experienced some kind of physical and/ or sexual violence either by a partner or by a non-partner. In context of Nepal, 1 in 3 women have experienced some form of violence committed by a partner.

OCMC is a gender-based violence management center established in hospitals and other health centers with an objective to provide comprehensive health treatment services, legal aid services, counseling services and ensure protection, shelter and rehabilitation to survivors of GBV as well as to control and manage GBV incidents.

These Centers were established under the leadership of Prime minister's office, by the Ministry of health and Population (MoHP). Till date the program is being run in 55 hospitals of 54 districts. It had been projected that there would be 69 OCMC centers in 67 districts in Nepal in the fiscal year 2076/77. Additionally, it had also been envisioned that in fiscal year 2077/78 OCMC centers would be established in all the remaining districts.

The following health services are required to be provided through the OCMC:

- Keeping records of health history and other required information related to GBV survivors and those affected by GBV.
- Medical examination and treatment of any injuries found.
- Health check-up, forensic examination, and medico-legal examination to document legal evidence
- Conducting pregnancy test and providing emergency contraceptive services
- Treatment of Sexually Transmitted Infections (STIs)
- HIV testing and counseling services
- Prevention/protection against Hepatitis B
- Safe abortion services
- Mental health services
- Designing and implementing protocols related to mental, physical and psycho-social counseling as well as screening and referral protocols

OCMC in Bir Hospital:

Bir hospital has also started rendering OCMC services to the GBV survivors from 2076/10/28. The service is being provided through the emergency department. There are trained doctors, nurses and nurse counselors for facilitating the survivors. The hospital Director is the Coordinator while the Emergency Nursing In-charge is the Member Secretary as well as the focal person of our OCMC center.

In order to manage GBV incidents and to provide treatment to the survivors, a case management committee and a coordination committee has been formed comprising of 10 and 15 members respectively. The main responsibility of coordination committee is to guide, protect and monitor the OCMC for its effective functioning and to facilitate and take decisions on issues related to rehabilitation, legal aid services for the survivors to resolve their problems. It also develops code of conduct for all concerned agencies, individual groups related to OCMC and operating guidelines for the establishment and functioning of the GBV alleviation fund.

From 16th Falgun 2076 to 27th Kartik 2077, 40 cases came to OCMC, Bir Hospital. All the cases were of physical violence. We had only 5 cases during the lockdown period of pandemic Covid-19. The services provided from OCMC, Bir Hospital are free of cost. It includes treatment expenses, medicines, investigations, referral services if needed and ambulance services. Since 27th September 2020, a psycho-social counselling nurse has also been assigned to us by Center for Victim of Torture (CVICT).

Challenges of OCMC service in Bir Hospital:

- According to the guidelines of OCMC, it is essential to have a separate designated room with an attached bathroom for patient examination as well as an office room for storage of confidential documents. However, this criteria has not been fulfilled in Bir Hospital.
- Since the OCMC service is in its very incipient stage, all the staff members need to be provided with requisite training.
- There is a problem of commuting for doctors and nurse counselor required to attend to a case during odd hours.

Reference:

1. Hospital Based One-stop Crisis Management Center (OCMC) Operational Manual 2067 http://www.nhssp.org.np/NHSSP_Archives/gesi/OCMC_manual_2011.pdf
2. Gupta NK. Implementation of Service Delivery at One-Stop Crisis Management Center in Addressing Gender Based Violence in Sarlahi, Nepal. 2017;(Thesis). http://www.northsouth.edu/newassets/files/ppg-research/PPG_6th_Batch/NItu_final_thesis__6th_batch.pdf
3. One Stop Crisis Management- Pulse Report. https://options.org.np/sites/default/files/final_ocmc_pdf_25th_feb_2014.pdf
4. Gender-based violence in health emergencies. https://www.who.int/health-cluster/about/work/other-collaborations/gender-based-violence/en/

Brugada Syndrome: Why Should It Matter?

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Sudden death is an indication for a medicolegal autopsy, almost 80% of which have cardiac origin. Among cardiac causes of sudden death, the most common cause is myocardial infarction commonly known as "Heart attack" in layman's term. However, all sudden deaths are not due to Heart attack as most layman think. There are wide range of differential diagnosis that we should consider while conducting an autopsy in such cases, especially when the gross or even microscopic findings appear to be normal. One of the most important differential diagnosis that we all underestimate is the "*Brugada Syndrome*".

There are situations when healthy adult dies in during their sleep and nothing significant is found during autopsy. It would be frustrating when the cause of death couldn't be determined after complete autopsy. One of the explanations could be *Brugada Syndrome*.

Brugada Syndrome is a genetic heart disease that can cause the heart to beat in an abnormal rhythm i.e., arrhythmia. The interesting aspect about this condition is that for some uncertain reason the heart is prone to arrhythmia during sleep at night. So, this differential diagnosis should be considered in Sudden Unexplained Nocturnal death syndromes (SUNDS). The reason for arrhythmia is due to mutation in various genes that encodes for sodium channel in the heart and this mutation could be inherited in an autosomal dominant fashion. This condition is more common in males than females. The intriguing fact is, this rare condition is mostly seen in Southeast Asian population. Although Nepal does not typically fall under Southeast Asian countries, Nepalese people do share some genetic similarities with people from these countries. So, this condition might be prevalent in our country too. But the unfortunate part is its diagnosis. Since this is an electrophysiological phenomenon it is almost impossible to diagnose during a routine autopsy especially in our setting where we lack even the basic histopathological facility. The diagnosis of this condition is done by genetic testing which is not only unavailable in our country but also very expensive, especially for the dead.

The condition can also be diagnosed during life by genetic testing in people with symptoms like palpitation, fainting/syncope, dizziness and ECG changes but most people won't have any symptoms and the first symptom they will present with may be sudden death.

Since this condition is inherited as autosomal dominant, it is possible that it

might run in the family. This fact emphasizes that it is important to diagnose this condition even after death. As further death could be prevented if we advise the family members to get screened. In our context, although there are few reported cases of *Brugada Syndrome* bases on ECG changes, we don't know its actual incidence. However, as forensic practitioners we have come across cases where people who have died in a circumstance very similar to *Brugada Syndrome* i.e., a young healthy male who went to bed at night well and good was found dead by family members and autopsy did not reveal any gross or even microscopic pathology. These deaths could be due to *Brugada Syndrome*.

As a forensic practitioner we are regularly conducting autopsies for the legal requirement in cases of unnatural death. But when the cause of death is natural, there is no further investigation on the cause of death specifically to rule out any pathological conditions. Because as soon as we rule out injuries the investigating officers are not interested in confirming the natural cause of death, and do not want to bear the financial burden of further performing histopathological (or genetic or molecular testing) on body samples. There are many other pathologies like hypertrophic cardiomyopathy, arrhythmogenic cardiomyopathy that might run in family, which require a proper investigation (beyond toxicological analysis) to confirm the diagnosis, but there is no responsible authority that is interested to investigate. This is a very disheartening because the diagnosis of such condition is important not only for the dead, but for the living as further deaths could be prevented. The autopsy that we are performing only fulfilled our legal duty but not the medical duty. The autopsies we conduct are literally "legal autopsy" not the "medico-legal autopsy" as the medical aspect is overlooked. In the country like ours where the legal autopsies are just receiving attention, there is a long way until pathological autopsies are conducted regularly to identify the pathology behind the undiagnosed disease. Till then the only thing we can do is make speculations of such medical conditions based on clinical and circumstantial history.

The Art of Profiling

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"Every crime leaves a trace; every trace is a step and unwinding of all these intermingled traces ultimately leads to the offender." The stories of the fictious world of *Sherlock Holmes,* intermingling traces of crime and profiling of the criminals, is embedded in our memories. But the reality is slightly different to what we see with the obvious lack of advanced equipment's and specialists who have been trained in the field of crime and criminology.

Once you enter the cordoned area (hopefully with minimal or no crowds) as an expert, every minute detail needs to be assessed, examined and retained as much as possible so that profiling of an individual can be done, or at least steps be taken to profile them. Moreover, profiling of an individual isn't just always limited in cases of death. From serial killings to sexual assaults, from attacks on strangers to the violent crimes with psychopathic components, detailed analysis of the crime scene character enhances the repertoire of a forensic expert in assessing the personality traits of the offender. Therefore, the term criminal profiling is very much synonymous with various other terms such as behavioral profiling, crime scene profiling, criminal personality profiling, offender profiling, psychological profiling, criminal investigative analysis and most recently investigative psychology.

From *H.H. Holmes (World's first Serial Killer)* to *Jeffrey Dahmer (The Trophy Collector),* from *The Alphabet killer* to *The Zodiac killer,* each of these serial killers left traces, left traits and some of them, they even collected something or the other from the bodies of their victims, leaving not just traces but questioning their psychological component.

Throughout the rigors of each day, many individuals have been found to share a guilty pleasure of wanting to kill people. For many, these are just an ideation, whereas for others, it may actually give them psychic relief. Many of the serial killings, during the course of profiling show similar pattern of offenders. When we look into the case of *Jeffrey Dahmer,* after his arrest he stated that the relations of his parents were extremely tense. Furthermore, he confessed of having sexual desire towards men, killing whom he got gratification. He was an average student during his class who would call all his male victims to come for a drink, kill them, mutilate them and keep different organs and in some cases even head of the victims as a trophy, therefore infamously known as "*The Trophy Collector"*. These patterns were of a disorganized offender, one who had a wretched childhood, was sexually

incompetent, had an average IQ and poor work history and also had a psychopathic component while killing.

