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## Medicolegal Aspects of Trauma

**Pratap Chandra Sarmah**

Professor & HOD of Forensic Medicine, SMIMS, Gangtok, Sikkim

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### **Introduction:**

Apart from diseases, trauma occupies major part causing deformity and death of persons. Trauma, injury, wound, hurt are like terms which indicate pain, disease, deformity or death caused by extraneous force or agent. **All Doctors irrespective of speciality should know to evaluate trauma and submit the injury certificate /report.**

### **Trauma includes:**

- (a) **Physical trauma** – which involves the body of person and needs to be evaluated by Doctor.
- (b) **Mental trauma** – effects the mind of person which is to be evaluated by Psychologist considering the circumstantial evidence. Mental trauma cannot be evaluated by Doctor due to lack of parameter to assess mental injury.

### **Legal Definition:**

**Injury** –denotes ‘any harm whatever illegally caused to any person in body, mind, reputation or property’ (sec.44 I.P.C.).

**Hurt** – ‘whoever causes bodily pain, disease or infirmity to any person is said to cause hurt’ (sec. 319 I.P.C.).

**Medical definition** – Injury is a break / solution of the natural continuity of any of the tissues of living body.

Difference between legal definition and medical definition is observed as follows:

Accidental injury and suicidal injury are not included in legal definition. Moreover harm in mind, reputation, property does not fall within the purview of Doctors.

### **Classification of injury to be followed as per legal classification:**

- a. **Simple hurt/ injury** – has not been defined by law, so any injury if not grievous is simple.

**b. Grievous hurt as per sec. 320 I.P.C. includes the followings:**

**First:** Emasculation – i.e, loss of masculine vigour.

**Secondly:** Permanent privation of the sight of either eye.

**Thirdly:** Permanent privation of the hearing of either ear.

**Fourthly:** Privation of any member or joint.

**Fifthly:** Destruction or permanent impairing of the powers of any member or joint.

**Sixthly:** Permanent disfiguration of the head or face.

**Seventhly:** Fracture or dislocation of a bone or tooth.

**Eighthly:** Any hurt which endangers life or which causes the sufferer to be during the space of twenty days in severe bodily pain, or unable to follow his ordinary pursuits.

Ordinary pursuits include activities like going to toilet, taking food, dressing / undressing etc without other's help and not reading paper, going to market etc.

**Medical classification of injury is done as per causative agent as follows:**

1. **Mechanical injuries** – caused by force and includes – abrasion / contusion (Bruise) / Laceration / Incised (cut)/ stab (punctured wound)/ Fracture or dislocation of bone or tooth/ Fire arm injuries and Explosion injuries.
2. **Thermal injuries** :  
Caused by cold – Frost bite / Trench foot.  
Caused by Heat – burns caused by flame, heated object / scald – caused by steam, hot liquid. Liquid burns are more harmful; steam inhalation may cause immediate death due to oedema glottis.
3. Caused by **Corrosive substance** – concentrated acid and alkali, corrosive salt
4. **Caused by Electricity**, lightning, X-rays, Radioactive substances.
5. Caused by **Physical agents** – excessive light, sound.
6. **Barotrauma** – sudden change of barometric pressures causes Caisson disease (bends, decompression syndrome).

**Injury Report** – Injury report to be furnished in schedule form provided by the police officer (I/O) at the time of sending the requisition to Doctor as follows:

1. Name of alleged victim/Age/Sex/Address/Occupation.
2. Marks for identification (1), (2) – 2 two marks should be recorded as one similar mark may be present in another person.
3. Signature /thumb impression – thumb impression is best as surest data for identification.
4. Consent for examination preferably informed consent in written i.e, consent given after understanding the fact.
5. Female attendant's signature.
6. Referred by P.S/O.P vide letter No.....
7. Brief case history:

**Injuries are described as follows:**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sl. No	Nature of injury,	Size of injury in cm. i.e, (length x breadth x depth)	Situation on body	Simple or grievous	Kind of weapon or how caused, blunt/sharp force, fire arm etc	Age of injury In hours / days	Remarks, observation, investigation (x-ray, C.T scan etc), referred for further treatment.
1.	abrasion,						
2.	bruise,						
3.	cut, burns etc.						
So on							

Abrasion and Bruise are recorded measuring the length and breadth.

Remark should also include following information, level of consciousness i.e, conscious, drowsy, unconscious which is necessary for **Dying Declaration**.

Evidence of intoxication i.e, smell of alcohol etc, as **minimum alcohol consumption may produce drunkenness following head injury, fracture of long bone.**

**Dying Declaration** –recorded or advised police to arrange for dying declaration, if time permits.

Second time examination is needed after 1-2 months to know the after effect/ complication of injury.

