INJURY OR WOUND CERTIFICATE

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**DEFINITION**

- An injury is any harm, whatever illegally caused to any person in body, mind, reputation or property (sec. 44, I.P.C)
- A wound or injury is a break in the continuity of any of the tissues of the living body.
CLASSIFICATION

MEDIAL

I. Mechanical injuries
   A) Due to blunt force- abrasions, contusions, lacerations, fractures and dislocations
   B) Due to sharp force- incised wounds, chop wounds, stab wounds,
   C) Firearms- firearm wounds.

II. Thermal injuries
   a) Due to cold – frost bite, trench foot, immersion foot,
   b) Due to heat- burns, scalds
CLASSIFICATION

III. Chemical injuries-corrosive acids, corrosive alkalis

IV. Physical – electrical, lighting, X-rays, radioactive substance etc.

V. Explosives

LEGAL

1. SIMPLE
2. GRIEVOUS.
CLASSIFICATION

- MEDICO LEGAL
  1. SUICIDE
  2. HOMICIDE
  3. ACCIDENT
  4. FABRICATED
  5. DEFENCE
BLUNT-FORCE INJURY

- Blunt-force trauma is that trauma not caused by instruments, objects or implements with cutting edges. The nature of the force applied may include blows (traction, torsion and oblique or shearing forces). Blunt force trauma may have a number of outcomes:
  - tenderness
  - reddening (erythema)
  - swelling (oedema)
  - bruising (contusion)
  - abrasions (grazes)
  - lacerations
  - fractures
ABRASIONS

- An abrasion or graze is a superficial injury involving (generally) outer layers of skin without penetration of the full thickness of the epidermis.
- They are caused when there is contact between a rough surface and the skin, often involving a tangential ‘shearing’ force.

TYPES

- Scratches (linear abrasion):- abrasion with length but no significant width.
  
  POINT SCRATCH
ABRASION TO RIGHT FACE AND CHEEK CAUSED BY KICK FROM SHOE FOOT. LINEARITY OF ABRASION ASSISTS IN DETERMINING DIRECTION OF MOVEMENT.
Linear abrasions caused by fingernail scratching on torso.
MULTIPLE FINGERNAIL SCRATCHES WITH 
WHEAL 
REACTION AND SUPERFICIAL ABRASIONS.
Deeper abrasions caused by fingernails.
Grazes (sliding, scraping or grinding abrasion):- occur when there is a movement between the skin and some rough surface in contact with it.
Deep and extensive abrasion (‘gravel rash’) caused by contact with road surface after motorcycle accident.
VARIABLE DEPTH ABRASIONS (GRAZES) CAUSED BY IMPACT AGAINST CONCRETE SURFACE.
MLI

- Site of impact and direction of the force.
- Only external signs of serious internal injuries.
- Patterned abrasions are helpful in connection with the wound with the object which produced them.
- Age of the injury – alleged time of assault
- In open wounds, dirt, sand, dust, grease are usually present - connects the injuries to the scene of crime
Character and manner of injury may be known from its distribution.

- in throttling: crescentic abrasions due to fingernails are found on the neck
- in smothering: abrasions may be seen over mouth and nose
- in sexual assault: abrasions may be seen over private parts
- abrasion on the face of an assailant may indicate a struggle
AGE OF THE ABRASION

Fresh: bright red-
12 to 24hr:-lymph and blood dries up leaving a bright red scab.
2-3 Days reddish brown scab
4-7 Days dark brown to brownish black scab
After 7 days scab dries, shrinks and falls off leaving a depigmented area underneath which gets gradually pigmented.
A contusion is an effusion of blood into the tissues, due to the rupture of blood vessels (veins, venules and arterioles) caused by blunt trauma, such as fist, stone, stick, whip, boot etc.