Unlike *Jeffrey Dahmer* the pattern of crime by the serial killer *Edmund Kemper,* was a bit organized. Kemper was a man with a genius IQ, a man liked by many to share a cup of coffee and have a conversation with, a man who covered his tracks throughout his killings and was ultimately arrested when he turned himself in*, also known as the Coed Killer*. Even though he suffered from Paranoid Schizophrenia, he had a sheer willingness of getting all the medical attention for his betterment, but the conviction with which he was able to carry out multiple killings without being arrested was a testament to his mental abilities beyond those killings. Standing at 6 foot, 9-inch, he was unable to join police force due to his height but befriended many cops. Further, he would hitchhike over 100 times, planning each time about how he would kill and present himself, if queried upon. Though not having the best of childhoods, *Edmund Kemper* had planned each of his killings, keeping a constant track on the investigations being carried by the police whom he had befriended, showing traits of an organized offender. And then, there are the likes of *Ted Bundy* and *Raman Raghav,* who showed traits of an organized as well as disorganized offenders, perplexing the investigators as well as keeping them on the edge of their seats.

Fortunately for us, as per records on serial killings, except for *"The Bikini Killer, Charles Sobhraj",* we haven't had many cases of serial killings in our country. So, our knowledge on profiling of an offender is slightly more deviated towards the theoretical components rather than practical ones. However, there have been certain pattern of offenders on sexual assault cases which were presented to the Department of Forensic Medicine, Maharajgunj Medical Campus, Institute of Medicine. Among 17 cases of pedophile across 2075 B.S., apart from all the perpetrators being well acquainted with the victims, they showed a similar pattern of offender, *grooming.*

Grooming, be it for a child or their parents was observed in all cases with the offenders providing the victim or their family with gifts, taking them for outings, supporting the family economically and pretending to be a part of their family. Also, with children, the offenders usually tend to make them presume that they are already adults, letting them consume alcohol and watching adult movies with them, which was also observed in further ten cases of pedophile. Apart from grooming, most of the sexual assault cases presents with the offenders being very much well acquainted with the victims, further helping them to approach their victims one way or the other.

Creating a profile of an individual demands rigorous study of the nature of crime with the nature of an offender, detail study of the scene, backgrounds of the victim/victims and integrate them to construct the profile analyzing the characteristics assessed from the crime scene and previous similar case incidences. The determinants of a profile can vary depending upon the personality of the individual and may show traits of cerebral damage, genetical or hereditary components, intoxicated state and biological reductionism. However, detailing for a conclusive profile is never bound to be cent percent accurate. The

characters of offenders can vary based upon prior research on similar cases as well as the experience of the analyst. These traits can be further enhanced using concrete evidences obtained from the scene, for instance hair, blood, foot prints etc. Profiling, in cases without any evidence of physical evidence from the crime scene, especially during death investigations, is highly effective to provide a definite direction for investigation as well as minimize the suspects and rule out the unlikely ones.

Profiling however bears minimal solid scientific theory with inadequate amount of research regarding its validity and reliability. Further-more, multiple models are present with different efficacies and most importantly, the individual variation of skills and abilities of the profiler with integration of findings is of utmost importance. Equally important is the skill of an offender, who can easily change the elements of the crime scene, create an alternative organized-disorganized pattern or simply redirect the crime by staging the events of crime with a motive of robbery or may be even fire up the scene to mimic burn.

References:

1. Dap Louw. Forensic Psychology. International encyclopedia of the Social and Behavioral Sciences. 2nd edition, 2015, 351- 356.
2. R.J. Morton, M.A. Hilts. Criminal Profiling. Encyclopedia of Forensic and Legal Medicine. 2nd edition, 2016, 740-743.
3. J.E. Arboleda-Flórez. Criminology: Psychopathological Aspects. International Encyclopedia of the Social and Behavioral Sciences. 2001, 2962-2967.
4. Forensic Psychology. Retrieved from: http://homepages.rpi.edu/~kalshm/fs/week4.html
5. Brent E. Turvey. Inferring Offender Characteristics. Criminal Profiling. 4th edition, 2012, 403-446.
6. Offender Behaviors- Early, Open, Often. Retrieved from: https://www.earlyopenoften.org/get-the-facts/offender-behaviors/.
7. Norbert Ebisike. The Use of Offender Profiling Evidence in Criminal Cases. Golden Gate University School of Law.

Carbon Monoxide Poisoning: An Alarming Issue

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Background:

As per the autopsy requisition letter dated 2077-08-18, from investigating police officer it was informed that a 27 years old mother with her 1 month old daughter had succumbed to death inside her rented room. The scene of incident explained how the room had no ventilation and that there were evidences of usage of heater and burnt coal to keep themself warm during winter nights.

Similar incident had occured a year back where a 6-years-old female along with other 7 individuals were found unconscious inside a hotel room in a hill station. They were all taken to hospital where they were declared dead on arrival. The inquest paper stated that they had used gas heater and stayed overnight in a non-ventilated room.

Such quiet deaths might raise eyebrows of any layman; but for professionals working with death investigations such deaths are harbingers of winter season in Nepal as witnessed by two above-mentioned cases. The first probable cause of death that crosses their mind with history like such in association with cold weather is Carbon-monoxide poisoning.

Discussion and pathophysiology:

Carbon monoxide (CO) is a colorless, odorless, tasteless, non-irritant and lighter than the air, which is produced from incomplete combustion of carbonaceous materials such as incomplete combustion of coal, exhaust gas of automobiles, fuel gases and explosive gases. CO poisoning can be acute and chronic types. Chronic occurs when a person is exposed to relatively low level of carbon monoxide for prolonged period.

During winter, the people use fire woods, gas/kerosene heaters, and geyser aided by closed windows and doors, thereby, increasing the concentration of CO overnight in room air. High level of CO (more than 100 ppm in air) can result in drowsiness, insomnia and sleeping distress initially. With further increase in CO level, the person gets unconscious and is slowly pulled towards death. The level of carbon monoxide in blood should not exceed 3% in non-smokers and 10% in smokers. Pulse CO-oximeter and breath CO-monitoring can be used to measure the carboxy-hemoglobin level in blood without the need to prick.

The CO is absorbed through the lungs and with its high affinity for binding sites on oxygen transporting Heme-protein, like hemoglobin, myoglobin, cytochrome C oxidases and cytochrome P-450 thereby replacing oxygen and forming a carboxy-hemoglobin compound. The oxy-hemoglobin

dissociation curve is shifted to the left side resulting less oxygen delivery to the tissues. The impairment of cellular respiration thereby results in a slow and quiet death.

Diagnosis of Carbon-monoxide Poisoning:

In the living: The individual may present with various complains depending upon the concentration of carboxy-hemoglobin in the blood. They usually develop headache, dizziness, nausea, loss of judgment, convulsion. However, the exposure time and the exposure concentration will affect the degree of concentration of carboxy-hemoglobin in an individual.

In the dead: During postmortem examination, the color of the skin and underlying muscles appear cherry red as the classical sign, within the area of hypostasis and congestion. However, the brightness of color of blood also depends on the level of individual's hemoglobin level and one should be cautious with other causes such as cyanide poisoning and refrigeration. Presence of CO in blood also has a medico-legal significance that the person was alive during the time of combustion.

Incident and death prevention:

Every year in winter, similar news breaks out in Nepal that a group of people were found dead inside a room in suspicious manner. In a country rich with timber and woods, it is eligible/liable to cause such incident in rural household every year. The scene evidence in such past deaths have always suggests use of coal, wood, briquettes, and kerosene heaters in a non-ventilated room. The issue gets sensitized and appears as headlines and topic of discussion in every neighborhood every year just to fade out as summer approach. People get aware of it and the cases may decline during mid and end winters.

Installation of fire alarms and smoke detectors in the house should be encouraged. There is specific device known as 'carbon monoxide detector' which detects the presence of carbon monoxide in air. Proper ventilation, maintenance of exhaust system, venting of gas appliances like (gas geyser) would prevent carbon monoxide poisoning.

It is the early winter next year that denizens tend to *forget to remember* what happened the year before, just to realize that some of us recalled late this year too!

Differentiating Injuries from Artefacts During Neck Dissection

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In medicolegal autopsies where the deceased has sustained neck injuries, the correct interpretation of both external as well as internal findings is crucial. In many parts of the country, medico-legal autopsies are carried out by Medical Officer in government run hospitals who have limited knowledge in the field. Keen observations with proper history and the circumstance of the case; the knowledge and skill of the autopsy surgeon will definitely help to ascertain the cause of death, narrow down the investigation and aid in establishing the justice. And if one not aware of those changes, there will be misinterpretation and misdiagnosis which may lead to miscarriage of justice. "*The eye cannot see what the mind does not know*". So, before handling any medicolegal cases related to neck injury, the autopsy surgeon should be aware of the anatomical variations, postmortem artefacts, resuscitation injuries, decomposition artefacts to name a few.

Hyoid Bone

One should be aware of developmental anomaly of the hyoid bone while performing neck dissections. The inward compression fracture of hyoid bone, which is usually seen in cases of manual strangulation, should not be misinterpreted with its segmental developmental fashion. Hyoid bone has three separate bony structures during early stages of development which usually unite after 30-40 years of age. The right and left greater cornu unite with the body of hyoid by two synchondrotic joints.

