STAB WOUND
STAB OR PUNCTURED WOUNDS

- Stab wound is produced when force is delivered along the long axis of a narrow or pointed object such as knife, dagger, chisel, sword, sickle, etc.

- Depth is more than the length and width.
WEAPONS CAUSING STAB
Types

1. Penetrating wounds
   - When they enter the cavity of body or viscus.

2. Perforating wounds
   - When the weapon enters the body on one side and comes out from the other side.
   - Known as through and through puncture wounds.
   - The entry wound is larger and with inverted edges.
   - The exit wound is smaller and with everted edges.
PENETRATING WOUND
PERFORATING WOUND
PERFORATING WOUND
Characters

1. Margins

- Edges are clean and inverted.
- The margins can be everted if wound is produced on fatty area such as abdomen and gluteal region.
- Usually there is no abrasion or bruise of the margins, but in full penetration abrasion and bruise may be found.
- The margins may be abraded and ragged if the cutting edge is blunt.
2. Length

Is slightly less than the width of the weapon up to which it has been driven in, because of stretching of the skin.

3. Width

The maximum possible width of the knife can be approximately determined if the edges of a gapping wounds are brought together.
4. Depth

- It is greater than the width and length of the external injury.

- The depth is usually equal to or less than the length of the blade that was used in producing it, but on yielding surfaces like the anterior wall, the depth of the wound may be greater, because the force of thrust may press the tissues underneath.

- The expansion and retraction of the chest is also considered.

- The mobility of the internal organ is taken into account.
The depth of the wound should be determined in the operation theatre when wound is repaired.

The position of the viscera during supine and standing position is also considered.

When tense, the abdomen is usually contracted and distance between abdominal wall and spine is reduced.

The abdominal wall is relaxed after death.

In anterior chest wall injury, the post-mortem depth is greater than it was during life, because of the collapse of lungs.
Depth of stab wound depends on

1. **Condition** of the knife: sharpness of tip, thin slender, double-edged knife
2. **Resistance** offered by the organs or tissues
3. **Clothing**
4. **Speed** of the thrust of the knife
5. **Stretched** skin or **lax** skin
5. Shape

It depends on –

- the type of implement, cutting surface
- sharpness, width and shape of the weapon
- body region stabbed, the depth of insertion
- the angle of withdrawal, the direction of thrust
- the movement of blade, cleavage direction
- the movement of the person stabbed, and
- condition of the tension or relaxation of the skin.
1. If single edged weapon is used, the surface will be **triangular** or **wedge** shaped

- The blunt end of the wound may have small splits in the skin known as **Fishtailing**.

2. If a double edged weapon is used, the wound will be **elliptical** and slit like and both angles will be sharp and pointed.
WEDGE SHAPED
3. Rounded object will produce **circular** wound.

4. Pointed square weapon may produce **crossed shaped** injury.
DIFFERENT SHAPES
6. Direction

- When knife penetrates at an angle, the wound will have a bevelled margin on one side with undermining on the other, indicating the direction from which the knife entered.
Complications

1. External haemorrhage is slight but there may be marked internal haemorrhage.
2. Infection of wound.
3. Air embolism.
4. Pneumothorax
5. Asphyxia
Concealed Punctured Wound

- These are puncture wounds caused on concealed parts of body.
- These injuries may not be detected unless searched carefully.
- Common sites are:–
  nostrils, axilla, vagina, fornix of upper eyelid, rectum, inner canthus of eye, nape of neck, fontanelles.
Examination:

- Identification and labelling of cuts and damages to clothing.
- Distribution of blood stains.
- Removal of clothing layer by layer.
- Identification and labelling of wounds.
Wounds

i) Position

ii) Location

iii) Description including margin, size, shape, ends, etc.

iv) Direction

v) Depth

vi) Trauma to viscera

vii) Foreign bodies.
Incised stab wound

- It is a wound which **starts as incised** wound but **ends with stab** wound by the sudden thrust of the blade into the body

  or

- **Starts as a stab wound** and **becomes incised** wound as the knife is pulled of the body at a shallow angle to the skin.
The external and internal appearance of a stab wound helps to give an opinion upon:

- **Dimension** of the weapon
- The **type** of the weapon
- The **taper** of the blade
- **Movement** of the blade in the wound.
- The **depth** of the wound
- The **direction** of the stab
- Amount of the **force**
Examination of the Weapon

- The length, width and thickness of the blade.
- Whether single edged or double edged
- Degree of taper from hilt to tip
- The nature of the back edge in a single edged weapon
- Any grooving, serration or forking of the blade.
- Sharpness of the extreme tip of the blade and cutting edge.
Medico Legal Importance