Types of Contusion.
1. Patterned Bruising:-is the one in which the size and shape mirror a portion of the object which caused it.
PATTERNED BRUISE – INTRADERMAL BRUISING CAUSED BY STAMPING ON BACK WITH TEXTURED CLOTHING INTERVENING.
A pattern was discovered on the decedent’s face.
Grip marks from fingers on assailant
bruises from grip and abrasions from fingernails seen on upper inner arm.
MLI

- Patterned bruises make connect the victim and the object or weapon example: Chain ligature, vehicle.
- Age of the injury can be determined by the color changes
- Degree of violence may be determined from their size
MLI

- Character and manner of injury may be known from its distribution.
  - Bruising of the arm may be a sign of restraining a person
  - Bruising of the shoulder blades indicate firm pressure on the body against the ground or other resisting surface
  - In manual strangulation-position of the assailant
  - Bruising of the thigh especially inner aspect, and genitalia indicates rape
  - In open wounds, dirt, sand, dust, grease are usually present- connects the injuries to the scene of crime
AGE OF THE CONTUSION

- At first: red
- First few hours to 3 days: Blue
- 4th day: Bluish black to brown. (Haemosiderin).
- 5-6 days: Greenish. (Haematoidin)
- 7-12 days: Yellow (Bilirubin)
- 2 weeks: Normal.
Laceration

Laceration are tear or splits of skin, mucous membrane, muscle or internal organs produced by application of blunt force to broad area of the body, which crushed or stretched tissues beyond the limits of their elasticity.

Also called tears or ruptures.

Types:
1. Split Laceration
2. Stretch Laceration.
3. Avulsion (Shearing) Laceration.
4. Tears Laceration.
5. Cut Laceration.
The direction from which a blow to the head came can be determined by “undermining.” The side of the wound which can be lifted off the bone is the undermined side. In this photograph, the ruler is placed under the scalp on the left side. This is the undermined side, indicating the blow came from the right side.
He died from a blow to the abdomen which caused lacerations of the liver. It is important to note there were no external signs of injury.
LACERATION TO EAR FOLLOWING IMPACT WITH BASEBALL BAT – NOTE IRREGULARITY OF LACERATION
The type of laceration may indicate the cause of the injury and the shape of the blunt weapon.

Foreign bodies found in the wound may indicate the circumstance in which the crime has been committed.

- Violent, uncoordinated muscular contraction can produce disruptive tissue stresses which produce fractures, lacerations of tendons and muscles
- Suicidal lacerations are situated on exposed parts of the body
- Homicidal lacerations are usually seen over head

Age of the injury
AGE OF LACERATION WOUND

Age determination of laceration is difficult unless there are clear signs of healing, such as granulation tissue, fibroblast ingrowth or organizing infiltrate.

Ante mortem lacerations show bruising, eversion, gaping and blood staining of margin greater bleeding and vital reactions.
**Incised wound**

- An incised wound is a clean cut through the tissues caused by sharp edged instruments which is longer than it is deep.

- **Age of Wounds.**
  1. Fresh: Hematoma formation
  2. 12 Hours: The edges are red, swollen and adherent with blood and lymph (leucocytic infiltration)
  3. 24 Hours: A continuous layer of endothelial cells cover the surface and overlying this a crust or scab of dry clot is seen.
Indicate the nature of the weapon (Sharp-edged)
Age of the injury
Idea about the direction of the force
Position and character of the wound may indicate mode of production i.e., suicide, accident, homicide.

- SUCIDAL: wound of extremities are usually found on flexor surface of wrist, outer aspects of forearm, the front and outer side of thighs, in front of the abdomen and chest (usually on the left side and directed downward and inward)
- A person who commits suicide usually exposes the portion of the body to be incised
MLI

- HOMICIDAL: usually multiple and can occur in any part of the body.
- Incised wound situated on the back, or in a position as cannot be easily reached by a suicide, are homicide.
- ACCIDENTAL are common in the home or workshop, and are minor nature. commonly seen over hands.
SLASH-TYPE WOUND TO FOREARM: WOUND IS WIDER THAN IT IS DEEP.
Incised wound to neck caused by use of knife
**CHOP WOUNDS**

- These are deep gaping wounds, caused by blow with the sharp cutting edge of a fairly heavy weapon like an axe, sword, broad heavy knife or meat cleaver.
- The dimensions of the wound correspond to cross section of penetration blade.
Most of the injuries are homicidal and usually inflicted on exposed portions of the body like head, face, neck, shoulder and extremities.