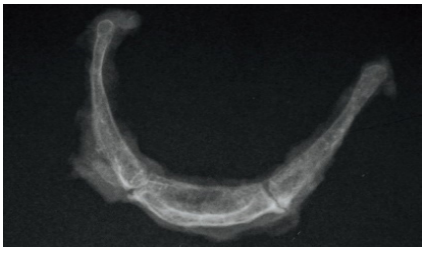

Fig 1: Hyoid bone showing synchondrotic joint before fusion.

These joints may be unfused or partially fused on one or both the sides, which results in mobility and flexibility of the greater cornu at the junction point between the greater cornu and the body of the hyoid bone. This can be misdiagnosed as a fractured hyoid bone. Therefore, meticulous examination of hyoid bone can reveal a discontinuity of the bone itself with the presence of hemorrhage. X-ray or histopathology examination could provide conclusive interpretation in differentiating a fracture from unfused joint.

Thyroid cartilage

Triticeous cartilages which are located superior to the superior horns of the thyroid cartilage, are the small pieces of fibrocartilage that are linear or round of millimeter size. The discontinuity in the fibrocartilage emanating from the superior cornu of the thyroid cartilage can simulate fractures of the superior cornu. The naked eye distinction is again done with discontinuity and the presence of hemorrhage as mentioned above. In the histopathological examination, they are viewed as fibrocartilaginous islands completely surrounded by perichondrium. If fractured, the actual fracture line will pass through cartilage itself and there will be no evidence of perichondrium surrounding the apparently fractured edge of the cartilage.

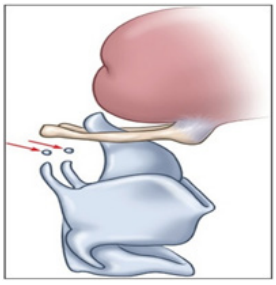

Fig 2: Hyoid larynx complex, arrow showing triticeous cartilage.

Prinsloo Gordon Artefact

Prinsloo Gordon Hemorrhage, are one of the most commonly encountered artefacts encountered during neck dissections. The mechanism behind this hemorrhage is shown in the flow chart.

The Prinsloo- Gordon Artefact simulates strangulation, which we often encounter in cases of sudden cardiac death in a heavily built person, with marked congestion of the

head and neck. These are the hemorrhages seen behind the esophagus on the anterior cervical ligaments. The principle for emptying of the thoracoabdominal cavity and the cranial cavity of its content before neck dissection is to avoid this artefact, creating a bloodless field on the neck. These hemorrhages simulate deep neck bleeding in strangulation and sometimes with spurious neck fractures.

Resuscitation Artefacts

In hospital treated cases; attempts of resuscitations during perimortem period can also create visible injuries, which could be misinterpreted as strangulation, but in fact are resuscitation artefacts. For instance, there can be injury to the sternocleidomastoid muscles associated with the placement of cannula in the internal jugular vein and a needle puncture mark in the wall of internal jugular vein with the focal perivascular hemorrhages. The introduction of intravenous cannula into veins may also cause large hematoma and more diffuse bleeding into the tissues alongside the larynx and can simulate strangulation. Endotracheal intubation can cause hemorrhages over the laryngeal mucosa with edema. In cases of difficult intubation, cricoid cartilage can also sustain fracture.

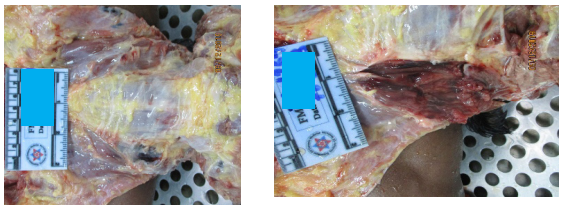

Fig 3: Resuscitation injuries.

Decomposition Artefacts

In advanced decomposition, it is actually impossible to differentiate the discoloration of decomposition from antemortem contusion grossly. Similarly, in cases of decomposed body, the external findings on the neck may simulate ligature mark. These marks around the neck resulting from the tissues swelling with gas and becoming embedded in a collar can mimic strangulation. Histopathological examination is essential to observe alpha glycophorin and red cell envelops in differentiating antemortem injuries in advanced decomposition.

Thus, neck dissection in medicolegal cases need correct interpretation of observed findings. One should have a sound knowledge to differentiate injuries from artefacts and to mitigate the practical difficulties in interpreting both external and internal findings during neck dissection.

Source of figures:

Fig 1 & 2: Michael S. Pollanen. Pitfalls and Artifacts in the Neck at Autopsy. Acad Forensic Pathol. 2016; 6(1):45-62.

Fig 3 : Department of Forensic Medicine, Institute of Medicine, Maharajgunj.

Safe Autopsy

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Forensic Medicine is dedicated to one of the important stages of human lifecycle and has always been at the forefront in times of unprecedented social changes. Autopsy is as skilful procedure as other fields of medicine, which provides information regarding cause of death and evidences for legal disputes.

Safety of the autopsy surgeons and assistants was not taken into consideration until 1980s when human immune deficiency virus (HIV) was discovered. With the establishment of Occupational Safety and Health Administration (OSHA) regulation, prevention of infection was emphasized.[1]

At the complex social scenario today, highly infectious agents are constantly threatening the human existence time and again viz. COVID-19, Tuberculosis, Hepatitis B, Hepatitis C, HIV, Spanish flu, Swine flu etc. It is not only the infection, but the autopsy surgeons and their assistants are also prone to mechanical injury, sharp force injury, chemical exposure, electric shock and radiation exposure. Although many infectious diseases are diagnosed only after post-mortem examination, the personnel involved in the autopsy are exposed to the risk of infection, due to insufficient clinical information, lack of facilities or equipment for protection, and injury due to accidents during autopsy. Therefore, there should be a standard guideline for autopsy of the deceased with infectious diseases.[2]

Mechanical hazards may occur while transporting the dead body, in the form of musculoskeletal injury, due to falling objects or slipping and falling on the wet floors. This can be prevented by proper lifting techniques, back support, protective shoes, adequate non-skid platform, dry floors and application of stools.

Sharp force injury may occur due to scalpel cuts, needle punctures, comminuted rib fractures, embedded metallic objects like wires, fragmented bullets etc. these can be prevented by wearing cut resistant gloves, not recapping needles, proper disposal of needles, syringes and other sharp objects and awareness.

Morgue is a wet place and electrical appliances are usually operated with wet gloves which might not provide electrical insulation. Electric shock can also occur due to implanted automatic defibrillators. For prevention ground fault interrupters can be used and also consultation with cardiologist or manufacturer of defibrillator should be done before autopsy.

Performing an autopsy in a well

ventilated, negative pressure autopsy room and use of bio safety/chemical hood may prevent from exposure to the chemicals like formalin, cyanide etc. Standard for radiation safety and wearing radiation preventing badges during X-ray can prevent from radiation exposure in the autopsy room.

High-risk autopsies are those autopsies when there is a higher risk of transmission of disease to the person conducting autopsy. Universal safety precautions are strictly to be followed during every autopsy because the deceased might have undiagnosed but underlying highly contagious infection like HIV, Hepatitis B, Influenza, Creutzfeldt–Jakob disease (CJD), Tuberculosis, COVID-19 etc.

It is recommended that all the mortuary staffs including the autopsy surgeons should be vaccinated against Hepatitis B virus. Entry to work area must be restricted to authorised staff only. For blood transmitted diseases one should be aware and be protected with cut resistant gloves as stated earlier. High efficiency particulate air (HEPA) masks should be used while performing high risk autopsy as in cases of Lassa fever, slow virus diseases, anthrax.[1] Certain procedures are likely to generate aerosols and splashing of the blood so the eyes, nose and mouth should be protected by face shield masks and wrap around eye goggles. Band aid should be applied in all fingers before wearing gloves to prevent injury.[3]

Sterilization of instruments can be done by steam (autoclave), dry heat (Gas oven) and high level of disinfection by boiling and soaking in chemicals. High level of disinfection is achieved when the instruments are boiled for 20 minutes, when sterilization equipment is not available. Boiling for 20 minutes can inactivate Hepatitis B virus for several minutes and even HIV virus can be inactivated. Chemical disinfectants should not be used for needles and syringes. Chemical disinfectants should be last option of disinfection for other invasive instruments also and should be used only when appropriate concentration of chemical and activity can be ensured after thorough cleaning of the instruments to prevent contamination prior to chemical disinfection. The chemical disinfectant may not be reliable as they may be inactivated by blood or other inorganic matter present and also, they may lose their strength if stored in warm places. Glutaraldehyde 2% and hydrogen peroxide 6% are the two most commonly used high level chemical disinfectants.[4]

The samples collected from HIV infected deceased should be kept in puncture resistant plastic containers and should be labelled similarly as for bio hazardous material. In case of HIV patient, the body should be washed with detergent and then with 0.5% hypochlorite solution before being packed in double bag of heavy plastic tied properly at both ends and labelled as “BIOHAZARD”. The relatives should be strictly instructed not to disturb the plastic ware before cremation. After disposal of the body the work place should be disinfected with 0.5 % hypochlorite solution. The instruments should be washed with water and then wiped with 0.5 % hypochlorite. Aluminium and stainless steel can be disinfected with 2 % Glutaraldehyde. The instruments should be subsequently autoclaved and then only be

used for infectious cases. Heavily soiled instruments can be disinfected by 1 % hypochlorite solution.[3]

Conclusion:

Safety should never be compromised during autopsy in order to carry out autopsy efficiently and derive the conclusions effectively. "An ounce of prevention is worth a pound of cure" also emphasizes on safety and prevention as per Benjamin Franklin.

