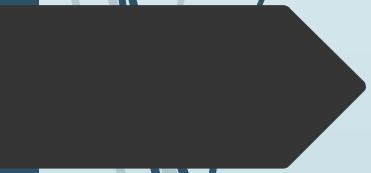


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





Learning objectives

- Define incised wound.
- Describe types of incised wound and mechanism of wound production, appearance and complications.
- Differentiate between antemortem and postmortem incised wound.
- Differentiate between incised wound and lacerated wound.
- Describe the medico legal aspects of incised wound.



Incised wound

An incised wound is an injury caused by a weapon with a sharp cutting edge when it is drawn across the skin..

Such weapons include knives or objects such as jagged portion of metal or pieces of broken glass.


The injury varies in sharpness according to the character of the weapon and the nature of stroke made.

Characteristics of incised wound

- ▶ The length of an incised wound is greater than its depth.
- ▶ The margins are clean cut and maybe straight or jagged depending on the shape of the cutting instrument but there is no bruising of the wound edges.
- ▶ All tissues are cleanly divided and as the blood vessels are cut across and not torn, bleeding is profuse, escapes freely and is not confined as in a bruise.
- ▶ Observation of the subcutaneous tissues may sometimes give a better indication of the true nature of the wound than skin margins alone.

INCISED WOUND



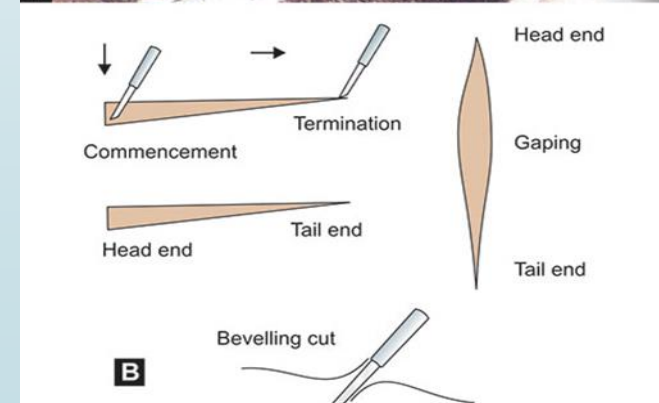
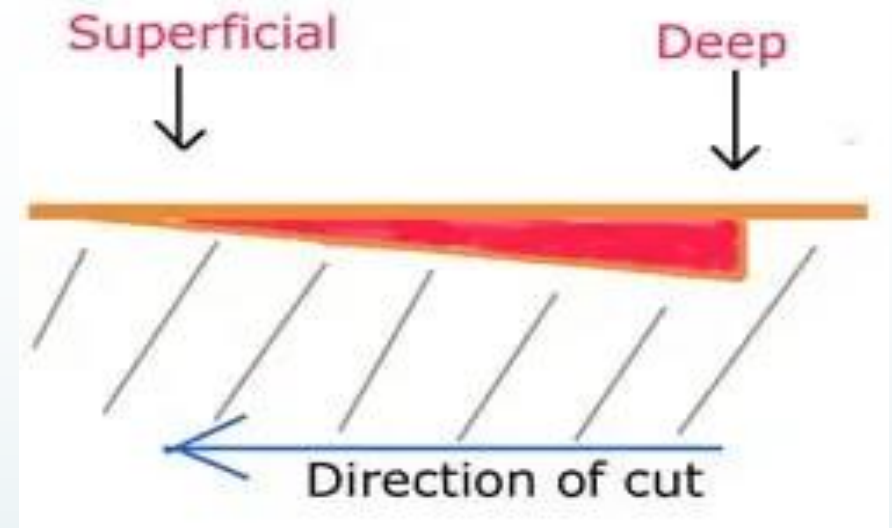
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- ▶ The incised wound is normally straight but maybe irregular if inflicted over an area of lax tissue like scrotum.
 - ▶ It is then known as a wrinkled warned
 - ▶ The term wrinkled is generally used to describe a situation where in a single sweeping cut or motion of a sharp instrument contacts the skin in more than one or several locations in sequence as it passes by.
 - ▶ This may occur if the skin is in folds or is deeply creased if the individual is obese, or if clothing intervenes.


INCISED WOUND


- ▶ Incised wounds tend to gap, owing to retraction of the skin and there is eversion of margins, specially if the wound lies across the axis of a limb.
- ▶ As a result of gaping the width of the wound is greater than the width of the blade of the weapon causing it and the wound appears spindle shaped.
- ▶ Deep incised wounds of limbs may produce permanent paralysis and wasting of muscles due to severed nerves.




- ▶ At the commencement of a cut, the tissues are divided more deeply than it's termination where the incision tails off.
- ▶ The tailing thus signifies the direction of the wound.
- ▶ If the blade of a cutting instrument enters obliquely, the margins are beveled, and one edge of the wound overhangs the other.



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- In incised wounds made by curved weapons such as a sickle, the pointed end of the instrument may make a stab or puncture wound and the blade a cut wound, sometimes with intact skin in between.
 - If the blade has a dull serrated edge, instead of a cutting edge it would cause a laceration.
 - Wounds from Jagged portion of metal or pieces of broken glass have the appearance of incised wounds, but are usually irregular and their edges are generally bruised.

- 
- Hesitation cuts derived their name from the hesitation with which these incisions are inflicted by a person intending to commit suicide by a cutting instrument.
 - He usually makes preliminary cuts before gathering sufficient courage to make a final deeper incision.
 - The preliminary cuts are also known as tentative cuts.
 - These are seen near and at commencement of the incised wound and may merge with the main incision.