Accidental injuries are caused by power fans, ship or airplane propellers which may lacerate soft tissues extensively or amputate part of the body.

Suicidal chop injuries are very rare.
**STAB WOUND**

- Stab wound is produced when force is delivered along the long axis of a narrow or a pointed object such as knife, dagger, nail, needle, spear, arrow etc., into the depths of the body.
- The wound is deeper than its length and width on the skin.
The shape of the wound indicate the class and type of wound which may have caused the injury.

Depth of wound will indicate the force of penetration.

Direction and dimensions of the wound indicate the relative position of the victim.

Age of the injury.

Position, and number and direction of the wound may indicate manner of production i.e., suicide, accident or homicide.

If broken fragment of weapon is found it will identify the weapon or will connect an accused person with the crime.
STAB WOUNDS. THE WOUND ON THE LEFT HAS ONE BLUNT ANGLE AND ONE SHARP ANGLE (DARKER ARROW).
Multiple stab wounds to the chest, caused by the same knife. This is an “overkill.”
According to S. 320, I.P.C. any of the following injuries are grievous.

1. Emasculation (loss of potency).
2. Permanent privation (loss) of sight of either eye.
3. Permanent privation of hearing of either ear.
4. Privation of any member or joint.
5. Destruction or permanent impairing of the power of any member or joint.
6. Permanent disfiguration of the head or face.
7. Fracture or dislocation of a bone or tooth.
8. Any hurt which endangers life, or which causes the victim to be in severe bodily pain, or unable to follow his ordinary pursuits for a period of twenty days.
I. EMASCULATION

- Loss of virility or loss of sexual power.
- Inflicting injury to the scrotum
- Squeezing the scrotum to the extent resulting in permanent damage & sterility
- Spinal injury interfering with erectile function of penis
II. PERMANENT PRIVATION OF SIGHT OR EITHER EYE

- Gouging out of the eyes using an object
- Poking the eyes.
- Inflicting chemical injury by use of acids/alkalis.

Even when full restoration of sight through surgery is possible e.g., Corneal opacity due to trauma correctable by keratoplasty
Chemical Injury to the Eye

Limbal ischemia, epithelial necrosis, superior conjunctival necrosis, corneal revascularization, granuloma pyogenicum, symblepheron
III. Permanent privation of hearing of either ear

- Injury to external ear with/without disfigurement
- Rupture of tympanic membrane by blow or blast.
- Blow to head injuring the middle or inner ear.
- Pouring a liquid to the ears
- Poking the ear by an object/weapon
IV. PERMANENT PRIVATION OF ANY MEMBER OR JOINT

- “membrum pro membro” limb for a limb/tooth for a tooth
- Include organs other than limbs and its parts
- Injury to limb/or its part/finger and its parts rendering them non functional.
- Loss of an limb is not equated with a loss of finger/toe or a terminal phalanx, but technically still qualified for a grievous injury.
V. DESTRUCTION OR PERMANENT IMPAIRING THE POWER OF ANY MEMBER OR JOINT

- Functional loss
- Is no less serious than anatomical loss
- Restoration of function by prosthesis to a crippled limb is more difficult
- Hence surgical correction/rehabilitation not to be accounted.
VI. PERMANENT DISFIGURATION OF HEAD OR FACE

