



RESEARCH ARTICLE

BURDEN AND TOOL FOR EARLY AND PRECISE IDENTIFICATION OF UNIDENTIFIED DEAD(S) IN INDIA

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ABSTRACT

Background: Every year thousands of people go missing and reports are filed in police records. Thousands of unidentified dead bodies recovered, where inquest is carried out throughout India. This is an issue which is of global concern. In the year 2015 only, 34592 unknown dead bodies were recovered all over India, where Maharashtra was the leading state. Identification of unidentified dead victims using a current methods is not sufficient in existing system, hence burden has been assessed and an algorithm has been prepared for easy, early and correct identification of the dead bodies.

Methodology: Analysis of existing system of identification adopted by the investigating authorities and compendium reports of government authority from 2010 to 2015 for assessing the burden of unidentified death victims.

Results and Observations: Thousands of people were declared as unidentified dead. In India the range of dead remain unidentified was 570 to 650 per lac registered deaths and in Maharashtra state from 730-1150.

Discussion and Conclusion: More than 100 dead's per day in India was declared as unidentified, of which 17 per day in Maharashtra alone.

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INTRODUCTION

Every man in the world is born with some identity and deserve to die with the same, this is the privilege of being born as a human (<http://medind.nic.in/jal/t14/i1/jalt14i1p76.pdf>). India is the second most populated country in the globe; its population quadruple within a span of 06 decade. With increase in population, the identification of Indian people is at stake. Every year thousands of people go missing and reports are filed in police station. Thousands of unidentified deadbodies recovered, where inquest is carried out throughout India (<http://ncrb.nic.in/>). This is an issue which is of global concern (Pankaj and Singh, 2017). Whenever a dead body found, initially it is reported to police and after inquest (if needed) police requested medical team, for forensic analysis, to find out the cause of death and identification of the victims in unknown cases. If the identification is not established than the body remains

unidentified. Unidentified dead body is defined according to American dictionary as "a corpse of a person whose identity cannot be established by police and medical examination" (https://en.wikipedia.org/w/index.php?title=Unidentified_decedent&oldid=768374631). Unidentified dead bodies were synonymous to unclaimed dead bodies, unidentified dead victims, unknown dead bodies, unknown corpse (<http://ncrb.nic.in/>; Kumar et al., 2014). Identification of mutilated body or fragmented body or decomposed body is time consuming and very difficult, sincere efforts are required by an investigating officer for establishing identity. Despite of their hard work and sincere efforts 1,83,659 (one lakh eighty three thousand six hundred and fifty nine) unknown dead bodies were recovered in India from 2011 to 2015. On an average 100 (one hundred) unknown dead bodies were recovered every day in India alone (<http://ncrb.nic.in/StatPublications/CII/CII2015/FILES/Compendium-15.11.16.pdf>). In the year 2015, 34592 (thirty four thousand five hundred and ninety two) unknown dead bodies were recovered all over India, where Maharashtra was the leading state with 6185 (six

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thousand one hundred eighty five) among all the states and Union territories of India (http://ncrb.nic.in/StatPublications/CII/CII2015/FILES/Statistics-2015_rev1_1.pdf).

System of identification in India

Medical team particularly forensic medicine experts are a part of investigating agency and play an important role with two main objectives;

1. To identify the remains of dead bodies.
2. To examine the dead body for criminal investigations for the exact cause manner and time of death.

