Forensic Nursing in Humanitarian Forensics

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ABSTRACT
Humanitarian forensics has been established as a new entity, and it is bound to develop as a robust branch of science. It is a multidisciplinary subject with the involvement of experts from different fields of science. Forensic nursing too is an upcoming branch of nursing science and is a relatively new discipline of science. Forensic nursing science is expanding in various countries. This paper will describe and discuss the various important aspects of Humanitarian forensics and forensic nurses' utility in humanitarian forensics and discuss the future role of forensic nurses in humanitarian forensics.

Keywords: DVI, Forensic Nursing, Humanitarian Forensics, Socio-cultural crimes.

INTRODUCTION
Forensic nursing science is a branch of science which is a combination of knowledge and the practice of nursing health care, the criminal justice system and Forensic Sciences including Forensic Medicine; when applied to criminal investigation and judicial system of a country.

Forensic nursing is now gradually making its presence felt in the different countries with the coordinated activities of different organizations like the International Association of Forensic Nurses [IAFN], Indo Pacific Academy of Forensic Nursing Science [INPAFNS], American Forensic Nurses Association [AMRN], American Association of Legal nurse consultants [AALNC], UK association of forensic Nurses [UKAFN], and Forensic Nurses Association of Canada [FNAC].

Suppose we see the origin of Forensic nursing. In that case, it can be traced to the United Kingdom in 1950, and stronger evidence of this practice was providing care to the persons in custody who needed mental health care or were involved with psychotropic substances in 1979. In the USA, forensic nursing initiated counseling of victims of sexual assault in 1976 at Yale-New Haven Hospital. It was recognized as a specialty due to the consistent efforts of Virginia A Lynch in 1980. Now, this has extended to many other countries. Forensic nursing science is scheduled to be part of the undergraduate nursing course in India, and post graduate (PG) course is being run by the Gujarat Forensic Science University.

Humanitarian forensic science is the application of the forensic sciences to humanitarian purposes so that with their skills and knowledge, they can benefit humanity. This is commonly being applied to the aftermath of conflicts and disasters. It alleviates the sufferings of humans.

Its actions dates back to the 2nd world war when identification was provided to the buried persons after examination of their documents and reburies in the named graves.

Forensic humanitarians took its shape in 2000 when the International Red Cross society started taking help for the bereaved persons is very important and will determine the a dignified way.

FROM THE EDITOR’S DESK

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success or failure of the cases.\textsuperscript{13} Providing comfort and information to the relatives of the missing persons is one of the main objectives of forensic humanitarian forensics as the interviewer is the forensic persons.\textsuperscript{20} The family members and friends have the right to know about the dead persons and this can be done by the examination of the remains of the dead bodies.\textsuperscript{21}

Maintaining human dignity is very important for optimum results whether it may be dealing with survivors or their family members. All such people need psychological support. Investigating people must understand that such individuals have rights and they have the right to make decisions and right to elaborate during giving of the histories, which should be respected. Psychological support and psycho-social commitment help in the healing process.\textsuperscript{22}

Other goals of humanitarian forensics are estimating the individuals' age, document the torture in custodial settings, monitor the places of detention, and manage hunger strikes.\textsuperscript{13} There is a need to understand that social and cultural beliefs may be behind the crime. It needs to be tackled and humanitarian forensics may be able to interact and help reduce the crimes.\textsuperscript{23} As people are migrating from one country to the other, the socio-cultural values are shifting and so are shifting the crimes and are not just limited to the one country.\textsuperscript{24}

In epidemics like Ebola too forensic humanitarian activities can be very useful by giving dignity to the dead bodies. People usually do not come forward for the final rites of the dead body. Proper disposal of the dead bodies can help in preventing the spread of the epidemics.\textsuperscript{20} A total of 45 unsafe burials were reported in a paper, and on an average seven people were associated with each unsafe burial and 65% of such contacts became sick afterwards. Safe and dignified burial in Ebola epidemics limits the spread of the disease in epidemics.\textsuperscript{25} Similarly, the dead body's safe disposal can also prevent the spread of COVID 19 and give dignity to the dead bodies.\textsuperscript{26}