References:

1. Wetli, C. V. Autopsy safety. *Lab. Med.* **32**, 451–453 (2001).
2. Kim, M. Y., Cheong, H. & Kim, H. S. Proposal of the autopsy guideline for infectious diseases: Preparation for the post-COVID-19 era (abridged translation). *J. Korean Med. Sci.* **35**, 1–25 (2020).
3. Bhardwaj, J. Guidelines for Autopsy in Hiv Positive Cases. *Med. J. Armed Forces India* **50**, 134–136 (1994).
4. World Health Organization. *Guidelines on sterilization and disinfection methods effective against human immunodeficiency virus (HIV)*. *World Health Organization AIDS Series* https://apps.who.int/iris/handle/10665/41538 (1989).

Crime Scene and Blood Stain Pattern

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Blood is one of the most common biological trace evidences frequently found in the scene of crime. A mere presence of a drop of blood is sometimes helpful in linking the crime with the criminal. Blood in the crime scene is collected for identification of individual and other qualitative and quantitative assay of chemical substances in blood. On the other hand, blood stain pattern reveals not "who" but "what" and "how" with regard to the bloodshed event. Our judiciary system of death investigating is more focused upon the identification of the individual hence, the blood stains pattern is usually overlooked.

The analysis of blood stain patterns is the use of size, shape, and dispersal of the blood stain found out at the crime scene to reconstruct the blood event. The blood stain patterns are specific in their occurrence which result from distinct act or events. The knowledge of blood spatter pattern and its mechanism of formation will aid in reconstruct the actual events each pattern revealing a piece of the crime scene puzzle.

The blood stain patterns at the crime can be used for the following reconstruction purposes like type of bloodstain patterns, direction of travel of the blood drops, distance of the blood source to the target surface, determination of directionality (direction of travel from where blood drop originated and angle of impact of the blood drop), determination of blood trails, their direction and the relative speed of their horizontal motion, nature of the force and the object used to cause bloodshed, the number of blows involved and relative location of persons or object near bloodshed and interpretation of contact or transfer patterns.

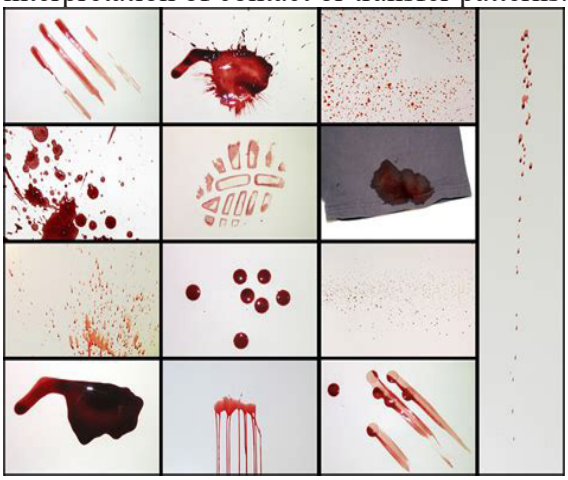

Figure: Showing different types of blood stain pattern.

The above figure is showing different types if the blood stains which are found in crime scene like wipes, shoe patter, drops, pools, swipe or smear. The most commonly seen blood stains in the crime scene are passive stain and impact stain followed by transfer stain.

Passive stains are formed from the force of the gravity acting on the injured body. It includes drops, drip patterns and pools. This are formed from oozing or gushes from the body, dripping of blood from finger or blood clots.

Transfer stains are formed when the wet bloody surface comes in contact with a secondary surface which leads in formation of wipes, smudge, swipe or smear. Examples of the transfer stain are like finger smudge, wipe hand on clothing, shoe and weave pattern on the pants.

Another type of blood stain is projected or impact stains which are formed when the exposed blood source is suspected to an action or force greater than the gravity. The impact stains can also be formed from internal activity like expirated blood and from external force like stabbing beating or gunshot. It is subdivided as arterial spurt or gush, cast off stains and impact spatter. For example, small spots and mist are not automatically called gunshot or high velocity impact spatters. Similarly, medium sized spots are not immediately indicative of blunt force trauma.

The analysis and recognition of the bloodstain pattern in a criminal investigation is to reconstruct those events of an alleged incident which are based on stains and stain pattern present at a crime scene, physical evidence recovered from that scene and items of clothing present in the crime scene. The size and shape of spots have considerable overlap between different dynamic events, leading to the considerable different interpretations. For example, the bloodstain pattern analysis gives information about the position of the individual (sitting or standing) when the blood is deposited, the relative position of the individuals at the time of bloodshed and the possible type of weapon used.

That's why in actual crime scene one must understand the type of event before developing a scenario of crime as a whole. The blood stain pattern also helps to distinguish between accident, homicide and suicide in most of the cases and also helps to identify bloodstains which are originated from a perpetrator and victim.

After analyzing all measurable characteristics of blood stain that are left on the crime scene, it will lead us to the mode of death as well as the nature of injury and time of crime. Also, it will lead us to the direction of movements of person involved after the crime was committed.

References:

1. Erbisti, P. C. F. & Gardner, R. M. *Bloodstain Pattern Analysis with an Introduction to Crime Scene Reconstruction* (2008). doi:10.1201/9781420052725.
2. *Lyle, D.P., M.D. "Chapter 13: Bloodstains: Patterns tell the story," Forensics: A guide for writers (Howdunit), Writers Digest Books, Cincinnati, OH (2008), pp285-302*
3. Stuart H. James, Paul E. Kish, T. P. S. Introduction to Bloodstain Pattern Analysis: Theory and Practice. in *Principles of Bloodstain Pattern Analysis* (2005).

Reflecting on the importance of Communication in Health Care

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Two hospital deaths during COVID-19 pandemic, hoisted the Nepalese media and medical society, which seemed no less than difficult encounters.

- 22 September 2020, National Academy of Health Sciences, Bir hospital on a press release stated and detailed about the deceased, Mr. Ram Lakhan Jaiswal who died on 19 September 2020 at 10:30 pm. He tested positive for COVID-19. It stated that the rumors of illegal organ procurement were baseless and accusations made by the family members of medical misconduct on the body were assumed without proper understanding. It also urged public not to treat the hospital with contempt based on wrongful allegations.
- 24th November 2020, news started floating after the death of Mr. Bikki Rishidev who died on 21st November 2020 in Nobel Medical College following cranial surgery. There were accusations of foul play and backlash on treating hospitals due to stitches on the abdomen which was seen by the kin during the last rituals for cremation. Their concern, why would there be stiches on the abdomen when the surgery was on head?

I was taken back by the news. It made me pause and consider what happened. Why are these incidents occurring? Why are people reacting this way? Why are there so much hate and anger towards medical profession?

So, through this reflective writing, I wanted to understand the circumstances better, to be aware of what I know and don't and to learn from the experience and share the importance of things we need to know. I would like to precisely emphasize over the importance of communication in medical practice.

To begin with, a difficult encounter refers to inharmonious doctor-patient relationship. Contributing factors can be related to doctor, patient or even the circumstances which leads an imbalance between the expectations, perceptions and the conduct of the doctor and the patient involved.

In the past, doctors were perceived as god, well-informed, knowledgeable due to their education and hence their suggestions/ opinions functioned as maxim. In a way, the autonomy of the patients hinged on doctors. What perceived as paternalism, was also well accepted. Doctors were trusted for their knowledge and nobility.

But today, doctors are viewed as service providers, an essential one. It is the love for service to humanity, love for medicine that rouses a doctor. Their nonstop contribution during COVID-19 pandemic is equally commended. However, there are also increasing incidences of conflict between doctors and patients or their attendants, lawsuits against doctors. While the reasons are varying, from a medical misadventure to malpractice, ignorance to neglect, such incidents if not managed properly are not only inexcusable but also disgraceful to the noble profession. There are now ethical and legal means of approach to any such disputes. Although, sometimes aggression may result from seemingly unsubstantiated disputes, a proper timely communication can be salvaging. Like, in the above cases, it is apparent that they both lacked proper communication. In both cases, the kin of the deceased were ignorant or not well informed about the patients' health or health related procedure. They were terrified to see the physical state of their dear ones. They responded by reacting, reacting on aggression, based on their understanding of medical knowledge. The doctors on the other hand responded late. In the first case, there was no counselling to the kin, proper breaking of the bad news, discrepancy on handling of the dead. The public perception- unacceptance of death from living/ undignified management of the body all while the patient was in a hospital. In the second event, there seemed a defect in informed consent which refers to the lack of detailed explanation by physicians and reconfirmation that they attendants understood it. Proper information regarding the nature, course and prognosis of the disease and risks/benefits of treatment needs to be communicated in manner that are well received by patients and their attendants. While, consent is a must in medical practice and informed consent a necessity, there is still a gap in practice. That, which bridges the outcome to response, is communication. If today's focus for patient care is in the holistic approach then, a doctor needs to be sound both technically and communicatively. Studies have shown that good communication skills in a doctor improve overall compliance and satisfaction and has even been labelled as "need of the hour", hence recommending a formal training course on it.