- 
- ▶ Such incisions are commonly found in suicidal cutthroat and in suicidal cuts on wrists.
 - ▶ Right-handed person will hold the razor in his right hand and start incising from left to right.
 - ▶ The tailing of the wound is therefore seen on the right.
 - ▶ Hesitation cuts are not found in homicidal assaults.

A dark grey arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.

Age of incised wound

- It is assessed roughly by the stage of wound healing, grossly as well as microscopically, at the time of examining.

Gross observation

- red and with clotted blood ---- fresh wound
- blood and lymph scab formed ---- 12 hours



Microscopic observation

- ▶ epidermal cells fill the gap ----- 24 hours
- ▶ capillary network formed ----- 36 hours
- ▶ growth of connective tissue fibroblasts ----- two to three days
- ▶ parallel growth of vessels ----- three to five days
- ▶ scar tissue formed ----- seven days

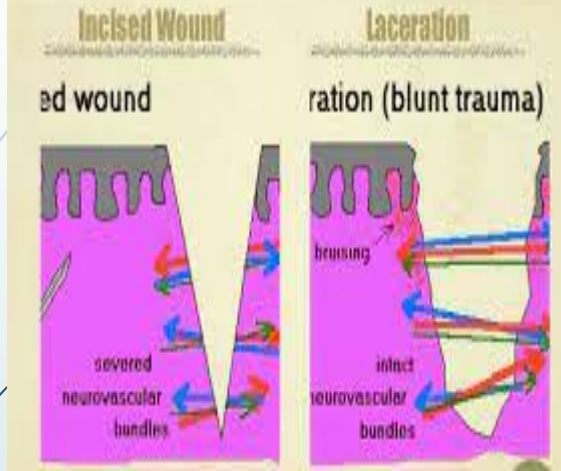
Differences between antemortem and postmortem incised wound

Characteristics	Ante mortem	Post mortem
Gaping	Present	Absent
Hemorrhage	+ve	-ve
Blood clot at the base	Present	Absent
Swelling of edges	Present	Absent
Evidence of sepsis or healing	Present	Absent
Cellular reaction	Present	Absent

Differences between incised wound and lacerations

characteristics	incised wound	Lacerated wood
cause	Sharp force trauma	blunt force trauma
edges	Ragged, irregular	Cleanly divided
Bruises, abrasions	present	absent
Depth	irregular	smooth
presence of tissue bridging	yes	no
Position	Bony prominences	Any location
presence of foreign body	yes	no
hairs	crushed	Cleanly cut,divided
Bony injury	May have associated fractures	Chipping of bones may be present
healing	2 nd degree intentin	1 st degree intention

Incised v. Laceration



Incised v. Laceration



A dark blue arrow points to the right at the top left. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.


Complications of incised wound

- ▶ Hemorrhage
- ▶ Infection
- ▶ Air embolism
- ▶ Muscle wasting and Paralysis




Medicolegal importance

- ▶ Identification of Weapon
- ▶ Manner of injury
- ▶ Time since injury

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- Incised wound may be homicidal, suicidal or more rarely accidental.
 - The identification being based upon situation, character and circumstances.
 - Generally, the presence of incised wound indicates intent and they should therefore be described very carefully.

- Incised wounds with hesitation cuts indicate suicide.
- They are usually seen at the sides of election, that is wrists, elbows; groins and throat
- The doctor treating such a case should bear in mind the possibility of prior suicidal attempts or gestures and consider the need for psychiatric help to avoid the possibility of future attempts




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- ▶ Homicidal wounds are without hesitation cuts.
 - ▶ They are often multiple and involve face neck and genitals.
 - ▶ They are usually associated with defence injuries.
 - ▶ Incised wounds of neck may cause death either from massive hemorrhage, due to cut carotid artery or from air embolism due to painful surveillance of jugular vein.



Left hand

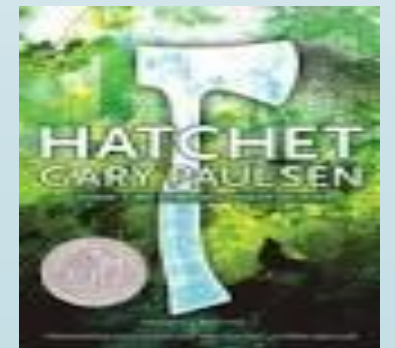


Right hand

- 
- Incised wounds may be caused accidentally by a fall on broken tumblers or glass bottles.
 - They may then appear irregular in shape but close examination with a hand lens will reveal that they are clean cut and their edges are everted.
 - In traffic injuries, accidental incised wounds that are caused by pieces of broken glass are seen on exposed body parts. Fragments of glass may be found in such wounds.
 - Incised wounds on palm indicate defence injuries.
 - Multiple superficial incised wounds on accessible parts of the body indicate fabricated injuries.

Chop wounds

- ▶ Chop wounds are caused by a blow with a moderately sharp splitting edge of a fairly heavy weapon like hatchet, an axe or a cleaver striking, at a body part overlying bone.
- ▶ The dimensions of such wounds correspond with the cross section of the penetrating blade.
- ▶ The margins are moderately sharp and the edges may show abrasions and bruising with marked destruction of underlying tissues and organs.
- ▶ If the edge of the weapon is blunt margins are irregular.






WIDTH

THANK YOU

• The width is greater than the thickness of the
edge of the object.

- 
- Chop wounds are commonly seen on exposed and easily accessible parts of the body and are accompanied by injuries to underlying bone also.
 - Majority of the such injuries are homicidal, few are accidental due to machinery and where rarely they could be suicidal.
 - Sometimes chop wounds are found on bodies recovered from water, they could be due to the propellers of passing boards or homicidal.

حِرَاكُمُ اللّٰهُ بِخَيْرٍ

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