ANIL AGGRAWAL'S
Internet Journal of
Forensic Medicine and Toxicology
The world's first online journal devoted entirely to forensic medicine and toxicology · Published 1 January and 1 July

VOL. 2, NO. 1 · JANUARY – JUNE 2001
Downloaded from www.anilaggrawal.com · ISSN 0972-8074 (Online) · https://www.anilaggrawal.com/ij/vol_002_no_001/theses/001/3_m_m.html

Material and Methods

The material for the present study comprised of dead bodies brought to the mortuary at Allahabad, Pratapgarh and Fatehpur district for medico legal autopsy, during the period of 1 year extending from 16th April 1997 to 15th Apri1 1998. The reported dowry deaths numbered 151.

Maximum cases of dowry deaths belonged to 'bride burning' as where the cause of death was burn whether homicidal or suicidal, and burn might be ante mortem of postmortem, which could be detected on careful examination. The asphyxial deaths especially due to hanging had other unique distinguishing features. Same hold true for drowning cases as well. In case of poisoning we could get special features of specific poison used for the purpose. The other causes of dowry death (different from mentioned before) could elicit the features depending upon method used.

METHOD

1. HISTORY

Regarding the history of a case of dowry death the following points especially have been considered.

P.M. No. Date

Name Age

Name of husband

Resident of (R/o)

Marital status

Socio-economic status

Educational status

Place of death

Type of family

Family Size

As we go deeply into the investigation of case, to get more and more clear picture, history should be obtained from

i) Husband of victims

ii) Relatives of victims of parental side

iii) Relatives of victims of In-laws side

iv) Neighbors of In-laws

v) Friends of victims

In case of death due to burn special emphasis on the following points have been given.

(i) Place of occurrence

(ii) Surroundings of victim in order to favor death due to burn (Kerosene Oil, Petrol, Cooking gas etc)

(iii) Nature of death

(iv) Date and time of receiving burn injuries (v) Whether the victim was admitted in the hospital or not.

(vi) Any associated illness.

In case of death, due to drowning special emphasis on the following points have been laid on - (i) Time lapsed between body recovered from water and postmortem done.

(ii) Place of occurrence.

In case of deaths due to asphyxia by means of constriction of neck, following points have especially been considered -

i) Method of compression of neck

ii) Material used for compression of neck

iii) Place of occurrence

iv) Nature of death

In case of deaths due to poisoning following points have been considered-

i) Patient profile

ii) Time interval between ingestion and hospital arrival.

iii) Mode of poisoning

iv) Symptoms and signs at admission

v) Course during hospital stay

vi) Amount ingested

vii) Reasons for consuming it.

viii) The time elapsed between ingestion and death.

ix) Presence of any empty container from which poison has been taken.

2. EXTERNAL EXAMINATION

A detailed external examination of the body is done and following points are noted in case of deaths due to burns - (a) Condition of cloth.

(b) Condition of hairs, especially of scalp hairs.

(c) **Extent of Burn:** " Rule of Nine" is applied i.e. 9% for head, 9% for each upper extremity , 18% for front of trunk, 18% for back of trunk, 18% for each lower extremity , 1% for genitalia. Extent of burn can also be measured by "Rule of Palm" i.e. the person's palm area represents 1% of body surface.

1. **Depth of Burn :** For this universally practiced method, based on forensic and clinical literature , is used i.e.

(i) ***First degree burn***: Only outer layer of skin is involved with predominant vascular reaction, as the dilatation of arterioles and capillaries, therefore the skin is red, swollen and painful.

1. ***Second degree burn***: It results in detachment of epidermis from the dermis. It typically shows blisters.
2. ***Third degree burn :*** It involves entire thickness of skin i.e. epidermis and dermis both with massive necrosis.

(iv) ***Fourth degree burn:*** Results in charring of body surface with destruction of skin and underlying tissues such as muscle and even bone.

(e) **Attitude of body:** whether pugilistic attitude present or absent.

(f) Any other external marks of injuries

(g) Rigor mortis is seen, if present

(h) Postmortem staining.

(i) Whether the burn is ante mortem or postmortem.

(j) Presence of any smell of kerosene oil or any other inflammable substance.

In burn cases visual examination of dead body ante mortem burn shows " Line of redness" and "Vesicles" which contains albuminous fluid and chlorides, while vesicles in postmortem burns contain air only. Due to presence of carboxyhaemoglobin in blood of ante mortem burn cases, blood is found thick (due to haemoconcentration) and cherry red (due to carboxyhaemoglobin). A blood level more than 10% carbon monoxide in a nonsmoker may be considered as evidence of smoke inhalation and consequently that the victim was alive after the fire started.

In case of deaths due to drowning special emphasis on following points are observed :

i) Condition of clothes.

1. Presence of froth at mouth and nostrils.
2. Condition of eyes and tongue.
3. Cadaveric spasm -presence of mud and weeds in the-"
4. Cyanosis
5. Cutis anserina
6. Injury marks on the body
7. Rigor mortis

8. Post mortem staining.
9. Decomposition.

In case of asphyxial deaths, following points are noted -

1. External evidence of compression, such as ligature marks, bruises, nail marks or any other injury around the neck.
2. Condition of eyes, tongue, external orifices and dribbling of saliva.
3. Cyanosis and petechial haemorrhage.
4. Evidence of struggle.

In case of asphyxial deaths especially in ante mortem hanging we get ligature mark obliquely, noncontinuous and high up in the neck With ecchymosis in underlying soft tissue (under ligature mark). But in post mortem hanging we get ligature mark continuous and low down in the neck, without ecchymosis in underlying soft tissue.

In case of deaths due to poisoning, special emphasis on following points are laid :

i) Smell from mouth.

ii) Condition of eyes, teeth, tongue, nails, etc.

iii) Presence of froth at mouth.

iv) Cyanosis or any other change in colour of body.

3. Internal Examination

The internal examination of the dead body is carried out :

(a) To find out any evidence of black soot in trachea and bronchi as suggestive of bum.

(b) Any evidence of injury to muscles of neck, hyoid bone, trachea, oesophagus, arteries, veins etc in favor of death due to constriction of neck.

(c) Lungs, Brain, Stomach, Liver, Kidney and Spleen are specially looked for congestion and any other abnormal findings.

(d) Urinary bladder is examined to see whether full or empty .

(e) Uterus is examined to see whether gravid or non-gravid.

CHEMICAL EXAMINATION

In cases of death due to poisoning the test samples of body tissues and fluids such as blood, liver, spleen, kidneys, stomach and small intestine with their contents, lungs, heart, brain and muscles etc are preserved and forwarded to Forensic Science laboratory for chemical analysis.

Download this chapter as the original Word document (32 kb)

Back to the thesis page