What's in the future? A doctor has both ethical and professional obligations towards their patients. They are and will always be highly regarded in a society due to their nature of service. Patients on the other hand will also be equally involving. The shift from doctor to patient centered care as much as to personalized medicine shifts the focus so much on patient, that every individual interaction will leave an impact. And with access to information and growing social network one will need to be vigilant. The accusing attitude towards doctors are growing stronger than ever and it is this attitude/perception that creates this wave of havoc and source of such misleading news. Appropriate communication is the stitch in time, relatively easy to fix and preventable. A proper communication benefits a doctor, patient and a society. It needs empathetic, patient but attentive listening. It helps in building trust and meaningful relationship, better rapport and enhanced diagnosis and management of the disease. It decreases work stress and increases job satisfaction, patient's satisfaction. As easy as it may seem,

there are also several hurdles to it. The notion of importance of communication is still not well perceived by doctors and healthcare workers or the importance of keeping patients adequately informed. Others are awareness, language, culture, low health literacy and lack of knowledge as seen in COVID-19 etc. Moreover, strong communication policies need to be established. Doctors, healthcare workers and hospital managers should maintain open lines of communication

Conclusion:

Reflecting is a learning processes which yields better results when reflected with others or in a group.

Communication in healthcare is integral to doctor patient relationship and shape their attitude towards each other. The efficient way to pact the healthcare or medical practice and thrive is by communicating better. It prevents bad consequences or difficult encounters.

Role of Crime-scene Examination in a Case Investigation- A Case Study

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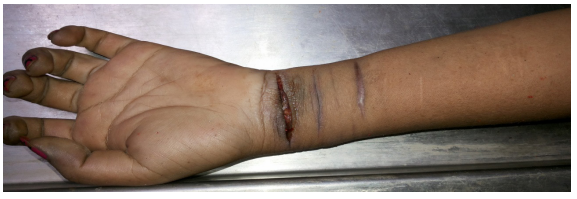
Background:

Crime Scene examination is considered to be one of the foremost basic perspectives of viable criminal examinations. Insufficiently overseen crime scenes, can result in destitute quality evidence being utilized and increases the risk of ineffective examinations and/or wrongful convictions.[1] The crime scene has not always been conceived as part of forensic science. In the past, activities at the crime scene have been viewed as 'police work'; processing and managing the crime scene, observed as a specialized discipline.[2,3] However, in both the forensic and the police field, there has been an increased focus in recent years on what happens at the crime scene.

Case Description:

A 38-year-old woman was found dead, lying on the ground in the church with a ligature around her neck. An alleged history of suicidal hanging was given by her husband. There was a past history of multiple suicidal attempts through different methods.

On physical examination: dead body of an obese female with red colored shawl (ligature) in situ. there were hesitation marks/ multiple linear scar marks paralleling laying on the ventral surface of the left wrist along with an incised wound lying adjacently.



The ligating material was broad. The ligature mark was 5 cm wide which covered the entire breath of the neck of the victim body. Signs of decomposition were present on the face, neck and the upper part of the chest adjacent to the neck. Multiple sub-scalp hematomas were present in the right parieto-temporal and occipital region of the scalp.

Discussion:

It was seen that hesitation marks were seen on the victim's left wrist, which suggested previous attempts of deliberate self-harm. Similarly, the ligature mark covered the entire breath of the neck of the victim, it indicated that she had short neck and reasonably due to obesity as well. Due to which, the mark appeared to run transversely across the neck hence making it hard to determine the level of ligature mark. The signs of decomposition were observed only on the face, neck and the upper part of the chest adjacent to the neck which obscured the findings around face and eyes which are helpful in differentiating hanging from strangulation. Since, they were present only at and above the level of neck compression sparing the remaining body parts, it created a room for doubt of facial congestion produced by the struggle during strangulation. Multiple sub-scalp hematomas could have been produced during the fall of the body from the point of hanging or during the struggle of strangulation. Further, discussion with the investigating officer regarding the circumstantial evidence or scene of crime revealed that there was nothing in the vicinity of the body from where the body would hang or suspend. The cause of death was concluded as combined effect of strangulation and head injuries. The husband was charged with murder and punished accordingly.

This crime scene findings which was not mentioned in the police inquest document supported the forensic experts' opinion.

This case highlights importance of examination of crime scene that is vital to the outcome of criminal justice system. Furthermore, to the importance of conceiving crime scene examination as a basic component of an investigation. The judgement of investigating police officer at the crime scene determines the sequence of action that follows. Decision-making at the crime scene is, thus, vital to an investigation.[4] It has been reported that erroneous opinions about the origin of various injuries occur, if a dead body is directly examined by forensic expert at the autopsy table without any details or information regarding the incident by investigating police officer.[5] Many states and provinces in the United States of America and Canada have abolished the coroner's system because of lacking medical input, replacing it with a medical examiner's system.[6] In Nepal, police inquest system is being followed which means crime scene is examined only by the police. This might have been due to the scarcity of forensic experts in the past. Nowadays, as the number of forensic experts is increasing, they are being frequently requested to visit the crime scene but in an informal way. In one case, the crime scene findings and the inferences deduced from those findings were refused to be accepted by the defense lawyer stating that the forensic medicine expert was not called formally with a written letter to visit the crime scene. These facts necessitate some intervention in the existing system of Crime scene examination.

Conclusion and recommendations:

The case study highlights the importance of crime scene during a medicolegal investigation. It is recommended to our medico-legal society and other concerned authority to further strengthen the existing crime scene examination system by incorporating the provision of regular training to the investing officer regarding

examination of crime scene with preference of medical input as well as of compulsory bringing of the crime-scene photographs along with the request for the postmortem examination. A uniform system is to be developed if the forensic experts are to be involved in the examination of crime scene.

References:

1. Edwards K. Ten things about DNA contamination that lawyers should know. Criminal Law Journal. 2005;29(2):71-93.
2. Crispino F. Nature and place of crime scene management within forensic sciences. Science & Justice. 2008 Mar 1;48(1):24-8.
3. Millen P. Is crime scene investigation forensic science? Are crime scene investigators forensic scientists?. Science & justice. 2000;2(40):125-6.
4. Aepli P, Ribaux O, Summerfield E. Decision making in policing: operations and management. EPFL Press; 2011.
5. Kanth Z, Lal B. Importance of crime scene visit: A case study. Journal of Indian Academy of Forensic Medicine. 2011;33(4):370-2.
6. Milroy CM, Whitwell HL. Reforming the coroner's service. BMJ. 2003 Jul 26;327(7408):175-6. doi: 10.1136/bmj.327.7408.175. PMID: 12881233; PMCID: PMC1126562.

Working as an Expert- Personal Experience

Dr. Kaschev Shrestha, MD
Lecturer, Department of Forensic Medicine
Patan Academy of Health Science, Lalitpur.

A sense of great relief and extreme happiness is felt by everyone who completes their residency and I was no different. Little did I know the true exam in my life had just begun.

I was the first from the Institute of Medicine and 2nd overall in Nepal who had done Post-graduate in Forensic Medicine under Ministry of Health and education scholarship scheme. So, my fate likewise of my predecessor lied in the hands of authorities from the Ministry of Health and Population. It was a frantic few week for me and my fellow compatriots from different departments to get posting in our desired institute or hospitals.

I had a desire to work in a place where I would not only get to do medico-legal cases but also get to teach and spread the joy and intruginess of Forensic Medicine. Luckily, I got posted in Patan Academy of Health Science where I could teach, do autopsy and work in clinical cases.

My senior colleagues have to be credited as even is such short duration; they had laid the groundwork and a blueprint for academics and medico-legal cases in Patan Academy of Health Science. But since my residency was from the Institute and department with the biggest caseloads and facilities there still was much left to be desired. There was OCMC and there was manpower but it lacked logistics and the facilities were still not completely streamlined for the survivors/ victim. Most of the staffs in the hospital were not oriented with what OCMC actually was. The autopsy room had one fixed table and we had to share the mortuary as a passage way to exit an also share the mortuary's limited refrigerators for other non-medico-legal deceased cases.

We even had to face ethical and moral dilemmas where there were situations where we felt that we were re-traumatizing the survivors before doing clinical examination due to lack of proper examination room. There were situations where confidentiality could not be properly maintained due to lack of counselling room. But my senior colleagues and I were determined to change this and contribute in enhancing the medico legal scenario of not only Lalitpur district by conducting cases but also uplifting Forensic Medicine scene by means of education.

I have been in this department since the last 18 months, and in that time our team has conducted 750 plus autopsies and 500 plus sexual assault examinations of survivors/ victims and perpetrators. We have been able to establish an OCMC department and PAHS has been kind enough to add an experienced sister in our department which has led to

huge benefits in examining and following up on the survivors. The facilities also have been streamlined for the survivors/victims after repeated presentations and request to the respected authorities. We have tried to enhance the help that we could provide the survivors by visiting and doing surveillance of all safe homes and rehabilitation centres of Lalitpur and have worked hand in hand with them in some cases as well. After meeting with the Government stake holders and through their help we will soon be able to provide a mobile vehicle and a helpline for gender-based violence survivors/victim. Due to the help of our Hospital Director, we also have been promised refrigerators for storage of the dead bodies. We have been conducting education programmes to medical officers and MDGP residents of Patan Hospital and other department has also approached us for posting residents in our departments which we are starting very soon. We also have been able to conduct training programme to medical officers in Patan Academy of Health Science and also have been able to conduct out-reach training programmes to other districts of Nepal. We also have been able to streamline our incentives for conducting autopsy after coordinating with Ministry of Health and Ministry of Finance.