- Facial mutilation
- Altered appearance of person
- No loss of function or incapacitation
- Disfiguration affecting the quality of life accounted.
- Disfiguration plus disability possible if eyes/mouth affected.
- Laceration of scalp is treated as simple injury, scar formed does not cosmetic disfigurement which may be covered by hair.
VII. FRACTURE OR DISLOCATION OF BONE OR TOOTH

- External fracture
- Only radiological visible fracture.
- Functional impairment may or may not be present. Hence hairline fractures included.
- Outer table or cortical portion.
- Consideration is the pain and disability resulting by fracture.
- A loosened tooth without dislocation is a grievous injury.
Not necessary that a bone should be cut through and through or that the crack must extend from the outer to the inner surface or that there is a displacement of any fragment of the bone. If there is a break by cutting or splintering of the bone or there is a rupture or fissure in it, it would amount to a fracture within the meaning of the clause (7) of S.320 IPC.

VIII. HURT WHICH ENDANGERS LIFE

- Imminent/impending threat to life
- Sufficient to cause death in ordinary course of nature
- Possibility of death.
- No bearing of surgical intervention/resuscitative measure.
VIII. **Severe Bodily Pain for 20 Days**

- Pain is subjective
- Might/might not pose immediate danger to life
- No quantum of pain defined by law.
- Pain inducing shock may be life threatening.
- Duration along with severity has to meet the requirements of the clause
INABILITY TO FOLLOW ORDINARY PURSUITS FOR 20 DAYS

- Normal daily activities from the time he wakes up till he retires in the night.
- Do not refer his occupation since it may involve convalescing period too.
**SIMPLE INJURY:**

*Neither extensive nor serious and which heals rapidly.*

**Punishment for voluntarily causing hurt:**

- Imprisonment up to one year, or with fine or both (S. 323, I.P.C.)

**Punishment for voluntarily causing grievous hurt:**

- Imprisonment up to seven years and also fine (S. 325, I.P.C.)
DANGEROUS WEAPON

- According to S. 324 and 326, I.P.C, dangerous weapons or means include any instrument for shooting, stabbing or cutting,
- or any instrument, which used as a weapon of offence, is likely to cause death;
- fire or any heated substance;
- poison or any corrosive substance;
- explosive substance;
- any substance which is harmful to the human body to inhale, to swallow, or to receive into the blood, or by means of any animal.
ASSAULT

A Male Mallappa aged 40 years was brought to casualty with H/O assault.

IDENTIFICATION MARKS:-

1. A lineate scar 4 cm in length, white and glistening not adherent, smooth, not tender present on the front of right forearm 8 cm. Above the fold of wrist joint.
2. A black mole 2 mm in diameter, circular, not hairy, not present on the back of distal phalanx of left middle finger.

Issue a wound certificate.

The following injuries were found on examination.

1. Abrasion over the tip of nose-05 cm x 0.5 cm. The wound is covered by a bright scab.
2. Laceration over right cheek bone 1 cm x 0.5 cm x 0.25 cm. The edges are red and swollen and adherent.
3. Fracture of terminal phalanx of right thumb.
INJURY

Mr. Khaja aged about 40 years came to casualty department with the history of assault by his neighbour during a quarrel.

Identification Marks

1. Black mole 3 mm in diameter, circular, not hairy, not raised on the left cheekbone.
2. Black mole 2 mm in diameter, circular, not raised on the front left forearm 6 cm above wrist.

ON EXAMINATION: THE INJURIES PRESENT WERE:

1. Laceration over right forehead 1 cm x 0.5 cm x 3 cm., above the eyebrows covered by a scab.
2. Dislocation of right upper incisor teeth from the sockets.
3. Contusion 4x2 cm. Over right arm on the front, 8 cm. Below the flexure of elbow joint, bluish.
4. Abrasion 3 x 2 cm over back of right chest at the level of fifth rib, 8 cm. Lateral to midline, covered with a reddish brown scab.

ISSUE A WOUND CERTIFICATE
Thank you