

Virtual Autopsy– Challenges in implementation in Indian Medicolegal System

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What is virtual autopsy

- Latin term *virtualis*: “usable”, “industrious”, or “better.”
- Greek terms *autos* “self” and *opsomei* “I will see”
- “VIRTUAL AUTOPSY” is the method which combines and analyses:
(Term used in Book By Dr Michael Thali)
- 3D photogrammetric surface scan of corpses.
- Images from Computed tomography (CT)
- Magnetic resonance imaging (MRI)
- With minimal invasive technique for taking for Autopsy Samples.

Benefits in Indian Medicolegal System

- Immense help In Sudden Non Violent Deaths
- All body parts can be recorded for further additional in-detail examination.
- Reproducibility.
- 2nd and 3rd Opinion.
- Infection and Biohazard control.
- Humanitarian Aspect.
- Less man power / resource required
- The whole body scan Data will stored with a digital interface like PACS.

Legal Status in India

- Autopsy Conducted under Section 174 & 176 of The Code of Criminal Procedure, 1973
- No Section in IPC, CrPC and IEA describes the manner an Autopsy will be conducted.
- Digital Autopsy report will be Valid in Court;
- Sec. 45 of the Indian Evidence Act deals with the Expert opinion related to the interpretations of Radiological Investigations including X-ray, CT and MRI admissible as report, subjected to cross examination
- Section 65B of the Indian Evidence Act relates to admissibility of electronic records as evidence in a Court.

AIIMS SET-UP

12/4/2019
AIIMS and ICMR working on developing 'virtual autopsy' technique, Harsh Vardhan says
AIIMS and ICMR working on developing 'virtual autopsy' technique, Harsh Vardhan says
The medical institutes are working on a technique that allows doctors to conduct postmortems without dissecting the body.
PTI
3 December, 2019 5:49 pm IST



Union Health Minister Harsh Vardhan at Parliament house | Photo: Praveen Jain | ThePrint



Myths Vs Realities In Indian Scenario

Myths:

- It will replace conventional Autopsy
- Cost Effectiveness
- Radiologist is required for reporting
- A CT film has to be read and reported

Reality:

- It is the same Autopsy, methods of conventional autopsy will not be discarded
- Only internal dissection will be limited, that too on case to case basis.
- Advanced technology will be used in conventional Autopsy
- Autopsy surgeon will have more detailed study of the case by additional radiological element in autopsy.
- 16 slice CT Scanner with accessories with 5 years warranty: 3.30 cr.
- Health of doctors and the mortuary assistants is important and valuable
- New technology of CT Scanning 60% less (Nanonex Israel Technology).
- Only required for training, consultation and academic collaboration
- Forensic doctors will do a complete examination of CT data in 3D Approach.
- No Automatic Film will be generated.
- Doctor will select the images which he want include in his report.
- He may write only his finding and may not include any image also

Challenges

- Inertia.
- Additional Work.
- Hostile Colleagues.
- Fear of Failure /Unexplored Domain.
- Fear of unknown.
- Un-Interested Radiologists
- Collaboration.
- Lack of Finances:

Way forward

- Start reading books.
- Basic CT reading experience/Training .
- Dual Approach
- Use Radiologist for training, consultation and academic guidance but not as solitary reporting Person .
- Identify Interested Individual/ Departments/ Authorities.
- Establish 2-3 Centers at state level.
- Procure CT Machines.

COST –NEVER A FACTOR BUT WILL POWER IS