I truly feel fortunate for being able to work in this Institute and am able to reflect how difficult the situation outside of tertiary centres are, since there are so many things to improve in tertiary centres only. Our respected seniors have tirelessly laid the ground work and developed the field of Forensic medicine but it may be said that Forensic Medicine in Nepal have been dealt a bad hand from the major stake holders and Forensic Medicine has somewhat been neglected and it's not because of lack of need since even a less significant individual in forensic medicine as me receive multiple phone calls from medical offices and police regarding medico-legal cases. But the growing rise in medical negligence accusations, rise in media scrutiny in gender-based violence and homicide cases it maybe now is time for us to win big.

In the near future we plan to enhance our mortuary facilities with addition of autopsy table and counselling room. We will be able to educate and reach more stake holders through various programmes and hopefully will be able to incentivize ourselves as per the rule of the government.

I would like to end with famous words by Robert Frost "The woods are lovely dark and deep but I have promises to keep and miles to go before I sleep and miles to go before I sleep."

Working as an Expert- Personal Experience

Dr. Bibhuti Sharma, MD
Consultant, Forensic Medicine
Provincial Hospital Janakpur, Province No.2
Janakpurdham, Janakpur.

I wonder how many of us can go and serve the place where we were born. I feel am fortunate enough to work in the same hospital where I was born, and am glad to share my working experience. The hospital and the staffs here are all friendly and welcoming and were excited to have a Forensic expert.

This hospital had no Forensic expert before so didn't have its department but now our hospital does have a Department and I am very thankful to be designated as Head of Department, since I am the only Forensic expert working here. Recently, I was given **'कदर पत्र'** by Honorary Chief Minister Mohammad Lalbabu Raut, Honorary Minister Nabal Kishor Shah of Ministry of Social Development of Province 2 and then Medical Superintended Dr. Nagendra Prasad Yadav; this is so overwhelming experience which I can't express. But, to get into this overwhelming experience was not that easy though. After completing 3 years of residency in Department of Forensic Medicine at Institute of Medicine, Maharajgunj and then working outside the valley has a huge difference in terms of infrastructures, facilities, equipment and other various aspects. And this is the scenario of almost each and every hospital outside the Kathmandu valley, because medicolegal autopsies and other medicolegal cases are done by medical officers or consultants of different fields depending upon the cases, but they were also obliged to do their own respective duties in their respective departments. This may not have affected the case but it certainly has affected in the development of facilities inside a Mortuary room and establishing a system. This is something that no Forensic expert wants to hear about, but unfortunately, this field is way behind the other medical fields and this is mostly because there is no responsible Department/ body to look after those things. Talking about this hospital, we have improved in many regards be it in establishing a department, conducting autopsies in a systematic way, taking pictures with the respective body registration number, sample collection as demanded by the case with the use of proper preservatives, not referring the complicated cases, printing reports as far as possible but yet there are many to be done. We don't have any time limits here for conducting autopsies and are usually conducted in daylight till sunset. The main hurdle I had to face is the language barrier. The language barrier was problematic to conduct autopsy as well as to take history

in clinical cases. But I was fortunate enough to get help from other doctors and sisters. Here, we do have OCMC and encounter sufficient number of cases of sexual assaults in a month, which is more than the Institute of Medicine. Here, we divide the duties and handle them as demanded by the case so that the work load is not only to a single person.

There is great demand of Forensic Expert outside the Kathmandu Valley but this department is way behind the other field and the problem we face inside the valley is just the tip of iceberg as compared to the outside. Government and concerned authority should look after its development in upcoming days. Hoping for genuine achievements.

Working as an Expert- Personal Experience

Dr. Biplab Manandhar, MD
Consultant, Forensic Medicine
Narayani Hospital, Birgunj.

I passed MD in Forensic Medicine in 22nd of Ashad of 2077. I was very excited that I finally finished my Masters' degree. I was waiting for my posting through Ministry of Health and Education. More than one month passed by but there were still no signs of posting letter. Day by day I was becoming restless staying in the home. My plan of visiting many places around Nepal could not be possible due to pandemic and lockdown. Finally, after around two months on 17th of Bhadra, I came to know that I have been posted in Narayani Hospital in Birgunj. Though the Hospital was not in my preference list, I was relieved that I can get started working again. In the middle of the lockdown, I reached the place reserving private vehicle paying more than ten times what the normal fare would be.

Luckily, one of the Medical Officer agreed to share his quarter with me inside the premise of the hospital. After being graduated from one of the pioneering institutes of Nepal, I had hoped that, one by one, I would be able to improve the Medico-legal services of the Hospital. I was given the responsibility of (i) post-mortem, (ii) injury examination, (iii) physical examination of alleged victim and perpetrator of sexual assault and (iv) age estimation.

In the COVID-19 time, all the post-mortem cases and injury examination used to be done by one of the medical officers, who have experience of six to seven years in the field. We agreed that we would do post-mortem and injury examination on the alternate days. The complicated case will be done by us together. Previously those complicated case used to be referred to Department of Forensic Medicine, Institute of Medicine (DoFM, IOM). Not all the cases are as straight-forward and I ask for opinion with my teachers and seniors in case I have any doubt. I frequently share my experience with them.

There used to be the strict time limit, when the post-mortem would be done in DoFM, IOM. Here due to the limitation of cold storage facility one cannot say that post-mortem will not be done after office hours. There had been few instances, when the body was in fresh state during death body investigation by police. When the requisition letter arrives after one or two days, the body would be in decomposed state which hampers to reach to a conclusion.

Before I came here, Age Estimation used to be done by a team of senior doctors from Radiology, Orthopaedics and Dental

departments. I am groomed to handle these cases independently. In case any dilemma arises, I consult with them. Instead of sending for eight to ten X-ray scans previously, I am sending three to four depending up on the cases, which have also benefitted the examinee financially and in terms of radiation exposure. More than one person has advised me not to take the responsibility of age estimation alone, which I am doing currently. Maybe I will know the reason when they call for expert testimony.

Previously, alleged victim of sexual assault used to be examined by senior male gynaecologist and those of alleged perpetrator by senior dermatologist. I have been handling these cases. No surprise that I have to be on call 24 hours a day.

Besides the regular salary, I get the incentives for post-mortem, the amount of which was decided twenty years ago in 2057.

All in all, I am happy that I am serving the people of province number two mostly from Parsa, Bara and Rautahat and also share the burden of clinicians.

THANK YOU

We would like to thank ***Prof. Dr. Harihar Wasti***, Chief Medicolegal Consultant of Nepal and also a member of Nepal Medical Council on his retirement from the government services. During his early professional career, he tirelessly advocated on the importance of Forensic Medicine and also for its upliftment for betterment. He pioneered to establish a medicolegal society to unite all the Forensic Medicine Experts throughout the country. He played a pivotal role in making guidelines and protocols for medicolegal investigations in scientific manner. He always encouraged and inspired us every day. We thank him for all the guidance and support that he provided us over the years. Although, retired from the government services he still thrives on the improvement and best medicolegal practice in the country. Enjoy your retirement.

CONGRATULATIONS

We Congratulate ***Prof. Dr. Shivendra Jha***, who is also the Head of the Department of Forensic Medicine at B.P. Koirala Institute of Health Sciences (Deemed University), Dharan for his new appointment as a Dean of the institute. Dr. Jha is also the first M.D. Forensic Medicine graduate from Nepal and also from the same institution. His institution is the only institute to have established a Forensic Science Laboratory outside the capital. Having a young talent like him in such a vital position gives us hope for Forensic Medicine's future in Eastern region and also the whole country. This promotion is just the beginning. Keep up the good work!

MeLeSON Activities

Executive Comittee (2075- 2077)

Chairperson	Dr. Rijen Shrestha
Vice-Chairperson	Dr. Shivendra Jha
Treasurer	Dr. Eugen Dolma
Secretary	Dr. Jenash Acharya
Executive Member	Dr. Alok Atreya
Executive Member	Dr. Ashish Shrestha
Executive Member	Dr. Nuwadutta Subedi
Executive Member	Dr. Samjhana Ghimire
Immediate Past Chair	Prof. Dr. Harihar Wasti

MeLeSoN Forensic Training 001

Exhumation Training was successfully conducted from 28 – 30 November 2018 at BP Koirala Institute of Health Sciences, Dharan.

The trainers were:

1. **Dr. Rafael de Abreu e Souza**, Forensic Specialist, ICRC Dushanbe, Tajikistan. Dr. Rafael is a forensic archaeologist with extensive experiences in forensic investigation of enforced disappearances across South America and Europe and has worked with many of the Commissions. He is currently serving as the forensic specialist in ICRC Dushanbe, with field service in Afghanistan.

2. **Prof. Adarsh Kumar**, Faculty in charge, Forensic Anthropology and Forensic Radiology, All India Institute of Medical Sciences, New Delhi, India. Prof. Adarsh has worked on numerous exhumations of national importance across India. He is a professor at the Department of Forensic Medicine and has been granted numerous commendations and awards over his glittering career.

3. **Dr. Rijen Shrestha**, Lecturer, Institute of Medicine, Kathmandu, Nepal. Dr. Rijen has been trained by some of the best anthropologist in the world and has worked on numerous exhumations in Nepal. He is also the President of Medico-Legal Society of Nepal.

The participants included Forensic Specialist from 14 Medical Colleges in Nepal and 4 invitees from the Forensic Co-ordination Committee of the Commission for Investigation of Enforced Disappeared Persons.