Signature of Doctor with date  
Full Name & Designation  
& Seal

**Precaution necessary for Doctors:**

1. Prompt response to trauma case – delay of attending increases mortality and morbidity. In case of accident, any Doctor irrespective of speciality need to attend the trauma case as **right to selection of patient does not exist**.
2. First Aids – to ensure air, breathing i.e, respiration, circulation, stop hemorrhage, support to fracture parts and analgesic for pain.
3. To refer the patient to suitable place for treatment.
4. Level of consciousness to be recorded i.e, for dying declaration, consent for treatment.
5. Informed consent (consent taken after explaining the procedure) to be taken.
6. Inform to nearby police in suspected foul play (firearm injury, explosion, stab, dowry, battered baby case etc) (Cr.P.C 39).
7. **Dying declaration** - to be recorded / advised to nearby police for recording it,if time permits. In dowry case relatives should not present in recording dying declaration to avoid their influence. **Doctor should certify that patient was mentally sound i.e, compose mentis.** Declaration should be sent to Magistrate in sealed envelope keeping the receipt and not to Police. Non recording dying declaration is a lapse in service which is viewed seriously by the judiciary.
8. **Careful handling of trauma case**, specially in head injury (to avoid further damage), fracture of long bone may cause fat embolism and sudden death due to careless handling.

9. Portable x-ray machine should be use for taking x-rays of patient in bed. Otherwise treating Doctor may have to face the case for medical negligence.
10. Evidence of intoxication if present as **minimum alcoholconsumption may produce drunkenness after head injury and fracture of long bone.**
11. **Observation of head injury cases for 24** hours even in absence of external injury as patient may be in lucid interval. Disagreed patient can leave hospital only after writing that he/she leaves hospital against medical advice.
12. Necessary investigations – X-rays, CT scan etc, for abrasion of forehead, chest, stab, firearm injury, explosion injury, battered baby. Whole body x-rays are essential in firearm, explosion and battered baby.
13. **No probing to be done for depth of stab injury, stab must be treated in the OT recording its depth.**
14. Second time examination after 24 hours is necessary to detect deep seated contusion.
15. **Second time X-ray after 14 days reveals fissure / linear facture from the shadow of callus.**
16. **It is** necessary to mention whether all injuries were sustained at same time or in different times.
17. **Out of** various injuries which one is lethal need to be mentioned.
18. To preserve trace evidences – strains of blood, semen, adherent particles etc on body or clothes.
19. Case history should be correlated with the finding of wounded person to reconstruct the event.
20. Injury report to be given after second time examination preferably 1 ½ to 2 months following trauma to know the after effect/complication of injury.
21. Records must be preserved with investigation reports – investigations are property of hospital and patient gets copy of investigations.
22. Small bruise, abrasion, scratch, nail marks are significant for defence wound, rape, throttling etc.
23. Best and suitable treatment should be provided consulting with expert whenever necessary.
24. No death certificate to be issued if Death occurs after trauma, police to be informed.

**Expert's opinion is necessary for:**

1. Amputation in crush injury to prevent crush syndrome, in emergency it can be done with 2 Doctors' Opinion.
2. Confirmation of diagnosis in head injury, concealed injury.
3. Rape trauma syndrome to be treated with help of Psychiatrist, psychologist.
4. Post traumatic stress disorder is also treated like rape trauma syndrome case.
5. Trauma scores evaluation of disability for compensation as per workmen's compensation act 1923.
6. Relation between trauma and tumour for compensation in the light of Ewing's Postulate i.e, history of trauma, incubation period after trauma, evidence of healthy tissue prior to trauma.

**Defence for Negligence charge**– negligence charge is not applicable in first aid as Doctor patient relationship is not established. However fulfillment of following conditions is essential

- a. Informed consent i.e, consent given after understanding the fact.
- b. Preservation of case record with investigations.
- c. Contributory negligence which helps Doctor in civil negligence case but not applicable in criminal negligence.
- d. Vicarious responsibility –i.e, liability of senior due to fault of junior; it is common in hospital treated patients.
- e. Therapeutic misadventure.
- f. Better to compromise the negligence case outside the court.

**Summary and conclusion:**

Doctors have to deal with Trauma / injury cases in day to day practice. It is utmost essential to confirm diagnosis by carrying out necessary investigations and to provide treatment **with reasonable skill and care**. It is worthy to note that wound / injury sustained in **perimortem period** i.e, immediately before or after death, say within quarter of an hour cannot be distinguished. Even enzyme Histochemistry is not reliable to confirm ante mortem or post mortem injury sustained during perimortem period. In such situation, circumstantial evidence, gaping of injury, changes in margins, amount of bleeding, adherence of blood in wound and over all experience of the Doctor is counted in such cases.