Basically, identification is a process which involves visual and other accustomed means of identification likewise relatives of the missing person looking at the remains of dead victims, systematic comparisons between the findings of the ante and post mortem data, scientific parameters which involves the matching of dental radiographs, finger prints, DNA samples, numbered surgical implants/prosthesis, unique physical or medical traits acquired or congenital deformities if any with the ante and post mortem data of the victims (<https://www.icrc.org/eng/assets/files/other/icrc-002-0880.pdf>). A dead body remains unknown until the identification is established. In India for establishing identity various parameters are used by the investigating authorities. First and foremost is by photo identification. Numerous governmental and non-governmental agencies issuing identity card with photograph pasted on the card. Identity card issued by the governmental and non-governmental agencies are Ration Card for families by Municipal corporation, PAN card for filling income tax return by Income tax department of India, Passport by Ministry of foreign affairs, employer identity card issued from individual organisation, Aadhar card issued by Ministry of Law and justice, driving licence by transport department, student identity card from reputed institutes, photo passbook of running bank account issued by respective bank, etc. The identity documents in physical form with the dead victims are not always found especially when the intention behind dead was criminal. If the facial features of corpse are disrupted which may be by mutilation, dismemberment, use of corrosives for specific or general destruction or burns, than establishment of identity will become cumbersome by matching it with the identity cards, using only photo as an identification parameter. At times the bodies are found in skeletonised form, so other parameters can be utilised for establishing identification like Finger prints of the corpse, DNA matching with referred samples, retinal scan, dental radiographs, numbered implants or prosthesis etc (<http://medind.nic.in/jal/t14/i1/jalt14i1p76.pdf>). Aadhar card system is the only identity system incorporating scientific parameters of iris scan, finger prints and photograph for issuing the card. Rest all are based on either address proof or photo identity system.

Need of the study

The pain and misery of the mankind is not end with the death, particularly when the loss is sudden. The agony of losing the near and dear ones leaves an irreparable mark on the survivor and family members may face additional anguish if body is not recovered (corpus delicti) and remain in constant dilemma about the position of the person (http://unidentifieddeadbodies.com/DeadBody_AboutUs.aspx). The identification of dead if unknown has legal significance for inheritance and

insurance that affect social and financial status of family person. Psychological impact on the near and dear ones like family, friends and relatives for many years after a tragedy (<https://www.icrc.org/eng/assets/files/other/icrc-002-0880.pdf>). One of the author and his family person has been suffered through such a misfortune during Kedarnath disaster (Uttarakh and June 2013) and can personally feel the pain in depth. An unknown male dead body was found near Gurgaon bus stand, red light fly over, Sarai kale khan, New Delhi. The description of dead body given was about height, age, complexion, the dress which he wore etc. This incidence was published in newspaper with an appeal to general public to help investigating authorities for establishing the identity of the dead victims after sincere efforts by local police for establishing the same has been fail. This is happening on regular basis and is one of the need for this study (http://epaperbeta.timesofindia.com/Gallery.aspx?id=04_12_2015_017_037&type=A&eid=31808). Surprisingly a man declared dead, returned home after 27 days in Delhi. That has shocked the police as well as public. This incidence generates few questions in mind; who was that x-man which was Declared (wrongly identified) as y-man? Simply it is the false identification or partial identification of the victim (<http://www.dnaindia.com/locality/north-west-delhi/dead-man-returns-alive-after-27-days-north-west-delhi%E2%80%99s-badli-70440>). Many incidences have been reported that person being declared dead returned home after many days leading to shock and raise the question on identification system in India. In many occasions false death by negative identification was used by people who have criminal charges and for their disappearance using dead body of someone else. To prevent such incidences early, correct and complete identification of dead bodies are mandatory (http://www.business-standard.com/article/pti-stories/dead-murder-accused-hc-raps-delhi-up-police-for-blame-game-115052201553_1.html). Such inaccurate measures of identification of dead bodies leads to mockery of legal system. The process of identification is an everyday occurrence in life, both for civil and criminal reason. Joining an institute for education, opening an account or getting a licence etc, almost every activity requires some form of identification in social life to sustain. For maintaining law in society, identification has to be carried out in both dead and the living (Kumar et al., 2014; <http://imsear.li.mahidol.ac.th/bitstream/123456789/145730/1/ji-afm2012v34i4p304.pdf>). Natural calamities, mass disaster, intentional/unintentional acts of fellow human beings, and similar circumstances leads to unknown dead bodies (<http://medind.nic.in/jal/t14/i1/jalt14i1p76.pdf>). It is the fact for identification “quicker the process begins better are the chances for identification” of victim, as the chances of identification is inversely related to the time since death. Greater the times passes since death, lesser the probability of identification (<http://medind.nic.in/jal/t14/i1/jalt14i1p76.pdf>). This study thereby plan to establish a system to accelerate early and maximize correct identification of unknown dead bodies not only for contacting next of kin but also providing them proper and dignified management of dead bodies as per their religion.