The MeLeSoN participants included:

1. Dr. Shrijana Kunwar
2. Dr. Jwala Kandel
3. Dr. Alok Atreya
4. Dr. Sharmila Gurung
5. Dr. Nitin Agarwal
6. Dr. Samarika Dahal
7. Dr. Malshree Ranjitkar
8. Dr. Pankaj Kumar Singh
9. Dr. Sudhir Raman Parajuli
10. Dr. Mani Maharjan
11. Dr. Gopal K. Chaudhary
12. Dr. Nuwadatta Subedi
13. Dr. Shivendra Jha
14. Dr. Bibhuti Sharma
15. Dr. Biplab Manandhar
16. Dr. Suraj Sharma
17. Dr. Manoj Hang Limbu
18. Dr. Barshika Katwal
19. Dr. Bhumikala Limbu
20. Dr. Arbin Shakya
21. Dr. Ashish Shrestha
22. Dr. Bikash Sah
23. Dr. Dikshanta Pokharel
24. Dr. Santosh Koirala
25. Dr. Sugam Shrestha
26. Dr. Madan Prasad Baral
27. Dr. Rajesh Kumar Shah
28. Dr. Rijen Shrestha
29. Prof. Pramod K Shrestha
30. Prof. Harihar Wasti

The sessions included interactive sessions on Forensic Archaeology, Documentation and Psycho-social aspects. The participants were provided hands-on training on surface mapping.

Day 2 started with donation of gloves and gowns from ICRC (Dr. Darshana Sharma) and MeLeSoN providing exhumation equipment to Department of Forensic Medicine, BP Koirala Institute of Health Sciences.The participants went back to the sites they had mapped the previous day and exhumed three mock graves that were set up for this training. On Day 3, the participants worked in groups to prepare report and presentation for the exhumation exercises. This was followed by a session by Dr. Madhur Basnet, Department of Psychiatry, BP Koirala Institute of Health Sciences who conducted a session on Psycho-Social aspects of Bereavement. The participants presented their findings with the facilitators providing feedback.

Some Glimpse of the Training

The documents pertaining to the Training are available from http://www.meleson.org/activities/meleson-exhumation-training/meleson-forensic-training-001-exhumation-training-completed/

MeLeSoN Forensic Training 002

Clinical Forensic Training was successfully conducted from 10-12 April 2019 at Pokhara with an objective of developing competency and ensuring uniformity in medico-legal examination and reporting in cases of alleged sexual assault and other forms of gender-based violence. Furthermore, the training focused upon the development of standards and protocols for forensic estimation of age.

The trainers were:

1. **Dr. Eugen Dolma Walung**, Maharajgunj Medical Campus, Institute of Medicine, was lead felicitator for the session on Medico-Legal Examination of Survivors of Sexual Assault and other forms of Gender based Violence.

2. **Dr. Neelu Hirachan**, Gandaki Medical College, Pokhara, was felicitator for the session on Medico-Legal Examination of Survivors of Sexual Assault and other forms of Gender based Violence.

3. **Dr. Nuwadatta Subedi**, Gandaki Medical College, Pokhara, felicitated Hands-on session on Demirjian's method of Age Estimation in the living.

4. **Dr. Mani Raj Maharjan**, Maharajgunj Medical Campus, Institute of Medicine, felicitated Hands-on session on Report writing in Forensic Age Estimation in the living.

The event started with an opening ceremony chaired by Dr. Rijen Shrestha, President – MeLeSoN; Prof. BM Nagpal, Dean – Manipal College of Medical Sciences as chief-guest; with SSP Hari Raj Wagle, Gandaki State Police Office; Dr. Arjun Acharya, Director – Pokhara Academy of Health Sciences; and Adv. Rohitraj Bastola, Chair – High Court Bar Association.

The participants included 24 Forensic Consultants from 15 medical colleges in Nepal.

Dr Alok Atreya	Dr Samjhana Ghimire	Dr Apurba Acharya
Dr Sanjay Kumar Shah	Dr Sudhir Raman Parajuli	Dr Manoj Hang Limbu
Dr Srijana Kunwar	Dr Santosh Koirala	Dr Abhishek Palikhe
Dr Archana Chaudhary	Dr Tej Prakash Chataut	Dr Jwala Kandel
Dr Malshree Ranjitkar	Dr Madan Prasad Baral	Dr Binamra Bista
Dr Jenash Acharya	Dr Rijen Shrestha	Dr Prakash Panjiyar
Dr Sharmila Gurung	Dr Biplab Manandhar	Dr Amshu Pradhan
Dr Raj Kumar Karki	Dr Suraj Sharma	Dr Rajesh Kumar Shah

Following the opening ceremony, the academic sessions were started, which were divided into two parts – a two days hands-on workshop on Medico-Legal Examination of Survivors of Sexual Assault and other forms of Gender based Violence, and a one-day seminar/working group meeting on Forensic Age Estimation in the Living.

The academic sessions included:

- Overview of Sexual Violence
  - Definition
  - Prevalence
- Introduction of Sexual Violence
  - Myths, Associated realities and Consequences of Sexual Violence
  - Nepalese legal context
- Service provision in Examination of Sexual Violence
  - Role of forensic consultants in examination of survivors
  - Benefits of medico-legal examination over traditional examination by non-specialists
  - International models for provision of service
  - Requirements for service deliverance to survivors of sexual assault
- Assessment and Examination
  - Relevance of assessment and examination of survivors of sexual assault
  - Legal implications of different types of Consent/Assent
  - Tips for history-taking
  - Differentiation between different conditions mimicking ano-genital injuries
- Specimen Collection
  - Needs, importance and some common principles
  - Guidelines for collection of forensic specimens.

The second day consisted of practical sessions with group members conducting hands on exercises on dummies for examination and collection of specimens from survivors of sexual assault.

The second day also included a session on Overview of Health Sector Initiatives on GBV – OCMC and further by Mr. Sitaram Prasai of National Health Sector Support Programme, where he discussed the development of One-stop Crisis Management Centers in Nepal and their management.

This was followed by a session on sharing of experiences of forensic experts around Nepal, before the day ended with the participants presenting on their cases, including consent, history-taking, examination and specimen collection.

The last day of the workshop consisted of a seminar and working group meeting of all participants on Forensic Age Estimation in the Living. The seminar and working group meeting was geared towards developing competency amongst Forensic Experts in estimation of age in living individuals and developing a protocol for estimation of age based on radiography to ensure uniformity in reporting in cases of age estimation throughout Nepal. The academic sessions included

- Introduction to Clinical Forensic Age Estimation and its legal implications
  - Legal bases for Forensic Age Estimation in the living
- Age Estimation in the living
  - Medico-Legal aspect of Age estimation in Nepal
  - Competencies required
- Latest developments
  - Recent and global approach in Forensic Age Estimation in the living
- Hands-on session on Demirjian's method of Age Estimation in the living
- Compilation of Standard Protocol for estimation of age in the living using Radiography
- Hands-on session on Report writing in Forensic Age Estimation in the living.

MeLeSoN Forensic Training 003

Forensic Anthropology Training was conducted in 20th November 2019 at Kathmandu Medical College teaching Hospital as part of Continuing Medical Education (CME).

The trainers were:

1. **Dr Samantha Rowbotham,** Forensic Anthropologist, Victorian Institute of Forensic Medicine, Melbourne, Australia; Adjunct Research Fellow, Department of Forensic Medicin, Monash University; Forensic Anthropology Trainee, Royal College of Pathologists of Australasia (Faculty of Science). She was a recipient of a VESKI Victoria Fellowship (2017) and the Australian Academy of Forensic Sciences 'Oscar Rivers Schmalzbach' Research Fellowship (2019). Since 2009 she has been involved with archaeological excavations, osteology research and bioarchaeology teaching projects in Asia, Europe, Central America, and Australia. From 2014 to 2017 she assisted with forensic anthropology casework in Victoria, and since 2018 she has undertaken forensic anthropology casework for the VIFM.

2. **Dr. Jenash Acharya,** Assistant Professor and Head, Department of Forensic Medicine and Toxicology, who had undertook a month-long capacity development placement training under Dr. Rowbotham on Forensic Anthropology.

As the analysis and interpretation of traumatic injuries to the skeleton often raises medico-legal challenges in court processes, the Medico-Legal Society of Nepal (MeLeSoN) asked Dr. Rowbotham to work with Dr. Jenash Acharya (Acting Head of Forensic Medicine and Toxicology, Kathmandu

Medical College) to develop and deliver a one-day workshop on the analysis of skeletal trauma. The workshop, entitled "A bone tale: forensic analysis and interpretation of skeletal trauma", was attended by more than 40 doctors from Nepal and one participant from India. Topics covered ranged from terminology, timing and taphonomy, to the analysis of blunt, sharp and projectile forces on skeletal tissues. The workshop was engaging and interactive, with participants having the opportunity to apply their new knowledge in a short practical session.

Although forensic anthropology does not form a large component of medico-legal case work in Nepal, skeletonised remains are still occasionally recovered as a result of the country's past natural disasters, civil war and high-altitude trekking deaths.

Dr. Rowbotham said "It was an extraordinary experience. I am very grateful to the DoFM for the opportunity to undertake this work, and to gain some understanding of the case work challenges entailed with working in a disaster-prone region".