There are victims of torture which may be victims of torture due to activities by terrorists or action by investigation agencies or security forces. Triad of blunt trauma i.e. bruises, patterned injuries and internal injuries; electrical and thermal injuries and injuries from prolonged suspension, which causes stress on the body. Due to this prolonged hanging stress, there occurs necrosis of muscles resulting in myoglobinuric renal failure and death. This may remain obscure until a proper autopsy is done especially of muscles of back, shoulder and knee joints and soles.\textsuperscript{27}

In terrorists' incidences identification of the terrorists is also facilitated by international coordination.\textsuperscript{28} The pattern of injuries in surrendered terrorists may indicate they may have been killed e.g. firearm injuries and blunt trauma with opposing trajectories.\textsuperscript{29}

Survivors of sexual assaults can be benefitted by the domain of forensic humanitarian forensics. It needs a planned approach which is usually a multidisciplinary approach, and if provided in a timely manner can be very fruitful. Religious and cultural values of the victims must be respected when dealing with gender-based violence.\textsuperscript{30}

Trafficking of children is a serious issue affecting the rights of children and such child victims need to be identified. Mostly such children have a history of abuse, and such children should be removed from their sufferings and given a life of dignity and saved by ascertaining their identity so that they can be located and sent back to their families and rehabilitated. Those responsible for these crimes should be punished and compensation may be given to such children.\textsuperscript{31}

Dignity of the dead is important so the dead bodies should be disposed of in a dignified way and one of the main steps in the management of the dead.\textsuperscript{32} Various guidelines have been developed for forensic pathologists to deal with the dead bodies in mass disasters- Interpol DVI Guide.\textsuperscript{33} Four steps are highlighted for identification i.e. crime scene investigation; Postmortem data comprising of fingerprints, dental examination, DNA profiling and physical examination; antemortem data and reconciliation of PM data with antemortem data.\textsuperscript{28}


International coordination in situations of disasters definitely improves the process of identification of the victims of disasters.\textsuperscript{28} Persons with the right skills need to be identified as per DVI Guide\textsuperscript{33} and forensic nurses have the right skills which can be utilized in such scenarios. There is an international commission on missing persons, and missing persons can be reported to the commission and they try to find that missing persons and forensic persons can submit their findings in a case to them. It has helped by identifying 70% of the missing persons in Yugoslavia.\textsuperscript{36}

In the case of missing persons, there may be multiple challenges, and all of them need to be tackled. The number of missing persons needs to be determined, and their identity needs to be established. Working protocols, a form of investigation as multiple stakeholders may be involved, need to address the cultural beliefs of the missing persons. All this has to do with time and funds constraints and keeping in mind the political establishment of that country where the investigation is being held.\textsuperscript{37}

The DNA profiling and DNA databank can be very useful in identifying missing persons.\textsuperscript{38} Internationally accepted guidelines are lacking though Interpol guidelines are being applied at many places.\textsuperscript{38} Statistical support about DNA markers of various communities is also non-existent, and there is a need to accept the lineage markers Y chromosome polymorphism and mitochondrial DNA for identification of parental lineage.\textsuperscript{39}

The DVI work is affected by many factors. One of the factors is if the dead body is the sea. People try to migrate through sea and accidents do happen and deaths occur. Identification in such situations may be really troublesome. Temperature, depth, salinity, currents and oxygen levels of
water may affect identification and factors like wearing of clothes, the stature of the person and status whether alive or dead when submerged in water and all these affect the retrieval of the dead bodies.\textsuperscript{40} In one of Italy's studies about migrants in the Mediterranean Sea, 60\% of such persons got buried in a stage of unidentified. The government and its various organizations are combining the services of Medico-legal, anthropological, forensic odontological, and forensic genetic services to identify the deceased persons.\textsuperscript{39}

Data management for DVI is also very important and involves collecting (antemortem and Post-mortem data) and archiving data, comparison, and analysis, and then reporting.\textsuperscript{31}

Procedure of prevention, investigation and documentation of torture in the form of psychological and physical injuries in custodial places is mentioned in the UN manual and forensic science and forensic medicine play an important role in it.\textsuperscript{42,43}

According to the Declaration of Basic Principals of Justice for victims of crime and abuse of power, standards have been set for the victims' rights and protection. According to this access to the fair Justice access to treatment, restitution, compensation, and assistance have been identified.\textsuperscript{44} But victims are not being treated with dignity and are not protected from intimidation.\textsuperscript{45} Even rights have been given to the detainees for which officials have to take care to provide these rights e.g., Right to physical and moral integrity, right to an adequate standard of living, health rights of prisoners, making prisons safe places, making the best use of prisons, prisoners' contact with the outside world, complaints and inspection procedures.\textsuperscript{46}