Aim

To assess the burden of unknown dead victims and identify possible tool for early identification in India.

Objectives

1. To evaluate the burden of unknown dead victims in India & Maharashtra state.
2. To analyse available identification system in India utilized for identification of unidentified dead bodies.
3. Find tool for easy and early identification of unknown dead victims.

MATERIALS AND METHODS

Study Design: An analytical study

Study Period: 01st Jan 2017 to 30th Nov 2017.

Study Centre: Jawaharlal Nehru Medical College, Sawangi (Meghe) Wardha, Maharashtra.

Study Tool: Numerous reports issued by government of India for public interest:

1. Crime in India 2010 to 2015 compendium by National Crime Records Bureau (NCRB) Ministry of Home Affairs.
2. Crime in India 2010 to 2015 Statistics by National Crime Records Bureau (NCRB) Ministry of Home Affairs.
3. Vital Statistics of India based on civil registration system 2010 to 2015 by office of Registrar General India, Ministry of Home Affairs.

Methodology

Analysis of reports mentioned above for assessing burden of unknown dead bodies recovered in India and in Maharashtra state. Analyse all related literature, documents and websites like Pub Med, Google scholar, Copernicus etc for related article, informal personal interview of local police of Maharashtra state to know the method adopted by them for identification of unknown dead victims. Analysis of sites like www.tin-nsdl.com for PAN and TAN card, www.uidai.gov.in for Aadhar card, www.passportindia.gov.in for passport, www.parivahan.gov.in for driving licence in India etc for assessing procedure adopted by them for issuing of their respective documents, which can be utilised for identification of UDB. Data were analysed and table, charts are prepared.

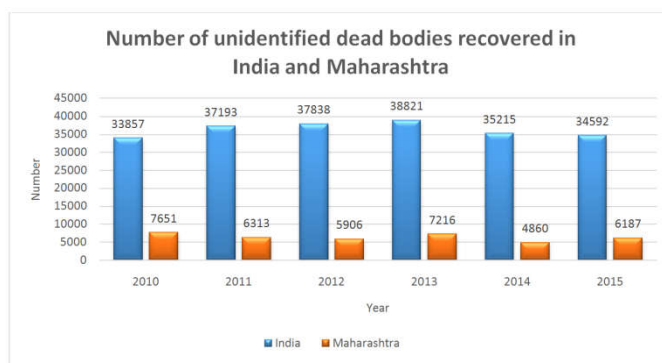
RESULTS AND OBSERVATIONS

Table 1. Registered deaths in India and Maharashtra state from 2010-2015

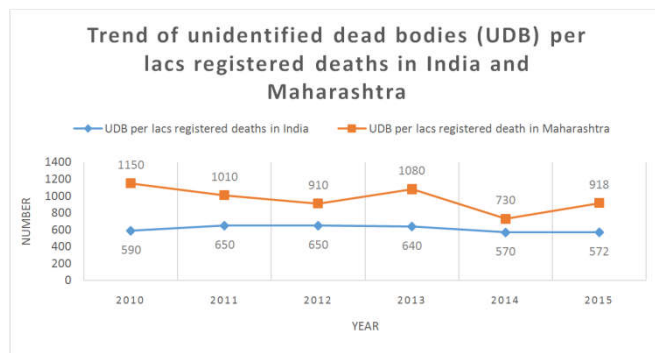
S. No.	Year	Number of registered Deaths		% share of Maharashtra
		India	Maharashtra	
1.	2010	5690549	663383	11.66
2.	2011	5735082	624791	10.89
3.	2012	5850176	651731	11.14
4.	2013	6086616	668887	10.99
5.	2014	6138182	669030	10.90
6.	2015	6267685	673824	10.75

This table shows registered death in India and Maharashtra state and percentage of Maharashtra in respect to India from 2010-2015.

This chart depicts the annual burden of unidentified dead bodies recovered from 2010 to 2015 in India and Maharashtra.