- The shape of the wound may indicate the class and type of weapon.
- The depth of the wound will indicate the force of penetration.
- Dimension and direction of wound indicate the relative positions of the assailant and victim.
- Age of the injury can be determined.
- Position, number and direction of the wound may indicate manner of production i.e. suicidal, homicidal or accidental.
Circumstances of injuries

Suicidal

- They are found over accessible parts of the body.
- The direction is upwards, backwards and to the right.
- The depth is variable.
HARA-KIRI

- It is unusual type of suicide, in which the victim inflicts a single large wound on abdomen with a short sword while in a sitting position

  or

- Falls forwards upon a ceremonial sword and pulls out intestine.

- Sudden evisceration of the internal organ causes decrease of intra-abdominal pressure and cardiac return, producing sudden cardiac collapse.
HARA-KIRI
Homicide

» Most stab wounds are homicidal, especially found in an inaccessible area.

Accidental

» Wounds are rare.
# Differences between Suicidal, Homicidal & Accidental Stab Wounds

<table>
<thead>
<tr>
<th>Traits</th>
<th>Suicidal wounds</th>
<th>Homicidal wounds</th>
<th>Accidental wounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number</td>
<td>Often single</td>
<td>Frequently multiple</td>
<td>Usually single</td>
</tr>
<tr>
<td>2. Site</td>
<td>Accessible precordial area or upper abdomen</td>
<td>May be anywhere</td>
<td>May be anywhere</td>
</tr>
<tr>
<td>3. Tentative wounds</td>
<td>May be present around site of fatal wound</td>
<td>May be present rarely but away from fatal wound</td>
<td>Absent</td>
</tr>
<tr>
<td>4. Clothing</td>
<td>Removed from injured area</td>
<td>Normally not disturbed</td>
<td>Not disturbed</td>
</tr>
<tr>
<td>5. Defence wounds</td>
<td>Absent</td>
<td>Often present</td>
<td>Absent</td>
</tr>
</tbody>
</table>
### Differences between Incised, Lacerated and Stab wound

<table>
<thead>
<tr>
<th>Traits</th>
<th>Incised wound</th>
<th>Lacerated wound</th>
<th>Stab wound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Manner of production</td>
<td>By sharp object or weapons</td>
<td>By blunt object or weapon</td>
<td>By pointed sharp or blunt weapons</td>
</tr>
<tr>
<td>2. Site</td>
<td>Anywhere</td>
<td>Usually over bony prominences</td>
<td>Anywhere ; usually chest and abdomen</td>
</tr>
<tr>
<td>3. Margin</td>
<td>Smooth, even, clean cut and everted</td>
<td>Irregular and undermined</td>
<td>Clean cut, parallel edges</td>
</tr>
<tr>
<td>4. Abrasion on edges</td>
<td>Absent</td>
<td>Usually present</td>
<td>absent</td>
</tr>
<tr>
<td>5. Bruising</td>
<td>No adjacent bruising of soft tissues</td>
<td>Bruising of surrounding and underlying tissues</td>
<td>Rare</td>
</tr>
<tr>
<td>6. Shape</td>
<td>Linear or spindle</td>
<td>Usually irregular</td>
<td>Linear or irregular</td>
</tr>
<tr>
<td></td>
<td>7. Dimension</td>
<td>Usually longer than deep; often gaping</td>
<td>Usually longer than deep</td>
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<td>----</td>
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<td>----------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>8.</td>
<td>Depth of wound</td>
<td>Structures are clean cut to the depth of wound</td>
<td>Small strands of tissues at the bottom bridge across margins</td>
</tr>
<tr>
<td>9.</td>
<td>Haemorrhage</td>
<td>Usually profuse and external</td>
<td>Slight except scalp external</td>
</tr>
<tr>
<td>10.</td>
<td>Hair bulb</td>
<td>Clean cut</td>
<td>Crushed or torn</td>
</tr>
<tr>
<td>11.</td>
<td>Bones</td>
<td>May be cut</td>
<td>May be fractured</td>
</tr>
<tr>
<td>12.</td>
<td>Foreign bodies</td>
<td>Absent</td>
<td>Usually present</td>
</tr>
<tr>
<td>13.</td>
<td>Clothes</td>
<td>May be cut</td>
<td>May be torn</td>
</tr>
<tr>
<td>Traits</td>
<td>Suicide</td>
<td>Homicide</td>
<td>Accident</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>1. Nature of wounds</td>
<td>Usually incised or stab</td>
<td>Usually chop wounds, laceration and stab</td>
<td>Usually laceration, abrasion and contusion</td>
</tr>
<tr>
<td>2. Number of wounds</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Usually single, may be multiple</td>
</tr>
<tr>
<td>3. Target area</td>
<td>Accessible parts</td>
<td>no fixed site</td>
<td>Anywhere</td>
</tr>
<tr>
<td>4. Wound grouping</td>
<td>Arranged</td>
<td>Irregular</td>
<td>Vulnerable parts</td>
</tr>
<tr>
<td>5. Direction</td>
<td>In right handed person from lt. to rt. and from above downwards</td>
<td>Any direction</td>
<td>Any direction</td>
</tr>
<tr>
<td>6. Severity</td>
<td>Mostly superficial</td>
<td>Mostly severe and extensive</td>
<td>Variable severity</td>
</tr>
<tr>
<td>7. Hesitation marks</td>
<td>Usually present</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td></td>
<td>Defence wounds</td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>----------------</td>
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</tr>
<tr>
<td>8.</td>
<td>absent</td>
<td>May be present</td>
<td>absent</td>
</tr>
<tr>
<td>9.</td>
<td>Secondary injuries</td>
<td>absent</td>
<td>May be connected with fight</td>
</tr>
<tr>
<td>10.</td>
<td>Weapon</td>
<td>By the side of the body, or may be grasped firmly</td>
<td>Absent</td>
</tr>
<tr>
<td>11.</td>
<td>Clothes</td>
<td>Not damaged</td>
<td>May be damaged</td>
</tr>
<tr>
<td>12.</td>
<td>Scene of crime</td>
<td>Usually inside closed room, no disturbances of surroundings</td>
<td>Disturbed and disorderly with signs of struggle and blood stains</td>
</tr>
<tr>
<td>13.</td>
<td>Motive</td>
<td>Present</td>
<td>Revenge, robbery, sexual offences</td>
</tr>
</tbody>
</table>
Accidental, self-inflicted or inflicted by others: the following factors are helpful in determining whether the wound is suicidal, homicidal or accidental