Prof. Dr. Tulsi Kadel, Head of the Department of Forensic Medicine at Maharaj Medical Campus - Institute of Medicine, highlighted the importance of such trainings for development of the entire medical fraternity. Prof. Dr. Mukund Raj Joshi, Hospital Director, KMCTH, praised the effort of MeLeSoN in their service to society. The program was also attended by Deputy Superintendent of Police of Metropolitan Police Circle, Gaushala, as well as the Deputy Superintendent of Police of Metropolitan Police Circle, New Baneswor, who communicated the importance of the topics discussed in crime investigation in Nepal. Dr. Rajkumar Karki, Head of Forensic Medicine, KUSMS expressed the importance of such events; updating and developing the skills and knowledge of academics and professionals. Prof. Dr. Harihar Wasti commented on the fruitfulness of such trainings to Nepalese forensic personnel and how they help in dealing with real life cases.

First Medico-Legal Conference in Nepal

In line with the views of the society for inter-societal networking and co-operation, MeLeSoN held MeLeCoN and IAMLE 2019 from 12th– 15thSeptember 2019 at Hotel Akama, Dhumbarahi, Kathmandu, Nepal.

This was a truly international conference co-organized by two national societies from India and Nepal, namely the Indian Association of Medico-Legal Experts and Medico-Legal Society of Nepal.

The conference provided a unique opportunity to Academicians, Professionals, Students, Judiciary, Police and Policy makers to learn from each other through plenary and scientific sessions about complex medico-legal issues. The participants included 152 delegates from 13 countries, including Nepal, ranging from undergraduate students to retired professors and policy makers.

The conference was inaugurated by the Chief Guest, Hon. Justice Anup Raj Sharma, Chairman of National Human Right Commission, Nepal. The inauguration ceremony was also graced by Guests of Honour – IGP Sarbendra Khanal, Inspector General of Nepal Police, Dr Pushpa Chaudhary, Secretary at Ministry of Health and Population, Mr. Andre Pacquet, Head of Mission of International Committee of the Red Cross, Kathmandu and Deputy Attorney General Mr. Bishwaraj Koirala from the Attorney General's Office. The dignitaries on the dais were joined by Prof. Dr Adarsh Kumar, Organizing President, MeLeCoN and IAMLE 2019.

The ceremony started with the national anthem by undergraduate students from Kathmandu Medical College. They also performed Gayatri Mantra and a cultural dance. This was followed by lighting of lamp to declare the conference open. The dignitaries expressed their views on the importance of development of medicolegal system in Nepal to assist the judicial and police investigations over allegations of misconduct. They discussed recent cases

and how the medico-legal system should be developed to safeguard against future incidents of alleged mismanagement.

The scientific sessions started with the JP Modi Oration by Prof. Stephen Cordner from Victorian Institute of Forensic Medicine, Melbourne, Australia, who shared his 35-year experience in "Reflections on running a Medico-Legal Service". The plenary and scientific sessions pondered on a wide range of topic of interest to the participants. The topics discussed varied from management to forensic pathology case reports, including medico-legal aspects of pharmacopoeia, human rights aspects of menstrual health, artificial intelligence in medicine amongst others.

A total of 17 plenary talks, 51 paper presentations and 27 poster presentations were conducted during the four days of the conference. In addition, an ICRC Symposium on Humanitarian Forensic, a Forensic Odontology and Disaster Victim

Identification Workshop, CME on Medical Negligence and Violence against Medical Personnel and Panel Discussions on Gender Based Violence as well as Investigation of custodial deaths were also conducted by national and international Facilitators during the conference.

The ICRC Symposium on Humanitarian Forensics was inaugurated by Andre Pacquet, Head of Mission, International Committee of Red Cross, Kathmandu. Prof. Stephen Cordner, Victorian Institute of Forensic Medicine, Dr. Panjai Woharndee, Vice-Chair, Asia- Pacific Medico-Legal Agencies and Dr Rijen Shrestha, President, Medico-Legal Society of Nepal were the dignitaries on dais with Dr. Prashantha Bhagvath, Forensic Advisor, ICRC, New Delhi moderating the symposium. The facilitators presented on the various aspects of Humanitarian Forensics, with focus on the management of DVI operations conducted during the Bushfire

and Tsunami Disasters. The dignitaries also emphasized on the need to further develop the Forensic disaster response in Nepal by training forensic experts.

Forensic Odontology and Disaster Victim Identification Workshop was extensive. The facilitators presented on the status of forensic odontology in various parts of the world. They also presented on their experiences on DVI operations in major disasters around the world. The delegates participated in a hand on workshop on charting of the dental odontogram. The facilitators then presented on the importance of databases and their management.

The CME on Medical Negligence and Violence against Medical Doctors was inaugurated by Mr. Sanjiv Raj Regmi, Deputy Attorney General, Attorney General's Office. The dignitaries on the dias included Dr Lochan Karki, Secretary, Nepal Medical Association, Dr Rijen Shresetha, President, Medico-Legal Society of Nepal and Mr. Sitaram Prasai, Gender Equality and Social Inclusion advisor, Nepal Health Sector Support Program, Muzaherul Huq, Organising Chair, 13th Congress of the Indo-Pacific Association of Law, Medicine and Sciences. The dignitaries discussed the need to reform the law regarding medical negligence, with the need to implement stricter regulations against perpetrators of violence against medical personnel. They also discussed the need to implement prevailing laws and regulations for protection of medical personnel and institutions.

The CME looked at the present scenario of increased allegations of medical negligence and incidences of violence against medical personnel in India and Nepal. The facilitators presented on various recent cases that have garnered media attention and political scrutiny. They also discussed the need to follow the rule of law and dissuade administrators from providing compensation as this is contributing to impunity of criminals.

The closing ceremony saw the valedictory function –

1. Dr Abhishek Yadav, AIIMS, New Delhi, and Dr Haneil L D'Souza, KMC, Mangalore, were declared the joint winners for Oral presentation – Faculty

2. Dr. Kaschev Shrestha, PAHS, Lalitpur, was declared the winner for Poster presentation – Faculty
3. Dr. Toniya Raut, BPKIHS, Dharan, was declared the winner for Oral presentation – Post Graduate
4. Dr. Varsha Sharma, KIIT University, Bhubaneswar, was declared the winner for Poster presentation – Post Graduate
5. Dr. Shantanu Dubey, ITS Dental College, Ghaziabad, was declared the winner of the Poster presentation – Under Graduate.

This was followed by vote of thanks from Dr Rijen Shrestha, Organizing Secretary. Dr Adarsh Kumar, Organizing President then informed the audience of New Delhi as the venue for IAMLE 2020. The conference was declared closed.

As per the Annual General Meeting held on Saturday, 26th September 2020 the new Executive Committee 2077 – 2079 was formed as follows:

Executive Comittee (2077- 2079)

Chairperson	**Dr. Eugen Dolma**
Vice-Chairperson	**Dr. Abhishek Karn**
Treasurer	**Dr. Mani Raj Maharjan**
Secretary	**Dr. Shrijana Kunwar**
Executive Member	**Dr. Alok Atreya**
Executive Member	**Dr. Arbin Shakya**
Executive Member	**Dr. Bibhuti Sharma**
Executive Member	**Dr. Kaschev Shrestha**
Immediate Past Chair	**Dr. Rijen Shrestha**

A Tribute to Late Lale Dai

Dr. Neelu Hirachan, MD
Lecturer, Department of Forensic Medicine
Gandaki Medical College, Pokhara, Nepal.

Confusion with a perfect blend of awkwardness was the feeling that I had on the first day of my orientation to the mortuary room of Forensic Medicine department of Institute of Medicine, Maharajgunj. On that very first day, one of the professors was demonstrating an autopsy of a partially decomposed and skeletonized newborn with missing upper and lower extremities to the medical students. This was not a sight that anyone would have wished for on the very first day of a postgraduate residency! A wave of thoughts started its journey over my mind making me feel remorse for choosing the subject. To make the situation more worse, my eyes got hold of another dead body on the adjacent mortuary table. It did take some time for me to mentally assemble myself from the devastating scenes that I had seen that day. As I was pondering my eyes over various objects present in the mortuary room, a stout man with approximate height of 4 feet and weight around 70 kg came into my notice. His round contoured face perfectly matched his obese and dark skinned body. He was trying his best to help the students to identify injuries present on the body in the second mortuary table. He was pointing towards the injury with the help of a scalpel and stating it as "this is CONTUSS". He was actually referring this to the contusion present on the dead body. This was one of the most common phrase that he used to utter and this was how I got introduced to our late LALE dai . As time passed by, I slowly got accustomed and adapted to this amazing world of forensic medicine. The dead bodies that used to scare life out of me previously turned out to be innocent beings with soundless voice shouting out from their souls all the pain, sufferings and injustice that had happened to them when they were alive. I started having feelings of pity for them as well as huge respect for them. It was obvious that without the intense observation and examination of these bodies, I would not have got the privilege of learning and mastering the subject that I had chosen for my master degree. Today, I am indebtful from the core of my heart to the two pillars of forensic medicine department at Institute of Maharajgunj, Kathmandu—Late Lale dai and Dale dai. I would prefer to idolize them as two components of Chinese Yin and Yang (e.g; light and dark, life and death etc.). Dale Dai is a tall, thin built and more aged than Lale dai. Dale dai mostly adorns a frowning face whereas late Lale Dai was exactly the opposite. The mutuality that they bestowed in their work created the perfect environment for a beginner like me to master this art of forensic medicine.

Late Lale dai, though you have left this world so early and you are not here with us anymore, I will always treasure your ever smiling face and helpful hands. I feel privileged to have some portion of life lived in your company. You will always be our "CONTUSS DAI"!