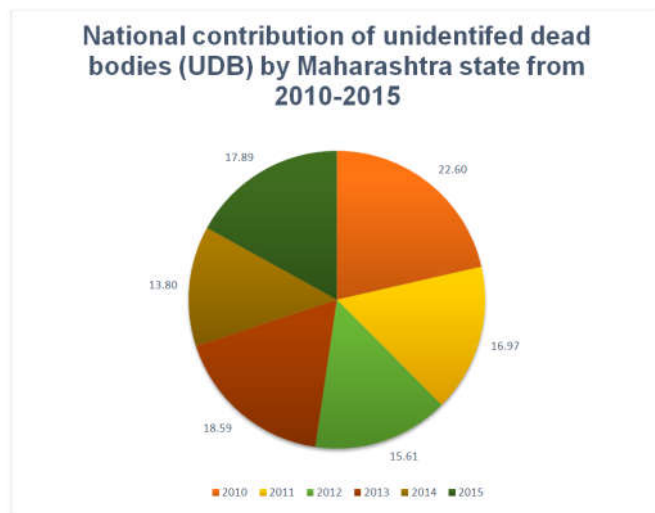


Char 1.



Char 2.

This chart illustrates the burden of unidentified dead bodies to per lac registered deaths in India and Maharashtra from 2010 to 2015.



Char 3.

This chart represents percentage share of unidentified dead bodies by Maharashtra state towards the nation from 2010-2015.

DISCUSSION

590 unidentified death bodies (UDB) were found per one lakh registered deaths in India in the year 2010, whereas 650, 650, 640, 570, 592 UDB per lakh registered deaths in India in the year 2011, 2012, 2013, 2014 and 2015 respectively. Similarly 1150, 1010, 910, 1080, 730 and 918 unidentified dead bodies were found in Maharashtra state for every one lakh registered deaths in state in the year 2010, 2011, 2012, 2013, 2014 and 2015 respectively. Unidentified dead bodies per lakh registered

deaths in Maharashtra was 1.95, 1.55, 1.40, 1.69, 1.28 and 1.66 times more than national UDB from 2010 to 2015 respectively. National contribution by Maharashtra state in terms of unidentified dead bodies found are 22.60%, 16.97%, 15.61%, 18.59%, 13.80% and 17.89% for the year 2010, 2011, 2012, 2013, 2014 and 2015 respectively. In developing country like India, ineffectiveness to prove identity is a major barrier preventing the deprived people from accessing benefits and subsidies. Both the private and public sectors, throughout the nation requires proof of identity before providing individuals with service. For establishment of complete identification, data should consist of photograph, religion, race, sex, age, stature, dactylography (finger print), foot prints, cheiloscopy, tattoo marks, scars, deformities, anthropometry, teeth, DNA typing, blood grouping and HLA typing and some miscellaneous data like complexion and features, hair, clothes, pocket contents, jewellery, occupation marks, ear morphology, palate prints, frontal sinuses, X-ray etc. Best establishment of identification can be done if the investigating authorities will match maximum data collected from body with the available resources (Bardale, 2011). Government has authorised police to establish the identity of the dead person for which they can take the help of forensic medicine experts. Doctor should record at-least two identification marks and must be described in all the certificates issued by them, along with the preservation of all the requisite data (described above) which can be used in establishing identity of the dead bodies (<https://uidai.gov.in/>). Standard operating procedures (SOP) of police for establishment of identification of UDB are by collecting finger prints, photograph, DNA sample, information from people near scene of body found, matching from records of missing people, sharing of information with police stations of nearby districts, appealing general public for sharing information by publishing incidence with photograph in local newspaper. Disposal of unclaimed, unidentified dead body by the police department is done in either ways:

- 1) It can be given to Medical colleges/ Dept of Anatomy for education,
- 2) Concerned NGOs are approached to perform the last rights of the body.
- 3) If nothing happens Municipal Corporation or local police personnel can cremate the dead.