1. The **nature, direction, extent** and **situation** of the wound.
2. The presence of the **foreign matter** in the wound.
3. The nature of the suspected **weapon**.
4. **Scene of the crime**.
Therapeutic wounds

- Produced during treatment
e.g. – Surgical incision, venesection, tracheostomy, etc.

Defence wounds

Two types:

- **Active** defence wounds: Caused when victim tries to grasp the weapon
- **Passive** defence wounds: Caused when victim raises hands, arms or legs.
Offensive manual injuries:

• Abrasion and contusion over the knuckles
• Fracture of 4th and 5th metacarpals
Self inflicted and fabricated wounds

- Inflicted by the person *himself* on his body.

- **Motives:**

  1. To charge an enemy with assault or attempt to murder.
  2. To make a simple injury appear serious.
  3. By the assailant to pretend self defence or to change the appearance of the wound.
  4. By the policeman and watchman acting in collusion with the robbers to show that they were defending the property.
  5. By prisoners, to bring a charge of beating against officers.
  6. By women to bring a charge of rape against an enemy
Self inflicted and fabricated wounds
Self Inflicted and Fabricated wounds
EVISCERATION
Questions

Questions 1.

Wedge shaped stab wound are produced by:

• Single sharp edged weapon.
• Double sharp edged weapon
• Sickle
• Scissors
Questions 2.

Hilt bruise around the stab wound is produced by:
• The knife has been partly entered
• The knife has been fully plunged in the victim with great force.
• The knife has been placed obliquely
• When screw driver has been used
Questions 3.

When wound enters the body on one side and comes out from the other side is known as:

• Perforating wound.
• Penetrating wound
• Lengthening of the wound
• Any of the above
Questions 4.

Perforating wound always has:
• Only exit wound
• Only entry wound
• Both.
• It is closed wound
Questions 5.

In case of stab wound to heart, death is immediate, if:
• Right ventricle is punctured
• Left ventricle is punctured
• Right atrium is punctured.
• Left atrium is punctured
Questions 6.

Stab wound has maximum:
• Breadth
• Length
• Depth.
• None
Questions 7.

Penetrating injury to neck is defined as:
• More than 2cm deep injury
• Injury to any internal organ
• Violation of platysma.
• Caused by sharp instrument
Questions 8.

Double edged knife produces:
• Elliptical wound
• Linear wound
• Circular wound
• Curvilinear wound
Questions 9.

Stab wound are mostly:

• Homicidal.
• Suicidal
• Accidental
• Any of the above
Questions 10.

Stab wound are produced by:
• Blunt weapon
• Sharp and pointed weapon.
• Sharp heavy weapon
• Any of the above