Rights have been given to all persons that they will not be tortured under any circumstances will not be given any degrading treatment according to the Universal Declaration of Human rights.\textsuperscript{47} Jail officials have been barred from this and in case of such treatment to the inmates, jail officials can be in trouble.\textsuperscript{48}

The capacity building of each nation for the DVI is very important, and in many circumstances, there is a need for exhumations and excavations. For the programs to succeed in local responsibility and local ownership of the mechanism is very important.\textsuperscript{49}

Forensic nurses are part of the death investigation in many areas. They mix their nursing education with criminology, law, and Forensic Medicine to help the investigation teams by carefully planning, going to the crime scene, observing and evaluating the crime scene.\textsuperscript{49,51} The trained forensic physician may not always be available, and then a forensic nurse death investigator may be ideal in such situations, and forensic nurses are being utilized in many counties in the USA.\textsuperscript{50} They are being posted as coroner, deputy coroner, death investigator, and nurse investigator to perform this role.\textsuperscript{52}

Forensic nurses are being utilized in mass disasters and situations of community crisis\textsuperscript{8} and can be very well utilized in humanitarian forensic work. There are online courses for Professional Certificate in Nurse Death Investigation. The nurses learn to collect the evidence at the crime scene, which is important for the case, and then preserve the evidence. They also are trained to photograph the crime scene and how everything is documented. They are also taught how to do the dissection of the dead body. They also look for the identification of the dead. They are also taught to look for the various signs of death and how they proceed with the time elapsed after death.\textsuperscript{51}

The forensic nurses' attitude affects the intervention, optimism, and not to perform in a stereotype working in substance user services,\textsuperscript{53} and this may be equally true for the forensic nurses in humanitarian forensic work. To succeed, forensic nurses also need effective and excellent written and verbal communication to deal with the victims, offenders, police officials and team members.\textsuperscript{54} Violence survivors and victim advocates may have conflicts with the team members because advocates usually use indirect communication language whereas forensic nurses usually use direct communication languages, and good communication skills can effectively tackle these.\textsuperscript{55}

**Materials and Methods**

Google Search and Google Scholar search using the keywords were used, and the relevant articles were selected.

**Discussion**

Humanitarian forensics is the branch of science that involves using forensic science for humanitarian purposes. It may be the identification of victims of mass disasters or identification of missing persons after a war or identification of victims of war and epidemics.

Role of nurses for humanitarian purposes goes back to the origin of nursing when the founder of modern nursing Florence Nightingale the British nurse in 18\textsuperscript{th} century was taking care of victims of war in the Crimean war\textsuperscript{56} or Bhai Kanhaiya was giving water to the war victims earlier to the origin of nursing in the 17\textsuperscript{th} century.\textsuperscript{57}

It also helps identify and prosecute the victims of socio-cultural crimes, including religious crimes.

Forensic nurses can help in photographic documentation of the injuries when a forensic pathologist is documenting these injuries in the medico-legal reports.

Forensic nurses can provide the right type of psychological support to the victims of torture and their families and families of the missing persons.

Forensic nurses can interview the victims of torture in a very compassionate manner, which is an essential aspect of DVI. Attitude and communication skills can play a very important role during interviews to elicit information from the victims which may be very useful for the case.

Autopsy in torture related deaths is important to find out the signs of torture and find out the injuries and find out the exact cause of death, which may be missed in a routine autopsy.

**Conclusion**

Forensic nurses can play a vital role in humanitarian forensics. They can play a crucial role in documentation and providing...
psychological support as they are experts in dealing with the victims and their families. They can provide psychological support even to the team members. They can help in preventing the spread of epidemics and take care of forensic aspects when there are several deaths due to epidemics. When there is a shortage of forensic physicians, they can fill the gap in humanitarian forensic work. They can play a perfect role in disasters, whether it is human-made or it is natural. This discipline requires further research and development, and ultimately forensic nurses will be able to contribute significantly in humanitarian forensics. Forensic nurses should be a part of the humanitarian forensic teams. The attitude of the forensic nurses who wish to work in humanitarian forensics should be optimum as suboptimum attitudes will not bring the desired success rates. Forensic nurses need to have effective communication skills to be successful in humanitarian forensic work.

REFERENCES