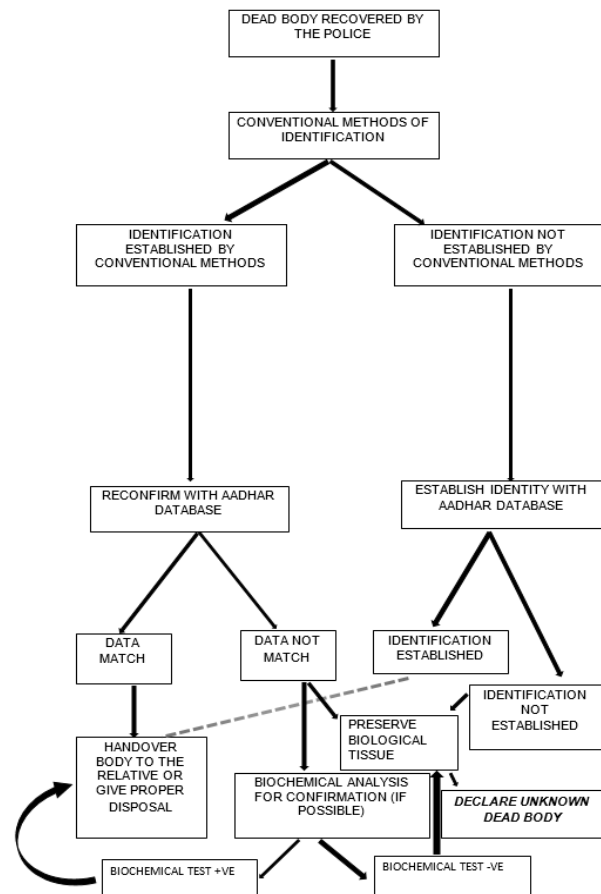
Out of all the available identification documents issued in India, it has been found that only aadhar is utilising finger prints of all ten fingers of both hands, iris scan of both eyes along with photo identification and information regarding age and address before issuing card by Unique identification authority of India (UIDAI). More than 99% people above 18 years of age are registered for aadhar in India. Though age is not a limitation for aadhar which is a limitation with other identity documents. 94% of Maharashtra population enrolled for aadhar and 88% for India by 31st march 2017 (<https://uidai.gov.in/>).

Conclusion

The burden of unknown dead victims in India is quite high, more than 100 dead bodies per day were declared as unknown dead victims from 2010 to 2015, whereas 17 dead bodies per day in Maharashtra declared as unknown dead during the same period. Aadhar is the only identification document which was qualify in this study, which can be incorporated for the purpose of identification of unknown dead victims, due to two main

reason firstly largest group of Indian population is enrolled for aadhar and secondly because of demographic and biometric data base, which was stored in Centralised data base in electronic form. An algorithm has been developed by Dr. Ravindra Kumar Vishnoi and Dr Mahesh Kumar Jain, which can be used by government authority for easy, early and maximize correct identification of the dead victims.

Vishnoi and Jain Algorithm



How to read it and apply?

Dead body was recovered by Police

- Try to establish identity by conventional methods as per their SOP (Standard Operating Procedures)
- There is two possibility;
- Identification established OR identification not established

In case if identification established by conventional methods, reconfirm the identification with aadhar database to avoid wrong or mis-identification

- If data of aadhar match with conventional methods of identification. The dead body may be handover to the relative(s) or the authority may give proper disposal as per their religion.
- If data of aadhar not match with the conventional methods of identification, than biological analysis may be performed with immediate relatives and if biochemical test results are positive (match), than hand over body to the relative(s) or the authority may give proper disposal as per their religion.

- And if biochemical test is negative (not match) or no individual is available for biochemical analysis, than biological tissue may be preserved and the body may be declared as unknown dead body. This biological tissue may be utilised in future, if needed.

In case if identification is not established by conventional methods, try to establish the identity with aadhar database.

- If data found in aadhar database and identification established, dead body may be handed over to the relative(s) or authority may disposed of the body as per their religion.
- If identification was not established as no record was found in aadhar database or body is so heavily decomposed that identification by aadhar is not possible, than biological tissue may be preserve for future and then the deadbody may be declared as unknown dead.

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