It is desirable for the Doctor to be familiar with provisions of law which are relevant for medical practice to avoid/ minimize probable legal problems such as mentioned below:

**Sec. 39 Cr. P. C.** – Every person, aware of the commission of or of the intention of any other person to commit any offence punishable under I.P.C shall forthwith give information to the nearest Magistrate or Police officer of such commission or intention.

**Sec. 176 Cr. P. C.** – Omission to give notice or information to public servant by person legally bound to give it may lead to simple imprisonment for 1 month or fine Rs. 500/- or both. Punishment may extend to six months imprisonment or with fine which may extend to Rs. 1000/- or with both.

**Sec. 32 I.E.A.** – Cases in which statement of relevant fact by person who is dead or cannot be found etc is relevant, i.e, when it relates to cause of death when the statement is made by a person as to the cause of his death.

**Sec. 45 I.E.A.** – Opinion of expert, when to the court has to form an opinion upon a point of foreign law or of science or art; or as to identity of handwriting or finger impressions, the opinions upon that point of persons specially skilled in such foreign law, science or art, or in question as to identity of handwriting or finger impressions are relevant facts. Such persons are called experts.

**Sec. 46 I.E.A.** – Facts bearing upon opinions of experts – Facts, not otherwise relevant, are relevant if they support or are inconsistent with the opinions of experts, when such opinions are relevant.

**Sec. 52 I.P.C.** – Good faith – Nothing is said to be done or believed in “Good faith” which is done or believed without due care and attention.

**Sec. 53 Cr.P.C.** – Examination of accused by medical practitioner at the request of police officer – When there is reasonable ground for believing that an examination of accused person will afford evidence as to the commission of an offence, it shall be lawful for a registered medical practitioner acting at the request of I/O to examine such arrested person and to use such force as it is reasonable for the purpose. In case person is a female, examination shall be made only by or under the supervision of a female registered medical practitioner.

**Sec. 54 I.P.C.** – deals with examination of arrested person by medical practitioner at the request of the arrested person.

**Sec. 80 I.P.C.** – Accident in doing a lawful act – nothing is an offence which is done by accident or misfortune, and without any criminal intention or knowledge in the doing of a lawful act in the lawful manner by lawful means and with proper care and caution.

**Sec. 87 I.P.C.**– Act not intended and not known to be likely to cause death or grievous hurt, done by consent – Nothing which is not intended to cause death or grievous hurt, and which is known by the doer to be likely to cause death or grievous hurt, is an offence by reason of any harm which it may cause, or be intended by the doer to cause, to any person, above 18 years of age, who has given consent.

**Sec. 88 I.P.C.** - Act not intended to cause death, done by consent in good faith for person's benefit.

**Sec. 89 I.P.C.** – Act done in good faith for the benefit of child or insane person, by or by consent of guardian – Nothing which is done in good faith for the benefit of a person under 12 years of age, or of unsound mind, by or by consent, either express or implied, of the guardian, or other person having lawful charge of the person, is an offence by reason of any harm which it may cause, or be intended by the doer to cause or be known by the doer to be likely to cause to that person.

**Sec. 304 I.P.C.** – Punishment for culpable homicide not amounting to murder – Whoever commits culpable homicide not amounting to murder, shall be punished with imprisonment for life, or imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine, if the act by which the death is caused is done with the intention of causing death, or of causing such bodily injury as is likely to cause death.

**Sec. 304A I.P.C.**- Causing death by negligence – Whoever causes the death of any person by doing any rash or negligent act not amounting to culpable homicide, shall be punished with imprisonment of either description for a term which may extend to two year or with fine, or with both.

**Further Reading:**

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**Key Words: Legal Trauma, Negligence in Trauma**

## Authors Column

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**Dr. Pratap Chandra Sarmah, DFM, MD, LL.B, ICFMT, FIAFM. Professor & HOD of Forensic Medicine & Toxicology, SMIMS. Son of Late Chandinath Sarmah and Late Parvati Priya Devi. Born on 1<sup>st</sup> March 1945. Permanent address: House No. 41/57, Namgarh Path, Dispur, Gauhati-6, Assam. Service experience Total-44yrs, out of which 6yrs Rural health service and 38yrs as faculty of Medical Colleges. Examiner and paper setter for undergraduate & post graduate, Ph. D guide. Resource person for Doctors' Training, North East Judicial Officers' Training Institute, Assam. Recipient of fellowships- FICFMT, FIAFM & Excellence Award. Publication & Presentation of papers in conferences total -40**

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